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ABSTRACT

There is a strong statistical correlation between delinquency activity level and the level of alcohol and other drug (AOD) use in adolescents. A strong association between drug use, drug trafficking, and youth gangs has also emerged. However, several important questions concerning the relationship of delinquency, gang membership, and AOD use remain unanswered in the research literature. To address these issues, the first section of the overview summarizes current knowledge about the extent of AOD use among delinquents and the relationship between AOD use and delinquency. Recently, researchers have reached consensus regarding the existence of an underlying deviance factor associated with various deviant or risk-taking behaviors in adolescence. Evidence for this viewpoint derives from three sources: (1) etiological and risk factor research on antisocial behavior, school adjustment, family and peer influences, and intrapersonal risk factors; (2) age prevalence data; and (3) attempts to measure directly the presence of a latent deviance factor. The overview next explores the related question of gang member involvement in delinquency, drug use, and drug trafficking. The final section discusses strategies to reduce the prevalence of drug use and delinquency through prevention and intervention programs. The report also contains tables categorizing research by topics, a research abstracts section, and a bibliography of 159 references. (Author/MLH)

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SUBSTANCE ABUSE AMONG JUVENILE DELINQUENTS AND GANG MEMBERS

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Number Six / Spring 1990

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SUBSTANCE ABUSE AMONG JUVENILE DELINQUENTS AND GANG MEMBERS

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Prevention Research Update is a quarterly current awareness service, prepared by the Western Center for Drug-Free Schools and Communities, which summarizes recent research on adolescent drug abuse and its prevention. Each issue abstracts and reviews the prevention implications of new research dealing with a major topic of concern in the field, placing the new information in the context of past findings. The goal is to help bridge the communications gap between the researcher, the practitioner, and the general population, by disseminating research findings in an accessible manner and providing an introductory review of their significance. Abstracts are arranged alphabetically by first author's last name. Preceding the abstracts is an overview discussion in which references to abstracted studies are identified by an asterisk (*). References to all documents cited are located following the abstracts. Copies of the Updates are available from all the Western Center sites, listed on the last page of this issue.

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OVERVIEW

Introduction

The relationship between juvenile delinquency and the use of alcohol and other drugs (AOD) by adolescents has been of long-standing interest to policy makers, researchers, law enforcement officials, school administrators, and almost all others who manage and develop social service programs serving adolescents. The presumed causal association between AOD use and criminal activity, both for juveniles and adults, underlies much past and current policy in law enforcement, health, and social services in the United States. For example, this presumed association was the motivation for the development of the Opium Exclusion Act of 1906, the Harrison Narcotics Act of 1914, and the Drug Abuse Office and Treatment Act of 1972 (Watters, Reinerman & Fagan 1985*).

There is, without question, a strong statistical correlation between the level of delinquent activity and the level of AOD use in adolescents. A strong association between drug use, drug trafficking, and youth gangs has also emerged. However, several important questions concerning the relationship of delinquency, gang membership, and AOD use remain unanswered in the research literature. Several of these issues are addressed in this Overview.

The first section summarizes current knowledge about the extent of AOD use among delinquents and the nature of the relationship between AOD use and delinquency users. The common perception among the public is that illicit drugs are a significant cause of both violent and non-violent criminal activity. In the research literature, however, the answer is not clear.

Next, we explore the related question of the involvement of gang members in delinquency, drug use, and drug trafficking.

The final section deals with what we can do to reduce the prevalence of drug use and delinquency through prevention and intervention programs. Because of the progress that has been made in this area, important, substantive answers can be provided to the policy maker and program manager who are developing social services for adolescents.

There are many other pertinent issues and questions regarding the delinquency and AOD use relationship. For example, how does adolescent AOD use and criminal activity relate to these activities in adulthood? There are indications that adult AOD use is similar to the behavior of adolescents in its characteristics and controlling factors (Kandel & Raveis 1989). In addition, we have very little data as yet about the delinquency-AOD connection for specific subpopulations such as females or ethnic minorities (cf. Kandel, Simcha-Fagan & Davies 1986*; Dawkins and Dawkins 1983*) While we attempt to shed some light on these other issues, the focus of this review is on understanding the general connection between delinquency and the use of alcohol and other drugs, as well as the prevention implications of this connection.

Drugs-Delinquency Connections

In this section current knowledge is reviewed regarding three issues: (1) the extent of AOD use among delinquents and the extent of delinquency among AOD users: (2) the extent to which delinquency and AOD use represent expressions of a common underlying factor of deviance or unconventionality or, conversely, to what extent delinquency and AOD use are caused by factors specific to themselves; and (3) whether the use of alcohol and illicit drugs *causes* crime, or, the reverse, whether crime *causes* the use of alcohol and/or illicit drugs.

Extent of the Problem

There can be no doubt that a consistent and strong correlation between AOD use and delinquency exists (e.g., Frost Reed & May 1984*; Elliott, Huizinga & Ageton 1985*; Kandel, Simcha-Fagan & Davies 1986*; Kovach & Glickman 1986; Hundleby 1987; Rivers 1989*). Research indicates that adolescents who engage in delinquent activities are at higher risk for AOD use than the general youth population.

Blane (1982/3*) reported that two-thirds of the delinquents in his sample were problem drinkers compared with 39% of the nondelinquents. The delinquents were also significantly more likely to use illicit drugs and to have more drug-related problems.

Elliott and Huizinga (1984) found that about 50% of the serious juvenile offenders they surveyed reported the use of multiple illicit drugs. The rates of use for alcohol were 4 to 6 times the rate of nonoffenders; for marijuana, 14 times; and for other illicit drugs, 6 to 36 times, depending upon the drug. They estimated that 1.5% of the sample were both serious delinquents and serious substance abusers (see also Elliott, Huizinga, and Ageton 1985*).

In a sample of juveniles and young adults incarcerated in 50 long-term, state-operated facilities in 26 states, Beck, Kline, and Greenfeld (1988*) reported regular alcohol use among 50% and regular illicit drug use among 60%. In addition, 80% had used marijuana in the past, compared with 51% in NIDA's 1986 National High School Seniors Survey. For cocaine, the rates were 46% vs. 17%; amphetamines, 36% vs. 23%; LSD, 29% vs. 7%; PCP, 23% vs. 5%; and heroin, 13% vs. 1%.

Nearly half the respondents were under the influence of AOD when they committed their current offense. In another study of incarcerated juveniles, 81% used drugs (unspecified) during the six months prior to their incarceration (Farrow and French 1986*).

Dembo, Derke et al. (1986/7*) found substantially higher percentages of use among youth in a juvenile detention facility than in other surveys of comparably aged youth. Nearly all (90%) of juvenile detainees they studied in 1982 reported alcohol use at least once, compared with 65% among juveniles in NIDA's 1982 National Household Survey. Over four times as many reported alcohol use four or more times in the past month (38% vs. 6%). Substantially higher levels of marijuana, cocaine, hallucinogen, and heroin use were also found. In another study, Dembo, Washburn et al. (1987*) found high levels of frequent marijuana use among juvenile detainees, which seemed to be related to a lifestyle with high levels of involvement with serious criminal behavior.

In a survey of 882 New Jersey adolescents, White, Pandina, and LaGrange (1987*) found that 23% of the total sample were either serious substance abusers or delinquents, but not both. Only 7% fell in both groups. This was higher than the 1.5% estimated by Elliott and Huizinga (1984), probably because of differences in the sample age and measurement of substance abuse. Serious delinquency rates were much higher for males than females. The majority of serious delinquents were also serious substance abusers.

Johnston, O'Malley, and Bachman (1986), in a longitudinal study, found that the level of illicit drug use and the level of criminal activity in a sample of high school males covaried over a period of several years. In a 1985 survey in Washington state, summarized by Hawkins, Lishner et al. (1987), institutionalized delinquents had higher lifetime and current prevalence rates for all illicit drugs than high school seniors. For example, 84% of the delinquents had used marijuana, compared with 54% of high school seniors. Nearly two-thirds of the delinquents had used marijuana within the 30 days prior to incarceration, compared with 26% of the high school seniors.

If delinquent youths have high levels of drug use, youths heavily involved in drugs have also been found to commit more delinquent offenses. Johnson, Wish, and Huizinga (1983) found that drug users accounted for 40% of all index crimes, even though they made up only 1.3% of the population. In a sample of mostly Hispanic juvenile inhalant users, Frost Reed and May (1984*) found that the inhalant abusers were almost three-times more likely to be involved in criminal activity than were members of two other control group of delinquents.

In a New York City survey, 41% of heavy crack users were frequently involved in serious crimes, compared with 5% of light users and 2% of nonusers (Carpenter, Glassner et al. 1988*).

In the survey by White, Pandina, and LaGrange (1987*), about a third of the serious substance abusers were also serious delinquents, although this was a lower rate than the level of serious abuse among serious delinquents. This is consistent with the finding of Elliott and Huizinga (1984) that serious and frequent delinquent behaviors directly related to a full range of drug-use behaviors including problem use, but that the type and frequency of drug use was only directly related to selected types of crime (e.g., felony theft, selling drugs, and public disorder crimes) and not to general deviance.

Furthermore, while many youth mature out of both delinquency and drug use, for a small group, possibly 2%-6% of the youth population, both serious crime and frequent drug use appear to persist into adulthood. This population is responsible for a disproportionate number of violent and property crimes and other social costs (Hawkins, Jensen et al. 1988*).

Evidence also suggests the view that the drug-delinquency connection varies depending on type of drug, type of crime, and different demographic characteristics of the sample (e.g., Elliott & Huizinga 1984). A study of a sample of delinquent youths from Philadelphia found that personal drug use and drug selling had different associations with three types of self-reported delinquency (general theft, felony theft, crimes against persons). Drug use was positively associated with all three types of delinquency, whereas drug selling was associated only with felony theft and personal crime. It appears that drug users may be "generalists" in their criminal activity, while drug sellers are "specialists" (Goodstein, Kovacevic & Southeimer 1989*).

The crack epidemic has fueled concerns about the drug-crime connection among youth. Media attention has focused on how the high addictive liability of the drug engenders criminality among users to support their habits and how, as discussed below in the section on gangs, youth have become involved in drug trafficking and trafficking-related violence in unprecedented numbers. Unfortunately, there is still very little empirical data on crack use or dealing among youth. In Miami, Rivers (1989*) reported that youths known to be users of crack cocaine committed an "astounding" number of criminal acts. All the "serious delinquents" (median age 14.7) interviewed by Inciardi and Pottieger (1990*) had histories of multiple drug use and nearly 80% had some involvement in the crack business; the greater the involvement in crack sales, the more likely was drug use of all types.

Research studies have clearly established that deviant behavior and AOD use in adolescence are strongly correlated. Generally, young people who are frequent users of drug are more likely to engage in delinquent activities than those who are light users or nonusers. Similarly, delinquent youth are more apt to be heavy substance abusers than nondelinquent youth. What remains to be explored is the relationship between the two behaviors. Are they

caused by non-overlapping factors specific to themselves, or do they both (along with other deviant adolescent activities) derive from a common factor or factors? Also, do these behaviors merely occur together, or can one be said to be the cause of the other? These questions are discussed in the next two sections.

