CHAPTER 15

CHILDREN AND ADOLESCENTS

CHRISTOPH M. HEINICKE
SHIRAH VOLLMER

It has repeatedly been concluded that to be effective and sustained, preventive intervention must be focused not only on the child but on the family system with which he or she interacts. Thus, interventions directed at infant development (Heinicke, Beckwith, & Thompson, 1988) or preschool development (Bronfenbrenner, 1974) have been shown to be effective and sustained if the family functioning is also the explicit target of change and if the family improves its impact on the child.

In this chapter, we argue similarly that child and adolescent drug abuse must be seen in the context of the development of other socially deviant behaviors and that this deviant behavior is in turn in part a product of the child's inadequate caretaking environment. It follows that both the early onset and the excessive use of drugs (not experimentation) are not likely to change unless the associated care environment is also changed. Once the substance abuse disorder is firmly established, interventions must be intense, are costly, and may not be effective. We argue that intervention designed to promote the type of family functioning that nurtures and guides the child is cost-effective and may be one of the few ways of preventing the development of socially deviant behavior and drug abuse.

To illustrate, we present the following case: Celia is an 11-year-old half-caucasian and half-black female who was brought to the clinic because her mother was concerned that "she never listened." After psychological testing, it was discovered that Celia had an IQ of 70. In addition, her mother reported that she often left Celia home alone. When the therapist explained to the mother that her daughter was functioning as a six-year-old and should not be left home alone, the mother resisted the idea. After frequent episodes of Celia again being home alone, she began to steal from her mother's purse. Celia also started to play with children down the street who were involved with drugs. The mother found out about the drugs and felt that Celia was a "bad kid."

During the meetings with the mother, the therapist tried to reframe her concept of Celia as "bad" to the idea that her daughter could not be expected to exhibit good judgment when left unmonitored. Eventually, the mother arranged for a babysitter for her daughter and Celia's behavior was no longer a problem. This example illustrates how teaching parents the value of monitoring their children can prevent drug-seeking behaviors.

To elaborate and provide support for these primary prevention assumptions, we first summarize four different models of how family functioning influences antisocial behavior and drug abuse. These models are designed to guide intervention with school-aged children. Accordingly

This research was supported by the Ahmanson Foundation of Los Angeles; the Lita Annenberg Hazen Charitable Trust, New York; the National Institute of Child Health and Human Development, Grant #HD13186; and the National Institute of Mental Health, Grant #MH45722.

we also describe the family-oriented interventions that have been used to reduce the incidence of school-age drug abuse. From these studies, socially deviant behavior in early and late adolescence, including drug abuse, emerges as a central outcome linked to specific family and school conditions.

We examine whether these socially deviant late childhood trends can be linked to earlier family and child developments. For example, does the nonresponsiveness of the mother to her five-year-old increase the child's difficulty in forming relationships and propel the child to social deviance?

Further setting the stage for primary prevention, we summarize what is known about the aspects of the earliest family and parent–infant development that are likely to affect preschool and kindergarten status. Is the mother's nonresponsiveness to her five-year-old anticipated by family developments in the first five years of the child's life? If so, what early family-oriented interventions can be used to alter the developmental sequence to prevent socially deviant behavior and drug abuse?

SECONDARY PREVENTION IN THE SCHOOL YEARS

In the following sections, we summarize the etiological models for adolescent drug abuse and the results of family-oriented treatment programs of four research teams led by the following investigators: Gerald Patterson, David Hawkins, Karol Kumpfer, and Peter Bentler. Our purpose is not to provide an exhaustive review but to focus on family determinants of the emergence of socially deviant behavior and the associated drug abuse.

Patterson et al.: The Family Management Model of Adolescent Substance Abuse

Throughout their published research, Patterson and his colleagues have stressed the influence of family management skills such as discipline and monitoring on the child's membership in deviant peer groups and the development of antisocial behavior, drug abuse, and ultimately delinquency. Where a breakdown in family discipline and monitoring occurs in the early school grades and there is already evidence of the child's negative peer relations and antisocial behavior, this "early start" is likely to lead to delinquency, including drug abuse.

The model is first expanded to show that both paternal and maternal antisocial personality traits are affected by stress, which in turn increases the frequency of irritable discipline.

Another expansion of the model cites the possible influence of parental rejection on the further development of child's antisocial behavior. That is, the rejection of the child as well as the breakdown of discipline and monitoring may enhance the development of antisocial behavior.

In the further search for the determinants of antisocial behavior, the authors examine the evidence for nonmediational and mediational mechanisms. In regard to the first, they indicate that there is little evidence for the direct inherited contribution of parental antisocial traits to adolescent delinquency, but suggest that adult crime may be so influenced. By contrast, the authors again emphasize the strong influence of the mediational mechanism of irritable family interaction styles in enhancing the development of delinquency (Patterson & Dishion, 1988).

This presentation of the Patterson et al. findings has emphasized the general determinants of antisocial behavior and delinquency. Like many other investigators, this research group makes the assumption that early drug use and delinquency are somewhat different aspects of a unified behavioral process. The interrelation has been outlined by Dishion, Reid, and Patterson (1988). They demonstrate, first of all, that parents who are highly proficient in the family management skills of discipline, monitoring, problem solving, parent involvement, and positive reinforcement tended to have children who were not antisocial, showed little drug experimentation, were less depressed, and were more adequate in their academic skills, peer relations, and self-esteem. The

central assumption is that coercive family processes serve as training for youngsters to practice coercive, antisocial, and rule-breaking behaviors, including drug abuse in other settings. The primary process underlying the child's training is hypothesized to be negative reinforcement. For antisocial children, it has been found that about 70% of the time the child's counterattack on a family member was followed by the attacker withdrawing or by a positive or neutral outcome. Noting the importance of deviant peer groups in initiating drug use, the authors emphasize that membership in the group and antisocial behavior are themselves determined by inadequate parental monitoring and discipline.

In further discussing the etiology of adolescent drug abuse, Dishion, Reid, and Patterson (1988) develop separate models for preadolescent drug experimentation and later adolescent drug use. Child drug experimentation was derived from a composite of both the parents' and child's report. The child characteristics that covaried with preadolescent drug experimentation were the child's antisocial behavior, observed coercive behavior in the home, the extent to which the child's peers were characterized as antisocial, and low self-esteem. Family management, such as parental monitoring and discipline, as well as a composite index of parent drug use also correlated with the child's drug sampling. Further statistical analysis (structural equation models) allowed the authors to show that parent monitoring did not have a direct effect on drug experimentation but its absence did have an indirect effect through allowing the child increased exposure to deviant peer influences. In considering possible interventions, the authors suggest that parent monitoring may be influenced by parental stress, parent drug use, marital discord, and single-parent status.

In their analysis of adolescent drug use, both alcohol and marijuana use were correlated with measures of deviant peer membership and parent monitoring and discipline. It was hypothesized that as opposed to preadolescent drug sampling, adolescent drug use would be affected by monitoring both directly and indirectly via deviant peer membership. This turned out to be true for self-reported marijuana use. However, for alcohol use, only the membership in deviant peer groups was associated with abuse.

These findings support the assumption that negative adolescent outcomes, such as delinquency and drug use, arise within the family and are later exacerbated by the influence of membership in deviant peer groups.

Patterson et al.: Parent-Training Treatment

The above results stress the potential impact of parent–child transactions and, in particular, inept monitoring and discipline on the antisocial behavior and drug use of the child. Several questions arise: What is the impact of parent training on child outcome variables? If changes in child outcome occur as a function of treatment, do family management skills changes also occur? Are differences in the parental reaction to the treatment program (process variable) related to child outcome?

Child and Parent Outcome

To assess the effect of intervention programs on childhood behavior, Patterson and Chamberlain (1988) developed an outcome measure of a composite of behaviors called Total Aversive Behavior (TAB). This TAB score is based on home observations of 16 behaviors selected to measure negative microsocial interactions. Included are behaviors with a negative content and those with a neutral content but a negative affect. TAB scores can be thought of as reflecting how deviant a child is on these 16 behaviors compared with a normal distribution of children.

The preliminary results are based on the first portion of the sample to complete the parent treatment. The treated sample (n = 16) showed significant reductions in the child TAB score from baseline to termination (p = .03), whereas comparison group cases (n = 9) showed no change (p = .69).

The preliminary conclusion is that parent-training treatment changes the problem behavior

of antisocial children. It was also found that all three parent management scores—monitoring, discipline, and problem solving—covaried significantly with the termination TAB score.

Parent Process: The Parental Reaction to Treatment

Patterson and Chamberlain (1988) also studied the effects of parent struggle during the treatment sessions on the child's behavior. Parent struggle included challenging and confronting, hopelessness and blaming, and interfamily conflict. Daily stress, marital discord, and parental depression were found to influence struggle within a session. They conclude, based on these preliminary results, that therapy is best served if part of the focus is on reducing stressors and the accompanying depression.

Indices of conflict within the treatment session were related to changes in both the parent management skills and the child's antisocial behavior. One such index of conflict, the parental "I won't" reaction to the expectations of the parent training, was seen as an index of active involvement. The occurrence of this reaction in mothers during the closing quarter of the treatment was correlated with a positive change in monitoring practices. Similarly, there was an association between the occurrence of the mother's within-session conflict and the child's behavior. Mothers who could express their conflict within a session had children whose aversive behavior decreased. In summary, involvement or noninvolvement in the parent-training treatment influences both the parent monitoring and the child's antisocial behavior (Patterson & Chamberlain, 1988).

Hawkins et al.: Intensive Family Prevention Services

In its emphasis on the importance of family discipline and monitoring, the approach to prevention developed by Hawkins, Lishner, Catalano, and Howard (1986) and Hawkins, Catalano, Jones and Fire (1987) is very consistent with the Patterson et al. family management model. Their research has also established several family-related factors as antecedents of teenage problem behaviors. Among these are poor family management practices, as indicated by unclear or inconsistent expectations for children's behaviors, poor parental monitoring of children, and negligent or excessively severe and inconsistent discipline; high levels of conflict within the family; and extreme family disorganization as indicated by simultaneous entrapment in conditions of extreme poverty, poor housing, single parenthood, and below-average parental educational, occupational, and social skills.