Etiology: The Deviance Syndrome

A long-standing question is whether there is a latent "deviance syndrome" that underlies delinquent behavior, AOD use, and other risk-taking or deviant behaviors in adolescence. Within the past 10-15 years, a number of important findings have emerged that shed substantial light on this question. A deviance syndrome can be defined as an individual's elevated probability of engaging in a wide spectrum of unconventional or deviant behaviors (Jessor & Jessor 1977). The concept of a deviance syndrome has meaning to the extent that major forms of deviant behavior (e.g., AOD use, delinquency, early sexual activity, rebelliousness, reckless driving, poor school attendance) can be shown to have a common etiology and that the presence of the deviant behaviors covaries in some predictable fashion. It is important to note that some behaviors (e.g., criminal activity, illicit drug use) are defined as deviant across the entire life span. Other behaviors (e.g., sexual activity, social use of alcohol) are defined as deviant until adulthood, at which point they are considered normal behavior.

Within the past few years a consensus has emerged among researchers that there is an underlying deviance factor associated with the production of a variety of deviant or risk-taking behaviors in adolescence. Evidence for this comes from three sources: (1) etiological research on risk factors; (2) age prevalence data; and (3) attempts to directly measure the presence of an underlying latent deviance factor.

Etiological and Risk Factor Research. The etiological literature, being cross-sectional and correlational, cannot answer questions about the causal relationships between different variables. But if there is a common deviance syndrome, there should be a common core of risk factors present in the backgrounds of both juvenile delinquents and adolescent AOD users. Although the existence of common background variables would not prove that an underlying deviance factor was the cause of both AOD use and delinquency, it would nonetheless be implausible that a deviance syndrome could exist without the presence of this commonality.

There is a large body of evidence showing considerable overlap in the risk factors found in the backgrounds of adolescents engaging in delinquency and/or AOD use (Loeber & Dishion 1983; Farrington 1985; Hawkins, Lishner et al 1987; Hawkins, Jenson et al. 1988*). White, Pandina, and LaGrange (1987*) found that variables related to any form of serious deviance discriminated between adolescents who met any criteria for serious substance abuse or delinquency from those who did not meet this criteria. Further, evidence exists that the presence of multiple risk factors is associated with a greater probability of drug use (Bry 1983; Elliott, Huizinga & Ageton 1985*; Kandel, Simcha-Fagan & Davies 1986*).

Table 1, located at the end of the Overview section, summarizes the findings of selected studies on specific risk factors for delinquency and for drug use conducted during the past 20 years. Those studies that identified the presence of a specific risk factor in the backgrounds of delinquents are listed for that risk factor under the delinquency subheading, and those that identified the presence of the risk factor in the backgrounds of adolescents engaging in AOD use are listed under that subheading. A study that reported evidence related to several risk factors for both delinquency and AOD use is listed at several points in the table. It is clear from this table that the amount of overlap in risk factors is substantial, particularly in the areas of antisocial behavior, family management practices and modeling, and peer influences.

Antisocial behavior. One risk factor clearly associated with both delinquency and AOD use is early antisocial behavior. Early antisocial and aggressive behavior has been strongly and consistently associated with later persistent and frequent delinquent activity (Farrington 1985, 1986; Loeber & Dishion 1983; Patterson 1982). The findings regarding this risk factor clearly indicate that the higher the level of aggressive behavior in the elementary grades, the more likely that deviant delinquent behavior will begin in adolescence. Early antisocial behavior also predicts frequent use of alcohol and other drugs in adolescence (Johnston, O'Malley & Eveland 1978; Kandel, Kessler & Margulies 1978; Kellam & Brown 1982; Simcha-Fagan & Gersten 1986).

School adjustment. Academic difficulties have been routinely identified as a predictor of both delinquency and AOD use. White, Pandina, and LaGrange (1987*) found the same school variables to be significantly related to both behaviors.

In regard to delinquency, several researchers have found a correlational relationship between it and academic failure and have proposed theoretical models linking the two (Loeber & Dishion 1983; Loeber & Stouthamer-Loeber 1987; Quay 1987). Academic failure may reflect the presence of learning disabilities or limited verbal abilities. Alternatively, anti-social behaviors may reduce academic achievement. Elliott, Huizinga, and Ageton (1985*) concluded that neither academic skills nor level of academic aspiration was directly related to delinquent behavior. Instead, it may be that delinquency is more related to attitudes and aspirations towards academic achievement. Related to this, Elliott and Voss (1974) found that delinquent behavior was related to

social functioning within the school rather than to attendance or academic achievement.

Research also indicates that poor school performance, underachievement, and failure are common risk factors for initiation of AOD use and heavier levels of abuse (Bry et al. 1982; Greenspan 1985; Hawkins, Jenson et al. 1988*; Kovack & Glickman 1986).

Family influences. Family management practices have also consistently been associated with adolescent criminal activity and AOD use. Children raised in families with lax or inconsistent discipline, excessively severe discipline, and poor parent-child communications are known to be at high risk for both AOD use and delinquency (Loeber & Dishion 1983; McCord 1979; Robins 1978). Adolescents from households with high levels of parental conflict are also at higher risk of delinquency and drug use (Baumrind 1983; Penning & Barnes 1982; Robins 1980). Family conflict should be differentiated from divorce or changes in family structure. Divorce *per se*, resulting in "broken homes," does not appear to be an important precursor of delinquent activity (Wilson & Herrnstein 1985). White, Pandina, and LaGrange (1987*) found only weak associations with either behavior, but this could be due to the relatively old age of the sample. Two-thirds of the sample were 18-21 years old, an age when family influences have declined.

Peer influences. The importance of peer influence in the etiology of both adolescent AOD use and delinquent behavior is clearly documented. For some of the more important studies listed in Table 1, including White, Pandina, and LaGrange (1987*), peer influences are the most, or among the most, important predictors of both. Elliott, Huizinga & Ageton (1985*) found that young people involved with prosocial friends were at low risk for drug dealing and use (see also Kandel, Simcha-Fagan & Davies 1986*).

Intrapersonal risk factors. While there is substantial overlap in the risk factors for delinquency and AOD use, some risk factors are more prominent for one behavior or the other. For example, White, Pandina, and LaGrange (1987*) found that intrapersonal variables were related to substance abuse but not to delinquency and that the strength of the different predictor variables varied between each type of behavior as well as across age groups.

Neurological factors have been implicated in the development of delinquency (Barnum 1985; Fenwick 1985; Peterson, Homer & Wonderlich 1982). This evidence centers on depressed levels of autonomic (Rutter & Giller 1983) and central nervous system (Mednick, Volavka et al. 1981) functioning. Attention deficit disorder (hyperactivity) has also been implicated in the development of delinquency (Olweus 1979; Rutter and Giller 1983).

Conversely, a sensation-seeking orientation has been correlated with early initiation of drug use and with use of multiple substances (Penning & Barnes 1982; Satinder & Black 1984; Spotts & Shontz 1984). However, a relationship between sensation-seeking and delinquency has not been definitely confirmed. The reported studies are divided as to whether this relationship exists (Karoly 1975; Thorne 1971; White, Johnson & Garrison 1985).

Finally, a genetic disposition to criminal activity has never been definitively confirmed (Wilson & Herrnstein 1985). There is a consensus emerging, however, that alcoholism is, in part, a disease involving a genetic predisposition. Convergent evidence from twin studies, adoption studies, and biological response studies suggest the role of a genetic predisposition for some male alcoholism (Hawkins, Lishner et al. 1987).

Summary. Thus there are several areas of overlap in the etiologies of delinquency and adolescent AOD use. These areas of overlap, while extensive, are not identical. There are specific risk factors that seem to relate either to AOD use or to delinquency, but not to both. In general, however, the social/familial factors are jointly related to both forms of deviant behavior, while the intrapersonal factors (e.g., attention deficit disorder) tend not to demonstrate such overlap. White, Pandina, and LaGrange (1987*) conclude that while the common-cause hypothesis is supported, there may be an additional set of predictors, which appear largely related to intrapersonal characteristics, that differentiates those young people who become serious delinquents from those who become serious substance abusers.

Age-Related Data. A second important source of evidence for assessing the presence of a common latent factor of deviance is the relative prevalence of delinquency and AOD use across different ages. There is a body of literature, smaller than the first, which examines this question. If an underlying common deviance factor is present, similar patterns in prevalence for both behaviors should be observed across different ages. The age-prevalence curves should reasonably correspond as to when they reach their peak, and they should consistently maintain the same slope, generally increasing or decreasing at about the same time.[1]

The most important evidence on this topic comes from several longitudinal studies conducted over the past decade assessing criminal activity and AOD use across different ages. These studies show that there is substantial similarity in the age-related prevalence for different types of delinquent behaviors and for AOD use among adolescents.

Using survey data collected beginning in 1964, Temple & Ladouceur (1986*) examined the self-reported rates of alcohol consumption and criminal offenses of a sample of 302 males in Oregon who had committed at least one recorded criminal offense by age 16. Fifty-six percent of the surveyed group, followed yearly to age 31, eventually reported committing at least one adult crime. For this group, criminal activity peaked around age 18 and thereafter sharply declined. At age 18, over 60% of the survey

respondents reported committing a crime during that year, over 70% were using alcohol, and about 35% reported the heavy use of alcohol. By age 21, over 90% were using alcohol and about 50% reported the heavy use of alcohol, but less that 20% reported that they had committed a criminal offense in that year. The rates for alcohol use and heavy alcohol use declined very slowly after that till age 31 (less than a 10% reduction for both alcohol measures). Thus, in this study, while delinquency and alcohol use rapidly increased in similar fashion in mid-adolescence, the pattern of prevalence differed after about age 18, with alcohol use maintaining high levels and criminal behavior substantially declining.

Johnston, O'Malley, and Bachman (1986) conducted a longitudinal study of 1,260 10th grade males beginning in 1966. The students were followed for eight years and were assessed on a number of measures, including the use of marijuana, the experimental use of psychoactive substances in pill form, the more regular use of pills, the use of heroin, and several measures of delinquency. Their findings support the covariation across different ages of illicit drug use and criminal behavior. In almost all combinations of age range, type of illicit substance used, and type of criminal activity, the prevalence curves for criminal activity and AOD use were similar. In general, the results indicated that the prevalence of deviant behavior peaked in the 16-20 year-old range and decreased after that point.

Osgood, Johnston et al. (1988*) reported the results of a longitudinal study of male high school students conducted over a four-year time span (roughly ages 18 through 22). For five specific deviant behaviors (an index of criminal behavior, heavy alcohol use, marijuana use, other illicit drug use, and dangerous driving), only criminal activity showed a substantial decrease in the age range covered. Heavy alcohol, illicit drug, and marijuana use increased very slightly, while dangerous driving decreased slightly.

Kandel, Simcha-Fagan, and Davies (1986*) conducted a longitudinal study of over 1,000 youths in New York state who were surveyed on self-reported delinquency and drug use for a nine-year period beginning at age 15-16. Results from the survey showed that nearly half of the young adult males and 25% of the young adult females had engaged in at least one crime. The results also showed a strong correlation between illicit drug use and delinquent activity, with the latter peaking in late adolescence and decreasing steadily after that point. This study was important in pointing out that somewhat different patterns of drug use and cessation of the deviant behaviors existed for men and women.

These findings present a consistent view of criminal activity and AOD use increasing in early- to mid-adolescence and peaking in late adolescence (ages 16-20). Criminal activity seems to peak somewhat earlier (in the 16- to 18-years-old age range), and also decreases much more rapidly than alcohol or drug use in the years after the peak prevalence is reached. It is important to note that the continued prevalence of alcohol consumption, as was found by Temple & Ladouceur (1986*) and Osgood, Johnston et al. (1988*), must be viewed in the context of increased social approval and availability once the early 20s are reached. This could, at least partially, account for the continued use of alcohol when criminal behavior is decreasing.

A number of factors have been proposed to explain the peak in prevalence of these deviant behaviors during adolescence. For example, the relative inability of adolescents to engage in productive employment might explain an increase in criminal activity (Greenberg 1985). However, this explanation does not explain the increased use of relatively cheap drugs such as alcohol. Explanations that focus on the relaxation of parental control and the corresponding increase in peer group relationships have been most prominent (Farrington 1986). For example, Elliott, Huizinga & Ageton (1985*) found that having friends who engaged in delinquency was the most important predictor of delinquency. After age 20, social control again may be reasserted through increases in other social ties such as marriage and job responsibilities (West & Farrington 1977; West 1982). Trasler (1979) proposed a somewhat similar explanation in which positive reinforcement for behavior shifts from parents to peers during adolescence, causing the adolescent to engage in more deviant behaviors.

It is important to note that these explanations generally do not make specific predictions differentiating between delinquency and AOD use. Both forms of deviant behavior fit equally well into the hypothesized model. As seen in the studies reviewed above, there is a consistent similarity in the patterns of prevalence of these different behaviors. Both AOD use and delinquency increase rapidly until mid- to late-adolescence, reach their peak prevalence, and then decrease after that. The difference in the patterns of the two sets of behaviors is that AOD use appears to decrease after age 20 at a slower pace than does criminal behavior. Other than this difference, there appears to be substantial similarity in the prevalence of these two deviant behaviors across the age span represented by these studies.

Latent Factor Analyses. Finally, four important studies have specifically tried to assess statistically the presence of a latent factor of deviance underlying both delinquency and AOD use using sophisticated analytic techniques to assess the strength of models that hypothesize the presence of the latent deviance factor. These studies provide estimates of the relative contribution of a common deviance factor and of specific factors in several types of deviant behavior. All have come to similar conclusions.

Two of these studies, Donovan and Jessor (1985*) and Donovan, Jessor & Costa (1988), are replications of a four-year longitudinal study by Jessor and Jessor (1977) of over 400 randomly-selected secondary school students (beginning in grades 7, 8, and 9), male and female. By the end of

the study, in 1972, the students were in grades 10, 11, and 12. A random sample of male and female college freshman were also followed for four years. Each year the students were asked to complete a 50-page questionnaire that requested self-report information on a wide range of behavioral and personality issues. Included were issues related to drug use, sexual behavior, alcohol use, protest behavior, and a composite measure of general deviance, which included behaviors such as aggression, stealing, and lying. The Jessors concluded that their data supported the concept of a "syndrome," which included positively correlated deviant behaviors such as drinking, marijuana use, delinquency, and early sexual behavior. All of the deviant behaviors were negatively correlated with measures of conformity and conventional behavior. They concluded that the positive correlations between all of the deviant behaviors were the result of an underlying "deviance syndrome," which influenced all of the deviant behaviors and the variable of unconventionality in adolescence.

Donovan and Jessor (1985*) reanalyzed the Jessor and Jessor (1977) data using factor analytic techniques to reach more conclusive findings regarding the presence of a single latent deviance factor underlying the positive association of delinquency, AOD use, and other deviant behaviors. Results showed that a single common factor accounted for between 23% and 44% of the variance of the deviant behaviors. In less technical terms, the percentage of variance reflects the extent to which the reported levels of a deviant behavior seemed to rise or fall together. That is, high levels of one deviant behavior in one individual tended to be associated with high levels of other deviant behaviors, suggesting that they were linked to a common, underlying deviance variable. All of the deviant behaviors, with one exception (frequency of sexual experience in the college male sample), were significantly related to the common latent factor.

Donovan, Jessor & Costa (1988) replicated the Donovan and Jessor (1985*) findings with a new sample of 1,588 students in grades 7-12 using essentially the same outcome measures as before. Again, a common latent factor was found that accounted for a large proportion of the variance for all of the measures of deviant behavior: 48% of the variance among males and 37% among females.

Osgood, Johnston et al. (1988*) also attempted to examine the fit between observed correlations of deviant behaviors with several models hypothesizing a common, latent deviance factor. This was a longitudinal study incorporating three waves of data from ages 18 to 22. Consistent with the research of Jessor and Donovan, a baseline version of the model showed that within each wave of data collection a substantial amount of the variance of the deviant behaviors could be accounted for by the single latent factor. This finding means that the frequency with which the study participants reported themselves as engaging in the separate deviant behaviors seemed to covary, suggesting that the prevalence of the deviant behaviors were linked to the level of an underlying deviance trait.

In a more complex model, the percentage of variance of the deviant variables that could be attributed to a single general latent deviance factor *and* the percentage of variance associated with factors specific to each deviant behavior were calculated for each wave of data. Both the general and the specific factors accounted for significant portions of the variance of the deviant behaviors. In other words, the amount of deviant behavior seemed to depend not only on a general latent deviance variable but also on variables that were unique and specific to each of the deviant variables. Also, the amount of variance accounted for by the general factor varied across deviant behaviors, and it even varied within the deviant behaviors across time. This information is presented in Table 2.

For example, criminal behavior was primarily accounted for by the general factor at Time 1 of the study, but the relative percentage of variance that was accounted for by the general factor (as measured by the percentage of various accounted for by the general factor) decreased throughout the study. Heavy alcohol use was another variable that saw a relative reduction in the importance of the general deviance variable. The other deviant variables remained stable over the course of the study in terms of the importance of the general factor. However, they appeared to be more heavily influenced by specific factors unique to the particular deviant behavior.

The Osgood, Johnston et al. (1988*) analysis confirms the importance of a general factor of deviance underlying the presence of much deviant behavior in adolescence. However, the common deviance factor accounted for only a quarter of the variance for some behaviors. This suggests that the relative influence of the general deviance factor may vary for specific problem behaviors and within a problem behavior at specific times in life. Nevertheless, the presence of a general factor of deviance is strongly confirmed.

Newcomb and Bentler (1988) conducted a nine-year longitudinal survey on the consequences of adolescent drug use, including criminality. The sample consisted of 654 subjects out of an original sample 1,634 youths in Los Angeles County which were originally surveyed in junior high in 1976. Teenage drug use changed dispositions and tendencies toward criminal behavior. Drug use increased stealing, involvement with drug-related crimes (e.g., driving under the influence, drug selling and drug possession), assault, and other confrontational acts. Although early drug use significantly affected the frequency of arrests and convictions for drug crime involvement, it did not generalize in a positive direction to other types of crime. Furthermore, drug users were involved in fewer violent crimes (e.g., vandalism, carrying a deadly weapon). This suggests that drug use may become less associated with

general deviancy (as reflected in all types of criminal activities) over time.

Summary. These four separate sources of evidence provide strong support for a common underlying factor in the etiology of delinquency and AOD abuse. This factor, conceptualized as a general deviance syndrome (Jessor & Jessor 1977) or latent deviance factor (Donovan & Jessor 1985*), appears to consistently underlie AOD use and delinquent behavior, as well as other forms of deviant behavior, and to account for roughly 25%-75% of the variance of a range of deviant behaviors. However, the above evidence also suggests that specific factors, unrelated to a general deviance factor, separately influence delinquency and AOD use. These specific factors may include some of the risk factors that were not equally represented for both delinquents and adolescent AOD users. The age-prevalence curves for both behaviors, while quite similar until about age 18, do diverge after that age, suggesting differing influences on these behaviors. Furthermore, Osgood, Johnston et al. (1988*) found that the common deviance factor accounted for as little as one-fourth of the variance for some of the deviant behaviors.

Therefore, the most plausible model for the relationship between delinquency and AOD use is a general latent factor of deviance producing much of the deviant behavior, with specific factors each influencing AOD use and delinquency at different points in adolescence. This mixed model represents the best fit with the empirical data and is consistent with theoretical perspectives on deviance in adolescence (cf. Elliott, Huizinga & Ageton 1985*).

Causality

There are plausible models that can be developed to support two alternative hypotheses: that AOD use causes criminal behavior, or that criminal behavior causes AOD use. For example, AOD use could be hypothesized to cause an increase in criminal activity because the addiction to illicit drugs creates a need for increased income, which in turn induces the addict to commit economically profitable crimes such as burglary. This is often called the "economic necessity" hypothesis (Kraus 1981; McCord 1981). It could also be hypothesized that increased involvement in criminal activities leads to participation in, and identification with, a criminal subculture. This, in turn, increases exposure to role models with extensive use of alcohol and/or illicit drugs. This exposure could lead to increased AOD use (Krohn, Lanza-Kaduce & Akers 1984; Elliott, Huizinga & Ageton 1985*).

Several studies have attempted to asses this causal relationship. Among these, Clayton (1981) conducted a secondary analysis of data from over 3,000 adolescents using three criteria of causality. The data indicated that minor delinquency was marginally antecedent to alcohol/marijuana use, which in turn was antecedent to hard drug use and serious delinquency.

In one of the few studies in the field specifically examining ethnic differences, Dawkins and Dawkins (1983*) found that alcohol drinking had a significant effect on minor delinquency (such as status offenses) for all adolescents. However, for serious crimes, drinking was strongly associated with serious delinquency for Blacks and Whites, but not for Hispanics, suggesting the influence of cultural factors. Only for Blacks was drinking the most important single predictor of delinquency in general.

Despite well-developed hypotheses, it has proven impossible to determine the causal relationship between adolescent AOD use (or adult AOD use, for that matter) and criminal activity (Watters, Reinarman &Fagan 1985*). There are several reasons for this. First, most of the research attempting to demonstrate a causal relationship has been correlational and cross-sectional (e.g., Kraus 1981; Clayton 1981; Hollin 1983; Farrow & French 1986*; Frost Reed & May 1984*). The methodology of these studies, while informative about the general relationship among the variables, is unable to unambiguously assess causality.

Second, it is very difficult to define precisely the onset or cessation of a criminal lifestyle, of alcohol abuse, or of illicit drug abuse (Hundleby 1987*). When examining criminal behavior, should onset be defined as the first officially recorded criminal offense or the first self-reported offense? Should status offenses be included or not? Official records are not reliable indices of criminal activity (Lipsey 1983), and so will provide only a gross indication of the onset of criminal behavior. Going further, the onset of criminal behavior could be defined as the first time a juvenile commits an offense such as shoplifting, minor vandalism, or malicious mischief. These events are likely to occur at a young age and will likely be undocumented; nevertheless, they could reasonably be considered criminal activity. Just as important, if onset of criminal activity is defined by very early deviant activity, this is likely to precede the onset of illicit drug use. Conversely, initiation of alcohol use is likely to precede the first recorded court adjudication. In these examples, the causal connection between delinquent behavior and AOD use is confounded by the level of deviance of the two variables. If the behaviors are of unequal levels of social deviance, however that is measured or defined, the temporal relationship of the variables is unlikely to be very informative about their causal relationship.

A third difficulty arises when AOD use is presumed to be a cause of delinquency. There are at least two distinct meanings to the statement that AOD use "causes" crime. The most limited meaning is that the physiological effects of the chemical actually produce a criminal event that would not otherwise occur. For example, the use of alcohol, marijuana, or other illicit drugs immediately prior to commission of a criminal offense has been studied

several times to determine if any particular drug is related to specific forms of criminal abuse (Tinklenberg, Murphy et al. 1974, 1981). In this sense of the term, the causal relationship is presumed to stem from the physiological impact of the chemical (e.g., causing a reduction of inhibitions).

Another meaning implied by "cause" is that the individual who is chronically engaged in AOD use may have a greater propensity to engage in criminal activity, but not necessarily because of the direct physiological action of the chemical. This is the meaning most frequently used in the literature (Simonds & Kashani 1980; Kraus 1981; Frost Reed & May 1984*; Farrow & French 1986*). For example, it might be hypothesized that addicts need to increase their income to purchase more heroin, or that involvement in an AOD-using subculture exposes the individual to more deviant role models.