This knowledge suggests that interventions that successfully strengthen high-risk families by improving parents' family management skills, reducing family conflict, and empowering multiply-entrapped parents to overcome extreme family disorganization hold promise for preventing teenage delinquency, drug abuse, and school misbehavior.

Parent-training programs have shown some effectiveness in reducing conduct problems, but they also present some serious implementation problems. There is some evidence (Hawkins & Salisbury, 1983) that parent-training programs are disproportionately available to white rather than minority families nationwide, and that white, middle-class, two-parent families participate in parent training more readily than do minority, low-income, single parents (Hawkins, Catalano, Jones, & Fire, 1987). High dropout rates for parent training are common. Families experiencing disruption and disorganization are particularly difficult to enlist and maintain in parent training.

Intense family preservation involves in-home intervention. This model is called *Homebuilders.* The Homebuilders group provides line staff with training in 21 specific training modules including defusing, engaging, and confronting clients; teaching such family skills as anger management and other problem-solving skills; and dealing with termination issues. This familiarization of the intervention, by training therapists to assess what specific intervention modules may be of most immediate use, is one of the most important achievements of the Homebuilders group.

The service is time-limited and is available for 30 days. From an implementation perspective, the Homebuilders approach shows some promise for reaching and retaining high-risk families in an intensive intervention without creating dependence. To date, the effectiveness of this model has not been subjected to experimental investigation.

Hawkins, Catalano, and Kent (1991) also designed and conducted a television-assisted parent-training campaign consisting of a one-hour TV special and nine series of four two-hour parenting workshops conducted at weekly intervals and offered simultaneously at 87 sites. The parent workshops were from the "Preparing for the Drug (Free) Years" parenting curriculum that is part of the Hawkins, Lishner, Catalano, and Howard (1986) study of the prevention of teenage drug abuse. The content and learning format of the program are designed to generate motivation and behavioral skills to implement risk-reduction strategies in the family. These changes in the family should reduce the influence of the following drug abuse risk factors: poor family management, parental acceptance of teen drug abuse, friends who use drugs, low family bonding, high family conflict, and early first use of drugs. The program seeks to increase protective factors against drug abuse by strengthening bonding to the family and by establishing clear family norms against drug use by teenagers. The results of this program support the combined use of broadcast media and parent skills training in a workshop format to reach and train relatively large numbers of parents. The data suggest that workshops led by trained volunteers were effective in generating significant knowledge, attitude, and behavior change in the majority of participants. A more rigorous evaluation of media/workshop is needed.

Kumpfer et al.: A Social Ecological Model of Adolescent Substance Abuse

The social ecology model of adolescent substance abuse hypothesizes that the family and the school climate affect a youth's self-esteem, which in turn influences whether he or she will turn to nonconventional (antisocial) peer groups and frequent drug use. The underlying associated process is hypothesized to be the balance between stressors and the young person's ability to cope with them. Youths with more environmental stressors than individual coping abilities or resources are hypothesized to be at higher risk for drug use. Restating their goal, Kumpfer and Turner (1990) set out to verify an extension of the Hawkins and Weiss (1985) social development model by adding the variables of family environment, self-esteem, and school climate. The Effective School Battery (Gottfredson, 1985) and various other self-report inventories were filled out by approximately 1,600 high school students. The data were reduced to 22 variables to measure family climate, school climate, self-esteem, school bonding, peer influence, and substance abuse.

A structural equations approach was used to examine the hypothesized causal relations among these variables. These hypotheses were stated as follows: A favorable *school* and *family* climate improves a student's *self-esteem*, and this facilitates the establishment of *positive bonds to the school*. A positive connection to the school facilitates *positive peer relations* and these associations reduce the likelihood of the student becoming involved in delinquent and *drug-using behavior*. Data analysis revealed that the above six latent variables (italicized) were intercorrelated rather than orthogonal; in particular, the self-esteem and school bonding latent variables were highly associated. Accordingly, in subsequent analyses these two variables were collapsed.

Results of the analyses of the cluster variables within the models indicates that the primary direct predictor of illegal alcohol and drug use in male and female high school students is association with antisocial peers and involvement in their antisocial acts. Whether students choose positive or negative peers is influenced directly by their self-esteem and school bonding for both males and females. The school bonding–self-esteem variable is in turn predicted by both the family and school climate variables. Although

the research is designed as a prospective two-year study, the data analyses are based on the student's view of all of the domains as assessed at one time.

The Kumpfer and De Marsh Strengthening Families Program

Based on the above results, Kumpfer and Turner (1990) conclude that family and school environments must be improved to enhance the student's self-esteem, which in turn enhances school bonding and decreases the choice of negative peers and drug use. The authors have developed three different types of family-oriented prevention programs: a parent training program, a family skills training program, and a children's social skills training program. Preliminary analyses of the pretest and posttest data suggest that each of the three programs was successful in reducing children's risk factors as well as their alcohol and tobacco use, but only when the three approaches were combined (i.e., a comprehensive approach) did drug use decrease in the older children (De Marsh & Kumpfer, 1986).

The results of two of the programs are as follows: Parent training improved parent discipline effectiveness, which had a direct impact on the children. The children screamed less, had fewer temper tantrums, got angry less, improved their home behaviors, and displayed fewer problems. Parents reported that their children were happier, liked school better, and increased their outside activities (De Marsh & Kumpfer, 1986).

A second component, the Kumpfer Family Skills Training Program, affected family functioning, children's behavior problems, and children's expressiveness. For example, family communication increased and relations improved. Moreover, parents reported that their children were less impulsive, better behaved at home, and showed fewer problem behaviors in general. Finally, the family skills training improved the children's ability to express themselves (asking for help with homework, talking to people when they were sad, seeking more attention from their parents, and crying more). As the author notes, these results are promising but they must be tested on other high-risk populations and the outcome results reported above must be assessed in a follow-up study (De Marsh & Kumpfer, 1986).

Bentler et al.: The Interactive Developmental Domain Model of Adolescent Substance Abuse

Peter Bentler and Michael Newcomb have developed and tested statistical (structural) models depicting constructs that anticipate child drug use at two time points: early adolescence (seventh, eighth, and ninth grade) and late adolescence (four years later). Measures were in the form of scales derived from inventories filled out by the adolescents and their mothers (Newcomb & Bentler, 1988). Three latent child constructs derived from several measures were available for both time points as follows: child emotional distress, child socially deviant attitudes, and child drug use. There were four family context variables: one measured variable (family disruption) and three derived constructs (mothers' drug use, mothers' somatic complaints, and mothers' emotional distress). Data analysis was carried out on a sample of 557 subjects.

A statistical (structural) model is presented to show the interrelation of these variables in a comprehensive and economical manner. Highlights of the findings are that family disruption and all of the mother constructs were significantly correlated in a positive direction. Mothers' somatic complaints and emotional distress did not influence childrens' behavior directly but their impact was mediated via family disruption and mothers' drug use.

Mothers' drug use was significantly associated with their children's drug use, socially deviant attitudes, and emotional distress during early adolescence. Mothers' drug use did not directly influence the child's qualities or behavior in late adolescence; these effects were mediated through the early adolescent constructs of child drug use and socially deviant attitudes.

Family disruption was significantly related to the child's drug use and socially deviant attitudes during early adolescence and had a significant impact on emotional distress in late adolescence.

When all effects were considered simultaneously in a theoretically driven model, socially deviant attitudes (as opposed to conformity) had the largest impact on early drug use, whereas the impact of family context and the other child constructs on drug use was mediated through these deviant attitudes. An alternate, competing hypothesis that child drug use generates child deviant attitudes was rejected empirically (Newcomb & Bentler, 1988).

Other publications have traced the impact of the child's social conformity, perceived adult drug use, and the child's drug use in late adolescence on the drug use, disruptive drug use, and problems with drug use four years later in early adulthood (Stein, Newcomb, & Bentler, 1987). In the final statistical (structural) model, social conformity strongly influenced other latent variables across time. As assessed in late adolescence, the absence of social conformity (i.e., social deviance) anticipated problems with drug use in early adulthood. For the same time interval (late adolescence to early adulthood), early drug use and perceived adult drug use predicted young adult drug use, whereas prior drug use anticipated disruptive drug use. The implication of these findings for prevention have been outlined (Bentler, 1992) but have so far not been translated into intervention programs.

Although the findings of the above four models depicting the antecedents of drug abuse differ, certain commonalities are noteworthy. Most important, socially deviant attitudes and deviant peer group membership are the mediating conditions for drug abuse. Family variables affect these socially deviant outcomes, so it is relevant to ask what earlier family and child characteristics anticipate these adolescent outcomes. We turn next to the findings of three longitudinal studies relevant to these questions and to issues of primary prevention.

PRIMARY PREVENTION

Very few projects have studied the impact of family and child characteristics during the first five years on the emerging family and child characteristics that influence drug use in the later elementary school years. Even less has been conceptualized in terms of possible effective primary prevention efforts, partly because it is difficult to successfully target families and children who are very likely to develop antisocial and drug abusing behavior. However, those considerations must be balanced against the strong possibility that intervention directed at negative patterns of behavior established by early school age may already be very resistant to change.

In delineating a possible primary prevention approach beginning in early childhood, we summarize three studies linking child and family status at 5–6 years to adolescent drug use. We then show how this earliest school status is in turn anticipated by child and family antecedents making an impact from birth on and describe what early intervention methods have been shown to be effective in promoting positive child and family development in the first five years.

Child and Family System Characteristics that Anticipate Later Drug Abuse

There are three known longitudinal studies linking child and family development at ages 5–7 to adolescent drug abuse: the Woodlawn study (Kellam, Brown, Rubin, & Ensminger, 1983), the Berkeley longitudinal study (Shedler & Block, 1990), and studies by Brooks et al. (such as Brooks, Whiteman, Cohen & Tanaka, 1991).

The Woodlawn Study

Kellam, Brown, Rubin, and Ensminger (1983) followed an entire first grade population until they were 16-17 years old. Frequency of drug use was determined from a questionnaire administered to the teenagers in a group setting; in this population, use centered heavily on alcohol, marijuana, and cigarettes. Rate of use of marijuana

and alcohol was broken into three categories: never used, used 1 to 19 times, and used 20 times or more. Measures of teenage psychiatric symptoms are also reported.