An even more insidious problem occurs with the longitudinal literature because of the time lag between data gathering waves. The shortest time between data gathering is usually one to two years, but often it is longer. During a year's time, an adolescent could become involved with criminal peers, leading to greater AOD use; or the adolescent could become involved with peers with heavy AOD involvement, leading to increased criminal activity. In either case, because these events take place within a year's time span, the events will appear to have been initiated simultaneously, and establishing causality will not be possible.

In short, there are substantial, perhaps insoluble, methodological problems involved in any attempt to accurately assess the causal relationship between delinquency and AOD use. To date, these problems have not been overcome, and it is unlikely, without the expenditure of enormous research effort, that this relationship will ever be successfully disentangled with current methodological technology. Most research indicates that serious delinquency generally precedes illicit drug use, but it is impossible to say whether delinquency and AOD use can be regarded as causes of the other. Interestingly, although Farrow and French (1986*) could not establish a causal connection between drug use and delinquency, the incarcerated delinquents that they studied perceived a strong relationship: 39% said that drug use caused their criminality. They suggest that more attention be devoted to the reasons for this perception.

Youth Gangs

Related to the subject of delinquency and drug use is the involvement of gang members in AOD abuse, drug dealing, and other criminal behavior, especially violence. The definition of a gang varies greatly, but Fagan (1989*) identifies it as a group of adolescents who are perceived by others as a distinct aggregate, recognize themselves as a denotable group, and have developed a negative response from the neighborhood and/or law enforcement because of illegal incidents. By whatever definition, in popular perception and media accounts it appears axiomatic that gang members are heavily and increasingly involved in all these deviant behaviors in large part due to drug abuse and trafficking. Community concerns over such gang activities have escalated and, as a result, so have gang reduction activities. Reflecting these concerns, two national conferences on drugs and youth gangs were recently held in Los Angeles to highlight the problem.[2] Last year, California issued a state task force report on gangs and drugs (California 1989).

However, most of the evidence cited is anecdotal, and like the delinquency-drug connection, there are many unanswered questions about the youth gang membership, crime, and drug use and trafficking. Furthermore, the research that does exist indicates that many popular perceptions both exaggerate and overly simplify a complex problem.

There is no doubt that gang membership and illegal youth gang activity have been increasing rapidly, both in cities with a history of gang problems and in cities without such a history. In Los Angeles, the number of gangs and the number of gang-related homicides increased an estimated 71% between 1985 and 1988 (Bryant 1989). The lethality of youth violence in the United States is now unprecedented: in 1986, 48% of those arrested for violent crime were under age 25. Homicide is now the second leading cause of death for those age 15-24.

The rise in gang membership itself is recognized as related to several broad sociocultural and economic factors. These include the disintegration of the family, which has enhanced the appeal of the gang as an alternative support system and a sense of security in life, and the declining employment opportunities for youth in the inner-cities.

Much of the gang-related violence that has occurred has been attributed to the influence of drugs, especially crack, along with access to powerful, sophisticated weapons. As Terrence Donahue, Acting Administrator of the U.S. Office of Juvenile Justice and Delinquency Prevention (OJJDP), has stressed: "The escalation of youth gang violence has left many communities virtually unprepared to provide an adequate response to a growing national dilemma. Much of this violence is drug-related, spurred on by the illegal, yet enormous, profits drug dealers earn. The fierce circle of drugs, profits, and violence threatens the freedom and public safety of citizens from coast to coast" (quoted in Bryant 1989).

In Fagan's (1989*) survey of male gang members in Chicago, Los Angeles, and San Diego, drug use prevalence rates were higher than for other inner-city adolescents, and the majority of gang members reported engaging in some type of criminal activity; half (51%) reported drug sales.

The ease with which crack can be produced and marketed, the tremendous profits that can be earned, and its high addiction liability have had a profound

Second, the program will have to be designed to provide multiple services that will respond to the particular constellation of risk factors that an adolescent brings to the program. The adolescents, particularly those with the most severe problems, are likely to have several risk factors, ranging from family dysfunction to poor academic performance to a lack of conventional attitudes and beliefs. It is likely that the particular mix of risk factors and the relative importance of each in the adolescent background will vary from program client to program client. As Dembo, Derke et al. (1986/7*) observe, reducing both drug use and continued criminal activity requires a range of comprehensive services that address the various personal problems of juvenile offenders, in addition to their drug use.

These considerations are already being applied to new and innovative programs around the country (cf. Catalano, Wells et al., in press; Haggerty, Wells et al. 1989*). It is worth noting that in a recent meta-analysis of the juvenile delinquency treatment literature, Lipsey (1990) found that one of the most effective treatment modalities for delinquency was multi-modal programs. These were programs that provided a range of services targeted to work with a variety of problem areas and needs of the juvenile.[3] Similar conclusions have been reached in the substance abuse literature (Austin 1988).

The commonalities in risk factors add importance to expanding our drug prevention efforts as a means to help prevent delinquency as well. Weisheit (1984*) observes that primary prevention of delinquency has rarely been attempted because of numerous implementation problems. However, because the risk factors for delinquency are so similar to those of drug abuse, the current generation of comprehensive drug prevention strategies may provide a means to circumvent or minimize these problems and accomplish a reduction in both drug use and delinquency. In order to determine if this is the case, we need to evaluate our drug prevention programs not only on the basis of drug-using behavior but criminal behavior as well.

White, Pandino, and LaGrange (1987*), on the other hand, voice concerns about combining delinquents and substance abusers in integrated intervention programs. They stress that the differences between the nondelinquent serious substance abusers and serious delinquents who are not substance abusers warrant attention to individualizing treatment to these populations. They warn that, given the significant influence of peers on these behaviors, combining both groups in a single intervention program "may perpetuate further socialization into alternative forms of deviance."

Conversely, Elliott, Huizinga, and Ageton (1985*) stress the importance of exposing delinquent youth and those at risk to prosocial, conventional peers. A Teen Court program incorporating positive peer pressure and parental involvement appears to have had a positive effect on both teen crime and drug abuse (Rothstein 1987).

In other recommendations, Farrow and French (1986*), among others, especially emphasize the importance of involving parents in prevention and intervention programs. This improves parenting and family management skills, and thus increases the protective factor of family bonding, and to reduce the influence of family modeling on both behaviors (see also Hawkins, Jenson et al. 1988*).

Braukmann, Bedlington et al. (1985*) found that a Teaching-Family model of residential treatment for delinquency had an immediate significant impact on AOD use. At the same time, they did not find a significant long-term effect because of the lack of aftercare. The need for aftercare services for the delinquent substance abuser is stressed by Haggerty, Wells et al. (1989*) and Catalano, Wells et al. (in press).

Elliott, Huizinga, and Ageton (1985*) also argue that targeting at-risk youth is more efficient and cost-effective than broad-based programs for those at low risk of engaging in either delinquency or drug use. This, of course, raises the problem of developing effective assessment or identification instruments, a problem which has yet to be adequately addressed. What is essential is that we learn to identify those youth most at risk of both behaviors and intervene early to reduce the underlying risk factors. Summarizing their review of the literature on delinquency and AOD use risk factors, Hawkins, Jenson et al. (1988*) observed that early intervention programs should seek to reduce conduct disorders and antisocial behavior, correct poor family-management practices, prevent school failure, counter family and peer influences, and promote the development of social skills (see also Dembo, Derke et al. 1986/7*).

These data also suggest that delinquency detention and treatment programs may provide an important means for accomplishing a reduction in client AOD use (Dembo, Derke et al. 1986/7*). Indeed, Inciardi and Pottieger (1990*) recommend that, given the attractiveness of crack and crack dealing to at-risk youth, compulsory intervention through the court system is essential.

Just as important as these general considerations, the findings reported in this review have significant importance for specific features of program operations or services. For example, age differences were found both in the prevalence of specific deviant behaviors and in the relative contributions of the general deviance factor as opposed to specific factors (e.g., Kandel, Simcha-Fagan & Davies 1986*; Osgood, Johnston et al. 1988*). From this perspective, a program might want to tailor its services so that they are congruent with expected age trends. Given that a program is serving clients in late adolescence, it might be advantageous to concentrate intervention or prevention services on the persistent heavy use of alcohol that is prevalent at that age. Since this behavior is more persistent than criminal activity, program efforts with chronic alcohol use may be more appropriate.

Drawing again from the Osgood, Johnston et al. (1988*) findings, it is also important to recognize that a general deviance factor is more important for some forms of deviant behavior than for others. Criminal activity at age 18 is heavily dependent upon a general deviance factor, while dangerous driving is only minimally related to a general deviance factor. Tailoring program activities to best address the relative mix of general and specific causes of the deviant behavior seems logical.

Regarding the problem of youth gangs, at the recent OJJDP gang conference it was stressed that the first step of any antigang strategy is to overcome community denial that gangs exist. Furthermore, all components of the community must work together in a coordinated effort. Entire systems, not just law enforcement, must address the problem in a coordinated, comprehensive manner, beginning with early prevention efforts to stop youth from ever becoming involved in the world of gangs. Among the critical school strategies identified were: (1) establishment of clear expectations about acceptable behavior; (2) maintenance of visible staff on campus to create a sense of safety and to send a message to gang members that they do not control the schools; and (3) parent involvement (Bryant 1989).

The California State Task Force on Gangs and Drugs (California 1989) recommended that school codes prohibit the displaying of gang "colors." Morales (1990) recommends, however, that students not be forbidden from wearing certain types of clothing, since they will find some other way to express their gang affiliation or to imitate gang behavior. However, schools should severely punish those who bring weapons or drugs to school, whether gang members or not.

The gang problem especially highlights the need for expanding drug prevention efforts to include socioeconomic changes within the community. Moore (1990) observes that when there is little community control and support and where jobs are scarce, most socialization occurs within gangs and few members have the opportunity to "mature out" of the gang. The California State Task Force (1989) also stresses that the drugs-gang connection will not be broken until viable job opportunities are available. Also, they recommend an expansion of after-school, weekend, and summer youth programs to appeal to older adolescents to provide a safe alternative to gangs. Reinforcing this recommendation is Tobler's (1986) conclusion in a meta-analysis of prevention programs that alternative programs were the most effective modality for at-risk youth, apparently because they provided them with a sense of self-worth and control over their lives.

This is a time of rapid progress in this field. The etiology of a broad range of deviant behaviors is becoming clear. A rapid reassessment of the success of social-science-based prevention and intervention strategies is underway. Particularly in light of the pessimism that was expressed just 15 years ago (Lipton, Martinson & Wilks 1975), this change is all the more refreshing.

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[1]The actual form of the age-prevalence curves depends on several factors. These include the particular form of the measurement variable (e.g., initiation vs. frequency of use) and the seriousness of the delinquent behavior being measured (e.g., shoplifting vs. assault). There would be little likelihood of finding a similarity in the prevalence across different ages for petty vandalism and heroin use.

[2]The first conference, sponsored by the U.S. Office of Juvenile Justice and Delinquency Prevention, brought together representatives from 19 metropolitan cities where youth gangs are an emerging problem. The conference proceedings are summarized in Bryant (1989). The second conference, sponsored by the California School of Professional Psychology at Los Angeles and the U.S. Office of Substance Abuse Prevention, was a National Conference on Substance Abuse and Gang Violence, held March 30-31, 1990.

[3]These programs averaged about a .25 standard deviation advantage of the treatment group over the control group.