Focus in this presentation is on the first grade antecedents of frequent drug use. The authors cite previous research showing that aggressive or antisocial behavior is the most frequently replicated predictor of substance use. Thus, Robins (1978) found that across all study populations, there was a reliable association of early fighting, truancy, arrests, and drinking with adult alcoholism and drug abuse.

The findings of the Woodlawn study indicate the following:

1. First grade aggressiveness without shyness increased the likelihood of males' (not females') use of all four substances (beer, hard liquor, marijuana, and cigarettes).
2. Shyness among first grade males (but not females) inhibits substance use at age 16 or 17.
3. The combination of shyness and aggressiveness in first grade males is associated with even more frequent use of substances (especially of cigarettes) than aggressiveness alone.
4. The developmental paths leading to psychiatric symptoms and substance use in adolescents are distinct.
5. First grade readiness and higher IQ lead to more teenage substance use.
6. Social maladaptation to school generally is strongly related to the characteristics of family structure and atmosphere but the specific characteristics of shyness, aggressiveness, or learning problems in the classroom were not found to be clearly associated with any specific characteristics of the current social context.

In a subsequent publication, Kellam et al. (1991) report that teenage delinquency, including physical assault, was also predicted by the pattern of antecedents listed for substance abuse under the first three conclusions of the Woodlawn Study. The link of antisocial behavior and substance abuse found by many other investigators is thus supported.

Further qualifying these findings on the current social context (see conclusion 6), Kellam et al. (1991) also report that lower-risk family structures such as mother/father, mother/grandmother, and mother/aunt lead to less aggressive first-grade children. However, among children from such families who do behave aggressively in the first grade classroom, there is an increased risk of substance abuse and delinquency later on in adolescence.

The Berkeley Longitudinal Study

Our summary of this longitudinal study (Shedler & Block, 1990) will characterize the personality profile of the frequent drug user at 18 years, show the similarity of that profile to previous independent assessments at 7 and 11 years of age, and contrast the frequent vs. experimental 18-year-old users in terms of the quality of parent–child interaction observed earlier in their life during the preschool period.

The Q-sort personality profile of the 18-year-olds was factor-analyzed to yield three factors. Their labels and highest loadings are as follows: quality of interpersonal relations (has warmth and capacity for close relationships), subjective distress (concerned with own adequacy as a person), and ego control (undercontrols needs and impulses and is unable to delay gratification). Linking to the Woodlawn assessments of aggression and shyness in the first grade children, the first factor was also loaded negatively on "has hostility toward others" whereas the second factor (subjective distress) also loads negatively on "has social poise and presence"; that is, the child is socially at ease and not shy. Further Q-sort descriptions of the users as opposed to experimenters are as follows: not responsible, not productive, deceitful, opportunistic, unpredictable, unable to delay gratification, rebellious, prone to push limits, self-indulgent, not ethically consistent, not having aspirations, critical, ungiving, not sympathetic, not liked by others, not having capacity for relationships, overreactive to minor frustrations, self-defeating, and feeling cheated and victimized by life. Using the factors and these Q-sort descriptions, the authors conclude that frequent adolescent users are interpersonally alienated, emotionally withdrawn, and manifestly unhappy, and

express their maladjustment through undercontrolled, overtly antisocial behavior.

Examination of analogous profiles at eleven and seven years of age suggest that by seven years of age, the frequent users were unable to form good relationships, were insecure, and showed various signs of emotional distress including being indecisive and unable to plan ahead. That is, the relative social and psychological maladjustment of the frequent users predates initiation of drug use. Moreover, the profile of the seven-year-old stresses the negative outcome of developments that are central to the development of the first years of life: capacity for relationships, security in autonomy, and the ability to define goals and take pride in their achievements (task orientation).

Given this relatively stable profile of the personality characteristics of the frequent users, what type of interaction with their parents did they tend to experience at the earlier age of five? Mothers of frequent users were perceived as cold, unresponsive, nonsupportive, and nonencouraging. This turned a potentially enjoyable interaction into a grim and unpleasant one.

In certain respects, the personality profile of the adolescent frequent drug user and particularly the five- to seven-year antecedents that emerge from the two prospective studies cited here are similar. Both studies describe the frequent adolescent user as expressing maladjustment through undercontrolled overtly antisocial behavior. That is, the frequent users (as opposed to experimenters) are also likely to be categorized as delinquent. Childhood antecedents of this profile stress the inability to form close relationships and, in this context, the display of interpersonal aggression. Early-school-age children who were characterized as both aggressive (hostile) and shy (socially uneasy) were most vulnerable to later frequent drug use. Unlike the Berkeley study, in the Woodlawn study these findings held only for the boys.

Both studies also isolated family conditions that are likely to anticipate frequent drug use: Mothers of frequent users were perceived as cold, unresponsive, nonsupportive, and nonencouraging with their five-year-olds (Shedler & Block, 1990), and six-year-olds were more likely to be aggressive if their mothers had neither partner or family of origin support (Kellam et al. 1991).