Table 1. Selected Studies Demonstrating Risk Factors Associated with Adolescent Delinquency and AOD Use

Family Management Practices

Delinquency	AOD Use
Farrington 1986	Adler & Lutecka 1973
Loeber & Dishion 1983	Jessor & Jessor 1977
McCord 1979	Kandel, Simcha-Fagan & Davies 1986
Robins 1978	Norem-Hebeisen et al. 1984
	Penning & Barnes 1982
	Simcha-Fagan & Gersten 1986

Family Conflict

Delinquency	AOD Use
Baumrind 1983	Baumrind 1983
Farrington 1985	Kovach & Glickman 1986
Kovach & Glickman 1986	Penning & Barnes 1982
McCord 1979	Robins 1980
Penning & Barnes 1982	Simcha-Fagan & Cersten 1986
Robbins 1980	

Parent and Sibling Modeling

Delinquency	AOD Use
Blumstein et al., 1985	Ahmed et al. 1984
Farrington 1986	Johnson et al., 1984
Langner et al. 1983	Kandel et al., 1978
Loeber & Dishion 1983	Kandel 1982
McCord 1979	Lawrence & Vellerman 1974
Robins 1979	Rachal et al., 1982
West & Farrington 1973 1977	Thorne & DeBlaissie 1985

Family social deprivation

Delinquency	AOD Use
Blumstein et al., 1985	Blumstein et al., 1985
Farrington 1985	Farrington 1985
Simcha-Fagan & Gersten 1986	Simcha-Fagan & Gersten 1986
Thornberry & Farnworth 1982	
Van Dusen et al. 1983	

Early Antisocial Behavior

Delinquency	AOD Use
Farrington 1985 1986	Johnston et al. 1978
Loeber & Dishion 1983	Kandel 1978
Patterson 1982	Kandel, Simcha-Fagan & Davies 1986
	Kellam & Brown 1982
	Simcha-Fagan & Gersten 1986

Table 1. Selected Studies Demonstrating Risk Factors Associated with Adolescent Delinquency and AOD Use (Cont.)

School Failure

Delinquency
Farrington 1986
Figueria-McDonough 1985
Hawkins & Lishner 1987
Johnson 1979
Kovach & Glickman 1986
Loeber & Dishion 1983
Spivack 1983
White et al. 1987

AOD Use
Anhalt & Klein 1976
Holmberg 1985
Hundleby 1986
Jessor 1976
Jessor & Jessor 1977
Johnston 1973
Kandel et al. 1978
Kovach & Glickman 1986
Robins 1980
White et al. 1987

School Bonding

Delinquency
Catalano et al. 1985
Elliott & Voss 1974
Hindelang 1973
Hirschi 1969
Kelly & Balch 1971
Kleinman et al. 1986
Lawrence 1985

AOD Use
Annis & Watson 1975
Friedman 1983
Johnston et al., 1985
Kandel 1982
Kim 1979
Kleinman et al. 1986

Peer Factors

Delinquency
Akers 1977
Elliott, Huizinga & Ageton 1985
Hirschi 1969
Kleinman et al. 1986
Loeber & Dishion 1983
White et al. 1987

AOD Use
Clayton & Ritter 1985
Elliott, Huizinga & Ageton 1985
Jessor & Jessor 1978
Jessor et al., 1980
Kandel 1978, 1982, 1985
Kandel & Adler 1982
Kleinman et al. 1986
Norem-Hebeisen et al., 1984
O'Donnell & Clayton 1979
White et al. 1987

Attitudes and Beliefs

Delinquency
Akers et al., 1979
Catalano et al., 1985
Hirschi 1969
Hindelang 1973
Hundleby 1987
Jessor & Jessor 1978
Kandel 1982
Kandel et al. 1978

AOD Use
Akers et al., 1979
Catalano et al., 1985
Hirschi 1969
Hindelang 1973
Hundleby 1987
Jessor & Jessor 1978
Kandel 1982
Kandel et al., 1978

Table 1. Selected Studies Demonstrating Risk Factors Associated with Adolescent Delinquency and AOD Use (Cont.)

Community Integration

Delinquency	*AOD Use*
Kobrin & Schuerman 1981	[None]
Murray 1983	
Sampson et al., 1981	
Schlossman et al., 1984	
Wilson & Hernnstein 1985	

Mobility

Delinquency	*AOD Use*
Farnworth 1984	Catalano et al., 1985
Farrington & West 1981	
Felner et al., 1981	

Personality

Delinquency	*AOD Use*
Barnum 1985	Ahmed et al. 1984
Fenwick 1985	Gottfredson 1981
Karoly 1975	Penning & Barnes 1982
Mednick et al. 1981	Satinder & Black 1984
Olweus 1979	Spotts & Shontz 1984
Peterson et al. 1982	
Rutter & Giller 1983	
Thorne 1971	
Weiss 1983	
White et al., 1985	
Wilson & Hernnstein 1985	

Table 2. The Relative Contributions of a General Deviance Factor and Specific Factors in the Prediction of Five Types of Deviant Behavior (taken from Osgood et al. 1988*)

Deviant Behavior		Measure's Reliability	Pct. of Reliable Variance General Factor	Specific Factors
Criminal Behavior	Time 1	.70	74%	26%
	Time 2		55%	45%
	Time 3		50%	50%
Heavy Alcohol Use	Time 1	.70	45%	55%
	Time 2		38%	62%
	Time 3		31%	69%
Marijuana Use	Time 1	.90	36%	64%
	Time 2		35%	65%
	Time 3		35%	65%
Other Illicit Drug Use	Time 1	.76	38%	62%
	Time 2		43%	57%
	Time 3		46%	54%
Dangerous Driving	Time 1	.49	27%	73%
	Time 2		32%	68%
	Time 3		29%	71%

ABSTRACTS

BECK, ALLEN J.; KLINE, SUSAN A.; AND GREENFELD, LAWRENCE A. 1988. *Survey of Youth in Custody, 1987*. Bureau of Justice Statistics Special Report, NJC-113365. Washington, D.C.: Bureau of Justice Statistics, U.S. Department of Justice. 6 refs.

In this survey conducted by the Bureau of the Census for the Bureau of Justice Statistics in 1987, interviews were conducted with juveniles and young adults (n=2,621) in 50 long-term, state-operated juvenile facilities in 26 states. The interview covered criminal history, family situation, peer-group activities, and drug and alcohol use. The population from which the sample was selected made up only about 4% of the total number of youth handled annually by the juvenile justice system. Results are reported here only for those respondents less than 18 years old and for questions related to drug and alcohol use.

Drug Offenses. Of the juveniles incarcerated in state-operated facilities in 1987, 5.6% were being held for a drug offense. Regardless of the type of crime for which the juveniles were currently being held, 22.1% had previously been sentenced to probation or incarceration for drug offenses. Of those serving time for drug offenses, 60.8% had previously been on probation or incarcerated for a drug offense.

Alcohol Use. Use of alcohol on a regular basis (at least once a week in the year prior to admission) was reported by 55.4% of the juveniles; 31.9% were under the influence of alcohol at the time of their current offense.

Drug Use. Just over 80% reported using any illicit drug at some time in their life; 59.7% used some drug regularly (at least once a week for at least a month); and 39.1% were under the influence of an illicit drug at the time of the current offense. Regular use of specific drugs were as follows: marijuana/hashish 56.6%; cocaine 19.6%; amphetamines 15.6%; LSD 11.5%; barbiturates 9.3%; PCP 6.4%; quaaludes 3.1%; and heroin 4.5%. At the time of committing their current offense, 31.7% were under the influence of marijuana; 12.9%, cocaine; 7.3%, LSD; 6.4%, amphetamines; 3.4%, PCP; 2.9%, heroin; 2.8%, barbiturates; and 0.9%, quaaludes.

Initiation. Use of any drug began at less than 10 years old for 19.7% of the juveniles, with the most common time for beginning drug use being between age 12 and 13 (33.9%). While 10.5% began using drugs regularly before age 10, most began regular use between the ages of 12 and 13 (37.4%).

Use at Time of Crime. Nearly half (47.6%) of the juveniles were under the influence of either illicit drugs or alcohol at the time of committing their current offense. The largest percentage of offenders who were under the influence were drug offenders (59.3%). The largest percentage of offenders who were under the influence of illicit drugs (only) at the time of the current offense were those being held for drug possession (36.0%). Being under the influence of alcohol at the time of the current offense was most commonly reported by those who were serving time for murder (17.3%).

BLANE, HOWARD T. 1982-1983. Problem drinking in delinquent and nondelinquent adolescent males. *American Journal of Drug and Alcohol Abuse* 9(2):221-232. 14 refs.

To determine whether problem drinking among delinquent youth differs qualitatively from problem drinking among nondelinquent youth, a self-report questionnaire was administered to 49 boys (aged 13-18 years) at a detention and evaluation center in a northeastern city. A control group of 100 drawn from a national survey matched for region, sex, age, and racial composition with the delinquent sample. The questionnaire asked about background information, drinking behavior and its consequences, and use of substances other than alcohol. Problem drinking was defined as four or more reported occasions of drunkenness over the previous year and/or two or more areas of negative consequences from drinking (school, friends, driving, dating, police).

Problem Drinking. The delinquent and nondelinquent males were significantly different in the percentage who were problem drinkers. Over two-thirds (67.4%) of the delinquents were problem drinkers, compared with 39.0% of the nondelinquents. Further analysis of the results indicated that delinquent problem drinkers, compared with nondelinquent drinkers, drank more per day, drank more often, had more negative consequences in a greater variety of areas, and were more likely to perceive themselves as having a drinking problem (all significant). For nonproblem drinkers, the only significant difference was that delinquents reported more times drunk than nondelinquents. In general, delinquents have more severe problems with drinking than nondelinquents.

Illicit Drug Use. Delinquent problem drinkers were significantly more likely to use illicit drugs in the past six months than nondelinquent problem drinkers. For instance, 96.9% of the delinquents reported using marijuana in the past six months, compared with 75.7% of the nondelinquents; the figures for other psychotropics (LSD, amphetamines, barbiturates) were 53.1% and 20.5%, and for hard drugs (cocaine, heroin), 43.8% and 0.0%. Among nonproblem drinkers, over twice as many delinquents as delinquents used marijuana

(80.0% vs. 37.3%), but use of other drugs by either group was very low.

Correlates of Problem Drinking. Among problem drinkers, three differences between the two groups were significant:. Compared with nondelinquents, delinquents: (1) had a lower mean grade level (9.8 vs. 10.6); (2) were less likely to be living with both parents (46.9% vs. 87.2%); and (3) were less likely to have been given a taste of alcohol by their parents (68.8% vs. 92.1%). For nonproblem drinkers, delinquents were less likely to have been given a taste of alcohol by their parents (38.5% vs. 78.8%) and they had their first drink later than nondelinquents (14.1 years vs. 12.5).

Conclusions. In agreement with previous studies, the results indicate that problem drinking is higher among delinquents than among nondelinquents, and that problem drinking delinquents have more severe problems, have higher levels of illicit drug use, and experience a broader range of social and family pathology than problem drinking nondelinquents. Delinquents who do not have drinking problems differ little from nondelinquents without drinking problems. The high levels drinking and drug use among delinquents suggest that delinquency treatment programs need to include alcohol and drug education and prevention components.

BRAUKMANN, CURTIS J.; BEDLINGTON, M., ET AL. 1985. Effects of community-based group-home treatment programs on male juvenile offenders' use and abuse of drugs and alcohol. *American Journal of Drug and Alcohol Abuse* 11(3/4):249-278. 48 refs.

In recent years, group homes for juvenile offenders have gained in popularity as a result of the trend toward deinstitutionalization. Group homes are small residential facilities where a group of four to ten adolescents live with program staff, who provide various forms of support and guidance. Little research, however, has been conducted to determine the effect of group-home treatment on alcohol and drug use by juvenile offenders.

This study compared eight homes in Kansas using the Teaching-Family model with nine homes in which the Teaching-Family model was not used. The Teaching-Family homes consisted of a live-in married couple who had been certified by the National Teaching-Family Association or who were in inservice training. Each couple had received training in the teaching of specific skills, self-government, motivation, relationship development, and youth advocacy. In addition, the youths in the group homes were matched with a friend; these friends served as a control group. Over the course of the study, the average daily attendance was 5.3 at the Teaching-Family homes and 6.5 in the non-Teaching-Family homes. The average age of the youths was 15.

Findings. The Teaching-Family group-homes had a significant impact on alcohol use, marijuana use, and some prosocial behaviors (achieving good grades, helping others) while the youths were in treatment. But neither the Teaching-Family nor the comparison group homes showed any significant effect one year after treatment. During treatment, the Teaching-Family youths had significantly lower drug measures and significantly higher prosocial scores than their matched friends. One year after treatment, only the prosocial measure was significantly different. There were no significant differences, either during treatment or after treatment, between the non-Teaching-Family youth and their matched friends.

Conclusions. It appears that group homes, particularly those that follow the Teaching-Family model, can reduce drug use and encourage prosocial behaviors during treatment. But long-term effects are less likely. While the results of this study support the need for alcohol and other drug prevention components in delinquency treatment programs, it also highlights the need for additional research to develop programs that would have more lasting effects on substance use. Certainly, followup supervision and guidance after the group-home experience would appear to be necessary in order to reinforce the improvement gained during treatment.

CARPENTER, CHERYL; GLASSNER, B.; JOHNSON, B. D.; AND LOUGHLIN, J.. 1988. *Kids, Drugs, and Crime*. Lexington, MA: Lexington Books. 223 refs.

This study sought to understand how adolescents define, perceive, and conduct themselves as regards drug use and criminal activities through lengthy interviews with young people in "Yule City" in New York. Three samples were selected: (1) a purposive sample of young people who had been identified after several months of field work as being regular drug users or as being frequent participants in delinquent activities (n=40); (2) a random sample of "normal" youths selected from two schools in the community (n=40); and (3) a detained sample of youths who were residing in the local detention facility or at group homes (n=20). These sample were divided into three drug use categories (nonusers, light users, heavy users) and into three criminal involvement categories (no crime, episodic, serious).

The detailed interviews (lasting an average of five hours) were transcribed to computer and then coded for a wide variety of thematic topics. The reported results consist primarily of excerpts from the interviews and case studies of several of the participants.

Findings. In comparing the three samples, it was found that both drug use and crime was highest in the purposive and the detained sample and lowest in the random sample. A third of the purposive

sample and 14% of the detained sample were heavy users, compared with only 7% of the random sample. As regards criminal activity, 22% of the purposive sample and 20% of the detained were serious offenders, compared with 6% of the random sample. When the crime involvement and drug use categories were combined, the strong association of crime and drug use is evident: 70% of the detained sample and 55% of the purposive sample fell into the serious crime-heavy use category, whereas only 13% of the random fell into this category. When criminal involvement was examined in terms of levels of use, it was found that only 2% of the nonusers had engaged in serious crime, compared with 5% of the light users, and 41% of the heavy users.

The interview responses by the young people provided a rich source of information about how they viewed drug use and criminal behavior by themselves and others. Much of what the youth had to say provides a different perspective on the relationship between drug use and delinquency than what is found in the literature on the subject. The authors summarized the main findings as follows:

- Seriously delinquent youths tend to be regular users of alcohol and other drugs.
- In explaining how alcohol and other drugs influence criminal behavior, the youths cited conventional wisdom (disinhibition, addiction, economic need, mental illness) to account for the behavior of others, but not for themselves.
- The association between drugs and crime is complex and assumes differing meanings depending upon time, place, and involvement with others.
- Nearly all of the delinquent youth stated that they did not commit property crimes in order to obtain money to buy drugs; they mainly stole in order to buy consumer goods associated with teenage culture.
- Youths who sold drugs regularly were likely to be the heaviest drug users.
- Delinquent youths tended to rationalize their crimes and to minimize their risk of being caught and of causing personal harm to their victims.
- Fear of arrest and trial in adult court caused many delinquent adolescents to stop or reduce their criminal activities.

DAWKINS, RUSSELL L., AND DAWKINS, MARVIN P. 1983. Alcohol use and delinquency among Black, White, and Hispanic adolescent offenders. *Adolescence* 18:799-809. 24 refs.

In order to better understand the relationship between alcohol use and delinquency, a questionnaire was administered to 342 juvenile offenders (males and females) institutionalized at a training school in 1979. The study examined three main topics: (1) the correlation between drinking and delinquency according to the seriousness of the offense; (2) the extent to which drinking is a significant correlate of delinquency relative to other factors; and (3) the degree to which the relationship between drinking and delinquency is affected by ethnic factors.

Findings. For Blacks, drinking had the strongest correlation with delinquency (both minor and serious offenses), followed by arrest rate, sex, and association with criminals. The same associations were found for Whites; in addition, heroin use was negatively correlated with minor delinquent offenses. Few significant correlations were found for Hispanics: drinking was associated with minor delinquent offenses, as was association with criminals.

With other variables held constant (sex, father's occupation, arrest rate, association with criminals, associations with drug users, and heroin use), the partial correlation between drinking and delinquency for Blacks was only slightly reduced. For Whites, the partial correlation between drinking and minor offenses was slight, but substantial for serious offenses. For Hispanics, the partial correlation between drinking and minor offenses increased. In other words, with other variables held constant, the strong relationship between drinking and delinquency held up for each ethnic group, although with somewhat different patterns.

Multiple regression analysis indicated that, with other factors controlled, drinking had a significant effect on minor delinquency for each ethnic group. Only for Blacks, however, was drinking the most important single predictor of delinquency. For Whites, drinking is a significant net predictor of serious crime, but was more important than some factors and less important than others. For Hispanics, drinking was a strong net predictor of minor offenses, but had little effect on serious offenses.

Conclusions. The results support the view that alcohol-related crimes by adolescents are likely to be minor status (victimless) offenses. Drinking was strongly associated with serious delinquency for Blacks and Whites but not for Hispanics, suggesting the importance of cultural factors in assessing the impact of drinking on serious delinquency. The findings indicate that two groups should be targeted for prevention efforts: Blacks who have an arrest record and who drink frequently, and Whites who have an arrest record and who are involved in drinking and other drug use. In general, this study highlights the importance of addressing the role of alcohol use in juvenile delinquency.

DEMBO, RICHARD; DERKE, MAX; SCHMEIDLER, JAMES; AND WASHBURN, MARK. 1986-1987. Prevalence, correlates and consequences of alcohol and other drug use among youths in a juvenile detention center. *Journal of Prison and Jail Health* 6(2):97-127. 37 refs.

Interview information gathered in 1984 from youths (n=145) in a juvenile detention facility was used to analyze the role of drug use in their lives, the relationship between drug use and other problems, the different factors relating to alcohol use and other drug use, and the adverse effects of drug use on the lives of delinquent young people. Out of the total sample, 36 were status offenders and 109 were juvenile delinquents. The sample consisted of 52% males and 48% females. The average age was 15. The ethnic composition was 63% white, 35% black, and 2% other. Between 21% and 28% had been referred to the juvenile court four or more times for status, misdemeanor, or felony offenses. The interview schedule included background and demographic information and measures of self-derogation, psychological and emotional functioning, sexual victimization, physical abuse, alcohol and other drug use, and the consequences of such use.

Prevalence of Use. Alcohol and other drug use in this group was high. Nearly all (90%) of the detainees reported that they had used alcohol use at least once, compared with 65% in a national sample of youth surveyed in 1982. Over four times as many detention youth as youth in the national survey reported using alcohol on five or more days in the previous 30 days (38% vs. 6%). As regards other drug use, 41% of the youths said that they had used marijuana 100 or more times in their lives. Frequent use (11 or more times) was reported by 24% for cocaine, 12% each for inhalants and hallucinogens, 4% for heroin, and 18% for nonmedical use of sedatives. These percentages are substantially higher than those found in other surveys of comparably aged youth. Nearly 20% of the youth reported using four or more illicit drugs eleven or more times.

Age of Initiation. Consistent with the results of other surveys, alcohol was the first drug used (mean age 11.1 years), followed by marijuana/hashish (11.8 years), sedatives, tranquilizers, stimulants, analgesics, and inhalants (12.5 to 12.9 years), and hallucinogens, cocaine, and heroin (13.4 years).

Consequences of Use. Of the 131 detainees who had used alcohol at least once, 62% said alcohol had made them sick; 50% had been in trouble with their families because of alcohol; 19% to 29% experienced problems with school, friends, or police as a result of alcohol; and 25% said they had experienced four or more adverse effects from alcohol.

Of the 127 detainees who had used at least one illicit drug, 51% had been in trouble with their families because of their drug use; 45% noted doing poorly in school because of it; 26% had been in trouble with the police; 28% had been in trouble with their friends; 35% had been sick because of drug use; and 33% had experienced four or more adverse effects from drug use.

The higher the involvement in alcohol use or illicit drug use, the greater the number of adverse consequences associated with use. The consequences of alcohol and drug use were more serious for males than for females.

Correlates of Use. Four variables were found to be significant predictors of alcohol use: ethnicity (white), having an antisocial value/behavior orientation, age (being older), and having a higher number of referrals to juvenile court for felony charges. Six variables were found to be significant predictors of illicit drug use: ethnicity (white), having a higher number of referrals to juvenile court for felony charges and for status offenses, having higher levels of self-derogation, and having been sexually victimized and physically abused.

Conclusions. The results show that the substance use of these youths in a detention facility was part of a larger pattern of interrelated problems. Reducing both drug use and continued criminal activity requires a range of comprehensive services that address the various personal problems of juvenile offenders, in addition to their drug use. An essential component of such a program is identifying youth at risk for frequent drug use and criminal activity as early as possible. Juvenile detention facilities would appear to be an optimal place to do this.

DEMBO, RICHARD; DERTKE, M., ET AL. 1987. Heavy marijuana and crime use among youths entering a juvenile detention center. *Journal of Psychoactive Drugs* 19(1):47-56. 21 refs.

Previous research has found that young people who are frequent users of drugs have crime rates several times higher than those who do not use drugs or who use only alcohol. The level of criminal activity appears to vary directly with the level of drug use, particularly heroin and cocaine. To further explore the drug-crime relationship, youths admitted to a juvenile detention center in Tampa, Florida, in November 1985 were questioned about their criminal history and drug use.

Interviews were completed with 77, and 66 of these agreed to provide a urine sample for drug analysis (the enzyme multiplied immunoassay technique, EMIT). Most of the subjects were males (77%) and White (71%), with an average age of 15.3 years. The majority (58%) had been placed in the detention center on charges of burglary or other nondrug-related felony offense. Many youth had

had repeated contact with the juvenile court before screening: 31% had been referred to juvenile court four or more times for nondrug-related misdemeanors and 39% for nondrug-related felonies.

Findings. Over half of the youths (53%) who provided a urine sample tested positive for at least one of the seven drugs included in the urinalysis; 42% tested positive for one drug and 11% tested positive for two drugs. These are probably conservative figures since some of the youths who submitted urine samples had been in the detention center for over 48 hours, which means that cocaine and short-acting barbiturates may not have been detected. Cannabis was detected in the urine of all but one of the youths who tested positive for drugs.