Childhood Antecedents of Adolescent Drug Use: Brooks et al.

To study the antecedents of adolescent drug use, Brooks, Whiteman, Cohen, and Tanaka (1991), and Brooks, Whiteman, and Finch (1991) analyzed the complete interview and questionnaire data available for a sample of 420 families at three time points: T1 (ages 5 to 10), T2 (ages 13 to 18), and T3 (ages 15 to 20). Certain latent variables (underlying constructs) are best thought of as early- and late-adolescent outcome measures. Thus, for both T2 and T3, there were measures of their own drug use, perceived peer drug use, delinquency, and unconventionality. Not surprisingly, measures of these qualities at T2 (ages 13 to 18) anticipated variations of them at T3 (ages 15 to 20). Stability in these functions can therefore be inferred.

Most relevant to this review of longitudinal studies, measures of aggression at T1 (ages 5 to 10) were directly associated with drug use (for both males and females) at T2 and indirectly affected the rate of delinquency at T3 (ages 15 to 20) via this drug use at T2. That is, there was no direct association between aggression at T1 and delinquency at T3. Cross-sectional analyses, or correlations within time periods, showed that if a child was using drugs during both early and late adolescence, he or she also tended to be delinquent. Aggression at T1 also anticipated unconventionality at T2. Unconventionality at T2 in turn influenced their own drug use at T3. That is, early signs of aggression (5 to 10) affected drug use in late adolescence by way of the drug use and unconventionality seen in early adolescence.

Perceived peer drug use in late adolescence was anticipated by the perceived peer drug use in earlier adolescence and the youngster's own unconventionality. Approaching these developments from a protective or risk point of view, conventionality when combined with low peer drug use and low self-drug use in early

adolescence led to the least amount of self-drug use in late adolescence.

Finally, parent sociopathy (such as illicit drug use and involvement with the police) was *negatively* associated with drug use at T2 but *positively* associated with drug use at T3. The authors suggest that in early adolescence, children listen to their parent's admonition "not to do what they do," but that in late adolescence, these admonitions are not as effective.

To summarize, self-drug use in late adolescence is directly affected by parental sociopathy and self-drug use and unconventionality in *early* adolescence. Aggression as measured at age 5 to 10 affects late adolescent drug use via early adolescent self-drug use and unconventionality. The adolescent's tendency toward delinquency as measured in late adolescence is also significantly associated with self-drug use at that time.

Findings on the parents' attitudes and quality of interaction with their children reported by Brooks, Whiteman, Nomura, and Cohen (1988) are particularly relevant to this review. Looking first at the mother–adolescent relationship variables, it was found that the mother's satisfaction and more time spent with the adolescent, a nonconflictual mother–adolescent relationship, and the adolescent's identification with the mother were negatively related to the adolescent's use of both legal and illegal drugs. Although data on the early mother–child relationship were not available, the authors assume that the quality of the mother–adolescent relationship largely reflects a continuum of interchange from infancy onward.

The Brooks, Whiteman, Nomura, and Cohen (1988) findings are similar to those reported for the Shadler & Block (1990) and Kellam, Brown, Rubin, and Ensminger (1983) studies. Frequent users are likely to be categorized as delinquent, and childhood antecedents stress the inability to form close relationships and, in this context, the display of interpersonal aggression.

Before turning to the intervention projects designed to affect the above profile of child and parent–child characteristics, and to set the stage for preventive intervention beginning as early as the postnatal period, we discuss what is known about the earliest antecedents of the preschool and parent–child transactions that have been shown to affect drug use in adolescence.

Antecedents of Preschool Parent–Child Responsiveness to Need (Parent Stimulates Cognitive and Verbal Experiences and Parent Promotes Effective Autonomy)

Various longitudinal studies of family development from birth to preschool have identified three major transactions between parent and child: parents' responsiveness to need, interacting with the child, modulates aggression (Heinicke & Lampl, 1988); parent stimulates cognitive and verbal experiences, interacting with the child's task orientation (Heinicke & Lampl, 1988); and parent promotes effective autonomy, interacting with the child's sense of separate self (Heinicke & Guthrie, 1992). The child's modulation of aggression is in turn associated with warmth and the capacity for close relationships and by ratings of a sense of positive self (security).

Given the above clusters of parent and child behaviors, which seem clearly relevant to the findings of the Woodlawn and Berkeley studies pinpointing the antecedents of later drug abuse, what in turn are the antecedents of these parent–child interactions? Moreover, what are the implications of these clusters of variables for the design of preventive interventions in the first four years of life?

We will focus on the preschool status of parent responsiveness to need interacting with the child's aggression modulation. As already suggested, the capacity for relationships, warmth, self-control, and sense of positive self-dimensions are absent in the profile that characterizes the frequent adolescent drug user (Shedler & Block, 1990). We note first of all that the transaction under discussion is significantly correlated with concurrent (four-year) measures of the mother's positive view of her marriage, her capacity for warmth, and her general adaptation-competence (Heinicke & Lampl, 1988). These three vari-

ables, as well as parent responsiveness to need and aggression modulation as measured at both 36 and 24 months, are also correlated with the 48-month transaction. The early emergence and relative stability of this profile of five correlated variables is further underlined by the finding that prebirth measures of the three maternal variables each significantly anticipate parent responsiveness to need at one month. See Heinicke (1994) for further review of the research on the prebirth determinants of parenting. These findings do not ignore the findings that variations in early stable infant characteristics such as one-month soothability and visual attention also affect parents' responsiveness to the needs of the infant. It does emphasize that early postnatal intervention directed at the crucial parent responsiveness to need must also address the associated parent and marital characteristics. What evidence exists that effective early interventions are characterized by the theoretically guided and actual changes in these parent and marital characteristics?

Postnatal Family-System-Oriented Intervention

Review of existing research shows that effective controlled interventions initiated in the first three months after birth and including a follow-up assessment are characterized by a theoretically guided intervention not just with the child but with some aspect of the parental, marital, and support system functioning (Heinicke, Beckwith, & Thompson, 1988; Heinicke, 1991). The significant impact of intervention on early family development is well-documented.

Although clearly dealing with aspects of family functioning such as parent responsiveness to need, which is relevant to later relationship capacity and sense of security and thus to the presence or absence of frequent drug abuse, there are no known longitudinal studies explicitly tracing the impact of such postnatal interventions on measured drug abuse in childhood and adolescence. However, had differential drug abuse or early onset of the use of drugs such as tobacco been assessed, in three of the existing early intervention studies the beneficial impact of the comprehensive interventions might well have been established in this area of functioning. Examination of these three studies is done in detail and informs the recommendations made at the conclusion of this chapter.

The first of these intervention studies designed comprehensive family services for mostly single, inner-city poverty-level mothers with full-term infants (Seitz, Rosenbaum, & Apfel, 1985). The goal was to enhance the mother's adaptation, the quality of her relationship with her child, and the child's development. An ongoing relationship with a home visitor, pediatric care, high-quality day care, and developmental examinations were provided. A series of follow-ups attested to the efficacy of the intervention. The last follow-up, at 10 years of age, suggests that children who had not experienced the intervention were more likely to be described as disobedient, not getting along with other children, and as unhappy, sad, or depressed. More important in terms of the efficacy of the intervention affecting both the mother's functioning and the mother–child relationship, it was found that the mothers in the experimental group completed more years of education, waited longer to have a second child, were more often part of a nuclear family, were more often self-supporting, often initiated contacts with teachers, and made greater use of remedial and supportive services. Most relevant to the dimensions of affection and responsiveness, the mothers experiencing the intervention showed a better relationship with their child, who was seen as pleasing them and giving them pleasure.

Two other projects have reported findings on the impact of early family-focused intervention on the children and adolescents of multirisk families. The prevention of antisocial behavior often associated with frequent drug abuse is documented in these projects. Thus, Wieder, Poisson, Lourie, and Greenspan (1988) have reported the five-year follow-up of 32 multirisk families who received intensive, comprehensive services through the Clinical Infant Development

Program (CIDP). Three components made up this intervention:

- Organizing basic services for adequate food, housing, medical care, and educational opportunities, to deal with day-to-day survival and future family stability
- Providing a constant emotional relationship with the family through which trust could be established with the parents and the infant
- Providing specialized services to the infant and parents geared to meet the challenges at each stage of development, given each infant's and parent's individual vulnerabilities and strengths.

The follow-up assessments were relevant to these three goals. Because the first goal was to deal with basic survival and sustenance, when compared with both the beginning and the end of intervention point, both the adult and especially the adolescent mothers had made striking gains in their work status and independence from public assistance. The increased freedom to work outside the home probably resulted from the avoidance of repeat pregnancies, which in the past further drained the limited resources.

The provision of an ongoing relationship opportunity by the CIDP staff was reflected in the mother's increasing capacity to form mutually satisfying partner relationships. Five years after the intervention ended, 42% of adult mothers were married or had sustained relationships. There was a striking decline in the abusive aspects of these relationships as well as in their relationships with their children. Thus, abuse for the older mothers decreased from 60% to 5.3% and from 50% to 18% for the adolescents.

Wieder, Poisson, Lourie, and Greenspan (1988) also cite findings on the children that indicate average IQ performance (103), placement in regular as opposed to special education classes, and active involvement in team sports and local youth organizations.

Although it seems clear that the persistent, clinically skilled, comprehensive program outlined above did indeed produce sustained gains in parent and child functioning, some reservation is introduced by the fact that a comparison group was not available to highlight which positive changes were a function of the intervention and which might have occurred without intervention.

Another major project, the Syracuse University Family Development Program, has also published dramatic follow-up results (Lally, Mangione, Honig, & Wittner, 1988). The intervention was designed to influence the permanent environment of the child, the family, and the home. Poor, largely black, young, mostly single women were recruited in late pregnancy. The contact with the parent was viewed as primary and child care as supplementary.

A cadre of paraprofessional home visitors, called Child Development Trainers (CDTs), was recruited and trained intensively to encourage strong, nurturing mother–child relationships that involved giving affectionate bodily contact, respecting children's needs, and responding positively to young children's efforts to learn. CDTs offered positive support and encouragement to mothers as they interacted with their children and also responded positively and actively to the mother's need to fulfill her aspirations for herself. Many mothers came to rely on the CDT as an advisor and confidante on personal relations, finances, career changes, and education. CDTs served as liaisons between the families and community support services, including the child care component of FDRP; in addition, they helped families to learn to find and use neighborhood resources on their own (by giving families specific practice in learning how to make and maintain contact with school personnel as children reached school age, for example).