A match between urinalysis results and self-reported drug use indicated underreporting of use. Six of the 32 youths who tested positive for cannabis did not admit to recent use of marijuana or hashish youth in the interview, and two of the four who tested positive for cocaine did not indicate recent cocaine use.

Youths who tested positive for cannabis had twice as many referrals for nondrug-related felonies to juvenile court as had youths who tested negative for cannabis. Also, the lifetime frequency of marijuana or hashish use as nearly twice as high among the cannabis-positive as among the cannabis negative group. The greater the number of referrals to juvenile court for nondrug-related felony offenses, the greater the likelihood of testing positive for cannabis.

Conclusions. Frequent marijuana use among these youths seems to be related to a commitment to a lifestyle associated with a high level of involvement in serious criminal behavior. The juvenile detention center would appear to be a likely place to provide intervention efforts to identify youths at risk for continued drug and criminal involvement and to provide help with their personal, social, and family problems.

DONOVAN, JOHN E., AND JESSOR, R. 1985. Structure of problem behavior in adolescence and young adulthood. *Journal of Consulting and Clinical Psychology* 53(6):890-904. 45 refs.

The present study had three objectives: (1) to reanalyze data from an earlier sample of high school and college-age youth (Jessor and Jessor 1977) to determine whether various problem behaviors reflect a single underlying common factor (problem syndrome); (2) to determine the generality of the single-factor model in a different, more heterogeneous sample (Rachel et al. 1980); and (3) to determine whether the problem syndrome could be demonstrated in young adults (using the sample as in the first objective). The problem behaviors examined were illicit drug use, problem drinking, deviant behavior, and precocious sexual intercourse.

Study 1. The data to test the first objective consisted of a subset of data from high school students (n=244) and college students (n=184) from Colorado in Year 3 and Year 4 of a longitudinal study conducted in the early 1970s. Analysis of data from males and females in both the high school and the college sample for both years indicated that a single common factor was adequate to account for the correlations among the four problem behaviors.

Study 2. The data in the second study was derived from the 1978 National Study of Adolescent Drinking; for comparison with the sample in Study 1, only data from 11th- and 12th-grade students in the national sample were used (n=2,652). The measures of problem were similar to those in Study 1, except that questions about sexual behavior were not included in the national study. Again, the results of the analysis indicated that the single-factor model accounted for the correlations among the various problems behaviors.

Study 3. To test whether a problem syndrome would be found in young adults in their middle to late 20s, data were analyzed from high school and college students from the sample in Study 1 who completed questionnaires in 1979 and 1981. As in Studies 1 and 3, the various problem behaviors could be explained by a single common factor.

Conclusions. The findings of the three studies undertaken confirmed that the association among adolescent problems behaviors can be accounted for by a single common factor and that this same factor is also evident in problem behaviors exhibited by young adults in their 20s. The single-factor model was found to apply to males and females, to differing education levels, to differing socioeconomic and ethnic groups, to different age cohorts, and at different points in time. One hypothesis to explain these results is that the common factor underlying problems behaviors is a dimension of unconventionality. The results of this study suggest that prevention programs may be improved by broadening their focus from specific problem behavior and devoting attention to the problem syndrome that lays behind such behavior.

ELLIOTT, DELBERT S.; HUIZINGA, DAVID; AND AGETON, SUZANNE S. 1985. *Explaining Delinquency and Drug Use*. Beverly Hills: Sage Publications. 187 refs.

This study provides an empirical test, using longitudinal data, of an integrated theoretical model to explain delinquency and drug use. The model synthesizes and expands on three theories: (1) strain theory (that delinquency results from frustrated needs or wants); (2) social control theory (that delinquency results from the failure to develop internal controls and/or from weak external controls); and (3) social learning theory (that delinquency results from direct socialization to deviance within adolescent peer groups).

The integrated model postulates that strain, inadequate socialization, and social disorganization are the primary causes of weak bonding to conventional groups, activities, and norms. Weak bonding and strain lead some young people to become active in delinquent peer groups. Finally, strong bonding to delinquent groups, combined with weak bonding to conventional norms and groups, results in a high likelihood of involvement in delinquency, including drug use. At the same time, participation in delinquent activities and drug use reinforces bonds to delinquent groups.

The integrated model was tested using data from the National Youth Survey, a nationwide probability sample of youths interviewed in 1977, 1978, and 1979 about their delinquent and drug-using behavior during the previous year. The initial sample consisted of 1,725 youths, with a loss rate of 6% by the final year. The model was tested using eight predictor variables (including measures of strain, conventional bonding, and deviant peer bonding) and five measures of self-reported delinquent behavior and drug use as dependent variables.

Findings. Multivariate analysis indicated that the main factors that influence both delinquency and drug use were prior delinquency and involvement in delinquent peer groups, both of which often provided a good estimate of the level of involvement in delinquency and drug use. Strain and conventional bonding showed only weak and indirect effects on delinquency and drug use. Further analysis of the relationship between conventional and delinquent bonding found that young people with low bonding to delinquent peers reported less delinquency than would be expected from their previous delinquency. Young people with strong bonds to delinquent peers were more delinquent than those with weak bonds, and their frequency of delinquent behavior and drug use is increased to the degree that they had low conventional bonding.

Conclusions. For purposes of prevention, the main finding of this study is that young people who are involved with pro-social friends are at low risk for delinquency and drug use, while those who are involved with delinquent friends are at high risk. Although the results highlight the importance of the adolescent peer group as the context out of which delinquency originates and is perpetuated, many prevention and treatment programs actually encourage the development of delinquent peer groups. Particularly in treatment programs, delinquent youth associate only with other delinquent youth, and they are seldom exposed to pro-social influences from conventional peers. A more productive strategy would be to design programs in which delinquent youth and those at risk for delinquency are integrated into conventional peer groups. It is both more effective and less costly to direct intervention efforts at delinquent peer groups than to develop broad-based programs that attempt to strengthen the conventional bonding or change the beliefs and values of those young people who are already at low risk of engaging in delinquency or drug use.

FAGAN, JEFFREY. 1989. The social organization of drug use and drug dealing among urban gangs. *Criminology* 27(4):633-669. 71 refs.

The relationships among drug use, drug dealing, crime, and social organization were examined surveys among gang members in three cities (Chicago, Los Angeles, and San Diego) in 1984 and 1985. A gang was defined as a "group [of adolescents or young adults] who are (a) generally perceived as a distinct aggregation by others in the neighborhood, (b) recognize themselves as a denotable group (almost invariably with a group name), and (c) have been involved in a sufficient number of [illegal] incidents to call for a consistent negative response from neighborhood residents and/or enforcement agencies." Fifty gang members from each city were recruited for the study by a "snowball" technique. All were males; they ranged in age from 13 to 20 years and were mainly from minority groups. The results from the three cities were reported together.

Prevalence of Use. Use of drugs at least once by gang members ranged from 41% for heroin to 79% for alcohol. Of those who used drugs at least once, frequent use (12 or more times within the past year) ranged from 13% for heroin to 41% for alcohol. These prevalence rates are higher than for general adolescent populations in inner cities.

Criminal Behavior. The majority of gang members reported engaging in some type of criminal activity during the past year, the most frequent being extortion (68%) and felony theft (64%). Just over half (51%) reported drug sales. The largest percentages of frequent criminal acts (12 or more times in the past year) were for robbery (22%), felony theft (22%), minor theft (24%), and extortion (21%); the least common frequent acts were felony (15%) and minor assault (9%) and drug sales (14%). Although violence is relatively infrequent compared with other nonviolent behaviors, it is still higher than among nongang adolescents.

Gang Typology. Four types of gangs were identified. Type 1 ("social gang") was involved in few criminal activities and drug sales and little drug use except for alcohol and marijuana. Type 2 ("party gang") was involved in few nondrug criminal activities, but had a high prevalence of drug use, drug sales, and vandalism. Type 3 ("serious delinquents") included gangs with high levels of all types of criminal behavior, but only moderate involvement in drug sales and "hard" drugs. Type 4 ("organizations") gangs were heavily involved in criminality, drug sales, and drug use and exhibited a high degree of cohesion and organization.

Conclusions. Although the prevalence of drug use, drug dealing, and criminal activity is higher

among gang youth than among nongang youth, the relationship among these behaviors within gangs is complex. There are different degrees of involvement by individuals in gangs and in the various types of gang activities, different levels of drug use and delinquency by gangs and by their individual members, and different associations among various activities. Only a small core group are responsible for the highest rates and severity of deviant behavior, including violence. While violence does occur in relation to drug sales, it is more often associated with status, territorial, and other types of gang conflict.

FARROW, JAMES A., AND FRENCH, JAMES. 1987. The drug abuse-delinquency connection revisited. *Adolescence* 21:951-960. 14 refs.

Popular opinion and research studies associate substance abuse and delinquency; while it has generally been found that delinquency precedes drug abuse, a clear causal connection has not been established. The relationship between drug abuse and delinquency was investigated in a sample of 91 adolescents in a state juvenile correctional facility. Three-fourths of the respondents were males. The mean age was 14.8 years. The questionnaire asked about background information, drug use, reasons for use, criminal history, perceptions of drug effects, and perceptions of the connection between drug use and criminal behavior.

Drug Use. With this sample of delinquents, 81% reported having used drugs (unspecified) during the six months prior to their incarceration. The percentage of respondents who reported daily use of different drugs was as follows: heroin 3.3%; cocaine 9%; LSD 2.2%; PCP 2.2%; speed 19%; downers 12%; marijuana 50%; solvents 4.4%; tobacco 76%; and alcohol 31%. Mean age at first use for most drugs was 11 or 12 years.

Reasons for Use. The common reasons given for using drugs were (in descending order) to overcome depression, to have fun, peer influence, to be cool, and to escape problems.

Parental Use and Attitudes. Nearly one-third (32%) of the subjects said their parents were abstainers, and 22% said their parents were daily users of alcohol or other drugs. Over half (54%) reported that their parents were apathetic or passive in their attitude toward their child's drug use; 28% indicated that their parents were angry or unhappy, but took no specific action.

Delinquency. The mean age at first arrest was 10.8 years. Sixty percent of the subjects reported having committed more than three offenses before they were incarcerated. Two-thirds of the crimes for which the subjects were incarcerated were crimes against property, one-third were crimes against persons. A high proportion (64%) committed at least one of their crimes with other youth.

Drugs and Delinquency. With regard to the association between drugs and crime, 35% reported that most of their crimes were committed under the influence of drugs, while 29% said that none of their crimes were committed while intoxicated. Dealing in drugs was reported by 66% of the subjects; stealing drugs or alcohol, by 57%; and stealing to buy drugs or alcohol, by 57%. When asked their opinion about the relationship between their drug use and their criminal behavior, 39% said that drug use caused their delinquency, whereas 26% said that their delinquent behavior led them to use more drugs.

Conclusions. While this study did not establish a causal connection between drug use and delinquency, it did document the importance of drug use as one factor in a deviant lifestyle which contributes to delinquency. Delinquents perceive a stronger relationship between drug use and criminal behavior than do researchers. The reasons for this perception warrant further investigation.

FROST REED, BARBARA J., AND MAY, PHILIP A. 1984. Inhalant abuse and juvenile delinquency: A control study in Albuquerque, New Mexico. *International Journal of the Addictions* 19(7):789-803. 25 refs.

The relationship between inhalant abuse and delinquency was studied among mostly Hispanic juveniles in Albuquerque, New Mexico. Inhalants included such substances as gasoline, glue, solvents, spray paints, and aerosols. The criminal offenses of a group of 100 juvenile delinquents who had been treated for chronic inhalant abuse were compared with the offenses committed by two control groups: a group closely matching the experimental group in age, sex, and ethnicity (Control Group I), and a randomly chosen group of juvenile delinquents (Control Group II). The results were correlated and compared to similar studies.