In addition, parent associations were encouraged and the Children's Center provided child and preschool education to three age groups: 6 to 15 months, 15 to 18 months, and 18 to 60 months.

The follow-up conducted ten years after the end of the program revealed that the program children showed a significantly lower rate of delinquency (6% vs. 22%) and showed that the offenses they did commit were less severe than those reported for the control group.

Girls in the program group, but not boys, were performing significantly better in school than their counterparts in the control group. Interestingly, these positive findings began to appear only during early adolescence; information on the elementary school years indicated no differences between the program and control group. Teachers rated girls from the program group as having more positive attitudes toward themselves and other people.

Compared with control group parents, parents who had been in the program reported feeling proud about the positive social attitudes and behaviors of their children and the degree of unity in their families. They were also more likely to advise young people to learn something about themselves and accomplish all they could, whereas control parents were more inclined to counsel young people to concentrate just on "getting by."

Compared with control group children, those in the program group felt more positively about themselves in early adolescence and were more likely to expect education to be a continuing part of their lives. Fifty three percent of the program group but only 28% of the controls anticipated that they would be in school at age 17 or 18.

An example of early family intervention designed to break the generational continuity of inadequate parenting, drug use, and future inadequate parenting comes from the UCLA Family Development Project (Heinicke, 1991). During the weekly home visits with Jessica, it became clear that this first-time mother had little consistent and responsive mothering from her own childlike, drug-using mother. Although Jessica renounced her heroin use when she became pregnant and participated in a methadone drug prevention as well as a weekly home visit and mother–infant program, at a certain point the current demands for mothering from her own mother and her sister as well as the lack of support from her partner led to a temporary return to drug use. She was not available to her eight-month-old son and was in danger of having to give him up to foster care. A variety of empathic and confrontive techniques were used by the home visitor to stop the continuing drug abuse and to return Jessica to her more than adequate natural ability to mother her baby boy. At 12 months, her son was secure in his relationship with her and showed good task orientation.

SUMMARY

We have shown that drug abuse, as opposed to experimentation, is mediated through socially deviant attitudes and deviant peer group membership and that these adolescent developments are influenced by, among other things, recent or concurrent family conditions and parent management practices.

We have also shown that drug abuse and the associated undercontrolled overtly antisocial behavior was anticipated by the young (five- to six-year-old) child's inability to form close relationships and a tendency to express uncontrolled aggression or be excessively shy. Early family predictors included parental unresponsiveness and the mother's lack of partner or family support.

Given the demonstration that these early (five- to six-year-old) antecedents are anticipated by earlier parent personality, marital, and parent–child relationship variables, one of the implications of the findings of this chapter is that early family primary intervention must be added to the secondary prevention approaches now being used. The efficacy of intervention with school-aged drug-abusing antisocial children, as opposed to experimental users, has been limited and certainly needs further documentation. The most recent review of existing outcome studies has found very few positive results (Bangert-Drowns, 1988). By contrast, early family intervention has been shown to make a difference, especially if also directed at parent personality and marital functioning. Although the long-term relevance of early family intervention for adolescent drug abuse and delinquency needs further demonstration, the Syracuse University Family Development Program is particularly impressive in this regard. Both the rate of delinquency and the

severity of the offenses were less than those reported for the control group.

As the other chapters of this book document, socially deviant behavior, including adolescent drug abuse, is highly overdetermined. Peers clearly provide a setting and encouragement of drug use. Educational programs using group settings and peer counselors may well be effective under certain circumstances. Problem drug use must be seen as part of a developmental profile focusing on the emergence of security in relationships, preparedness and autonomy in adapting, and commitment to goals that, when achieved, lead to pride and pleasure.

This positive profile is likely to be associated with caretaking systems involving positive parent partnerships and other support systems that promote responsiveness to the needs of the infant, preparation for autonomous functioning, encouragement and guidance to tasks (Heinicke, 1994), and appropriate limit setting (Patterson & Dishion, 1988).

Although it is necessarily a long-term solution, we believe that a national family policy supporting the functioning of parenting from the child's conception on is necessary to combat drug abuse. The following questions must be addressed and resolved with new and especially integrated services: Have the expectant parents been sufficiently counseled to ensure the commitment to the infant? Are adequate prenatal medical care systems available? How can the basic problems of the housing and the financial support of the new parents be addressed? What services are available, such as home visiting, to improve the support experienced within the caretaking system and to make the best use of support available outside the family?

Although the continuing support of the caretaking system and the influence of new environments (school and peers) are significant, the need for an early nurturing and guiding environment must be addressed in any effort to affect frequent drug use. It is in this earliest period that the groundwork for the child's involvement in relationships and meaningful tasks is laid. Character formations and family systems that foster commitments to love and work are the best antidote to the alienation, impulsiveness, and false sense of quietude and pleasure that accompany drug abuse.

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