In the experimental group and Control group I, the average age was 15.2 years, 84% were male, and 91% were Hispanic. Among the inhalant abusers, 44% lived in single-parent homes with their mothers (compared with 37% in Control Group I and 31% in Control Group II), and over half (57%) of these families had annual incomes under $6,000 (compared with 40% for Control Group I and 18% for Control Group II). One-third of the abusers had dropped out of school (compared with 12% for Control Group I and 11% for Control Group II), and 14% had been suspended (compared with 3% for Control Group I and 3% for Control Group II).

Findings. The inhalant abusers had been arrested for 754 offenses, 2.8 times more frequently than either control group. The largest number of offenses committed by a single inhalant abuser was

Project ADEPT consists of two phases: preparation for reentry into the community and support through aftercare. During the first phase, the young people participate in a ten-week group that stresses goal setting and skill training. Seven areas are included in skill training: consequential thinking, impulse control, avoiding trouble, social networking, coping with authority, problem solving, and relapse coping. After the youths are released from the facility, they work with a case manager for six months to help them reintegrate into their family or find other placement, practice skills learned in the first phase, enroll in school, find a job, obtain other needed services, find pro-social activities, and develop a supportive network. The case manager and the client focus particular attention on two areas: the client's greatest strength (the "hook") that will help him or her stay out of trouble, and the client's greatest problem (the "trap) that will likely place successful rehabilitation at risk.

In summary, Project ADEPT provides incarcerated juveniles with a comprehensive program involving goal setting, skills training, and case management aftercare that seeks to address the many factors that place these youth at risk for further involvement in drug use and criminal activity once they reenter the community.

HUNDLEBY, JOHN D. 1987. Adolescent drug sue in a behavioral matrix: A confirmation and comparision of the sexes. *Addictive Behaviors* 12:103-112. 55 refs.

In a study examining behavioral variables not normally associated with drug use among young adolescents, 1,008 boys and 1,040 girls were provided a questionnaire measuring a variety of behaviors, including tobacco, marijuana, and alcohol. Subjects were ninth-graders with an average age of 14.5 years from 40 different schools in Ontario.

Findings. Results showed possitive correlations between drug use and other forms of activity (sexual behavior, delinquent behavior, social activities with peers). As regards delinquency, while confirming existing evidence of the ties between delinquent behavior and drug use, the results also suggest that delinquency tends to occur prior to drug use. However, due to the ill-defined parameters of delinquency and drug use, determination of the temporal relationship between them remains imprecise. Less strong negative correlations with drug use were found for scholastic achievement and religiosity. There appeared to be no differences between the sexes.

Conclusions. Adolescent drug use occurs within a matrix of of other behaviors, which must be considered in trying to develop an adequate theory of drug use.

HAWKINS, J. DAVID; JENSON, JEFFREY M., ET AL. 1988. Delinquency and drug abuse: Implications for social services. *Social Service Review* 62(2):258-284. 119 refs.

Young people who engage in regular delinquent behavior have higher rates of drug use than other youth. One survey found rates of use among serious juvenile offenders to be as much as 36 times higher than among nonoffenders for certain drugs (Elliott and Huizinga 1984). While both drug use and delinquent behavior ends for most teenagers in their late teens or early twenties, for a small percentage regular drug use and chronic criminal activity continues into adulthood, accounting for a high number of property crimes and violence. Research indicates that common risk factors increase the likelihood of both frequent drug use and serious delinquent behavior, suggesting that the same intervention and prevention programs could help to reduce both drug use and delinquency.

Common Risk Factors. Research on the etiology and correlates of chronic delinquency and frequent drug use has identified a common set of risk factors; the greater the number of risk factors present, the greater the likelihood of drug use and delinquency. The following factors have been identified as predictors of both types of adolescent antisocial behavior:

- Antisocial behavior in childhood;
- Drug use and criminal behavior by parents or siblings;
- Poor and inconsistent family-management practices;
- A high degree of family conflict;
- Extreme social and economic deprivation;
- Academic failure and poor school adjustment;
- Low commitment to school activities and educational pursuits;
- Drug use and delinquency by peers;
- Alienation from dominant social values;
- Community disorganization and low community attachment;
- Movement to a new school or new community;
- Attention-deficit disorders and hyperactivity;
- Various personality factors such as sensation seeking, rebelliousness, risk taking, and low verbal ability.

Prevention Programs. These risk factors, when considered along with prevention and treatment programs that have shown positive results, suggest a set of approaches for early identification and prevention of delinquency and drug abuse. Such programs would appear to be most cost effective if they targeted children known to be at high risk for delinquency and drug use early in their development and if they addressed children known to have risk factors for these behaviors. In particular,

early intervention programs should seek to reduce conduct disorders and antisocial behavior, correct poor family-management practices, prevent school failure, counter family and peer influences, and promote the development of social skills. There are a variety of promising approaches to preventing adolescent drug abuse and delinquency:

- Early childhood education with parent involvement
- Parent training in positive child rearing
- Cognitive skills training in schools
- Proactive classroom management
- Law-related education
- Life skills training
- Problems-solving and behavioral skills training
- Enhancement of instruction to improve academic success
- Social influences strategies
- School-based health clinics

While these approaches are promising, in most cases their effectiveness in reducing rates of delinquency and drug use has yet to be clearly demonstrated.

INCIARDI, JAMES A., AND POTTIEGER, ANNE E. Forthcoming (1990). Kids, crack, and crime. *Journal of Drug Issues*. 8 refs.

Involvement in drug use and dealing, especially of crack, was studied in a sample of 254 Miami youths deemed to be "seriously delinquent" (having committed 10 FBI "index" offenses or 100 lesser crimes in the 12 months before the interview). Approximately 85% of the subjects were male, 15% female; 43.3% were White, 39.4% Black, and 17.3% Hispanic. The median age of the subjects was 14.7 years, and 89.4% had been expelled or suspended from school at least once.

Drug Use and Dealing. All of those interviewed had histories of multiple drug use. Nearly 80% had some involvement in the crack cocaine business (7.9% with "minor involvement," 54.3% as "dealers," and 18.1% as "dealers+"--meaning some sort of involvement in the manufacturing, smuggling, or wholesaling of crack).

The greater a youth's involvement in the crack business, the more likely was drug use of all types. For instance, regular marijuana use among those with no involvement in the crack business was 66%, compared with 80% of those with minor involvement in the business, and 100% of those in the dealer+ group. Regular crack use ranged from 2% for those with no involvement in the crack business to 87% of those in the dealer+ group.

For those dealing crack, nearly 90% frequently received crack as part of their payment for drug sales. In addition, 70.3% of those in the dealer category and 93.5% of those in the dealer+ category had spent $1,000 or more on crack for personal use in the previous 90 days.

Those with no or minimal involvement in the crack business were more likely to have had bad experiences with crack (two-thirds of those with no involvement and three-fifths of those with minor involvement). Almost the reverse was the case in the dealer and dealer+ groups.

The popularity of the crack business is explained by several factors: high youth unemployment, the attractiveness of the crack business as a lifestyle (high profitability, upward mobility, the romance of street life), and the euphoria induced by the drug itself.

Criminality. A link was demonstrated between crack use and the number of crimes committed. For the group with no involvement in the crack business, the mean number of crimes committed in a 12-month period was 375.9. For those in the dealer+ category, the figure was 1,419.1. It appears that "crack dealing finances crack use, crack use encourages more crack use, and more crack use requires more profit-making crimes."

Treatment. The criminal justice system had been successful in locating these offenders (87% of subjects had been arrested within the previous 12 months), but not in treating them. Fewer than 4% of the subjects had ever been in drug treatment--a reflection of an overburdened juvenile court system and inadequate resources for treatment.

KANDEL, DENISE B.; SIMCHA-FAGAN, ORA; AND DAVIES, MARK. 1986. Risk factors for delinquency and illicit drug use from adolescence to young adulthood. *Journal of Drug Issues* 16(1):67-90. 51 refs.

Using longitudinal data covering a nine-year period, this study examined the predictors of delinquency and drug use from adolescence to young adulthood and the role that involvement in one of these behaviors has for later involvement in the other. The sample consisted of a cohort of young people from New York State who were first studied in 1971, at age 15-16 years, and interviewed again in 1980, at age 24-25 years (n=1,004).

Criminality. Nearly half (49%) of the young adult males and 25% of the young adult females had engaged in at least one delinquent act in their lifetime; 55% of the males who had done so and 52% of the females were involved in at least one delinquent act in the past year. Thus, while women are less likely to become involved in delinquency than men, once they do so they are nearly as likely to persist in delinquent activities. Persistence of drug use from adolescence to young adulthood was greater than persistence of delinquency.

Drug Use. Ever use of illicit drugs (other than marijuana) at least ten times was reported by 28% of males and 17% of females; 75% of the males and

59% of the females who had formerly used drugs also did so in the year prior to the interview. Women were less likely to have once been involved in drugs than in delinquency; compared with men, they were nearly as likely to persist in their delinquency, but less likely to persist in their drug use. The results also showed a positive relationship between drug use and delinquent behavior: young adults who currently used illicit drugs other than marijuana were more delinquent than those who used only marijuana or those who were former (but not current) users of drugs.

For men, adolescent illicit drug use and delinquency predicted themselves in young adulthood. But while adolescent delinquency predicted illicit drug use in young adulthood, drug use did not predict delinquency, indicating that delinquency is a precursor to illicit drug use, but the reverse is not true. The pattern for women was somewhat different. As with men, illicit drug use in adolescence predicted illicit drug use nine years later; but unlike with men, adolescent delinquency by women did not predict delinquency, whereas illicit drug use did.

Various risk factors in adolescence other than drug use predicted continued involvement in delinquency in early adulthood. For women, the most important factor was depression; for men, family factors. Failure to enter conventional adult roles, such as marriage and continuous employment, predicted continued drug use, but not delinquency.

Conclusions. The results shed light on whether there is a common set of etiological factors that predict adult participation in delinquent activities and use of illicit drugs. The answer depends on the type of delinquency, the type of drug, and gender. In general, for men, a common etiology is more evident between illicit drugs and theft than between illicit drugs and interpersonal aggression. Also, the same factors that predict illicit drug use among women predict delinquency among men.

OSGOOD, D. WAYNE; JOHNSTON, L.D.; O'MALLEY P. M.; AND BACHMAN, J.G. 1988. The generality of deviance in late adolescence and yearly adulthood. *American Sociological Review* 53:81-93. 36 refs.

Although researchers have clearly established that many deviant behaviors are positively correlated with one another in adolescence and early adulthood, it is less clear whether these various deviant behaviors are manifestations of a more general tendency. This study sought to confirm this last possibility through sophisticated causal modeling of the relationship among deviant behaviors in late adolescents (n=975) sampled over five years (1976-1980). The sample consisted of respondents in the annual Monitoring the Future study of drug use among high school seniors. Subsamples of each class are asked to fill out questionnaires every other year following graduation. The present analysis was limited to whites, because the black subsample was less representative due to differential dropout rates from high school. The study focused on five types of deviant behavior: criminal behavior (crimes directed at victims); heavy alcohol use; marijuana use; use of other illicit drugs; and dangerous driving.

Findings. The results of the analysis indicated that a general tendency toward deviance, or a deviance syndrome, can explain the positive correlation among different types of deviance behavior. However, a general deviance variable does not fully explain all of the reliable and stable variance found for each of the separate behaviors examined. In other words, each deviant behavior is partly a manifestation of a general tendency toward deviance and partly a unique phenomenon.

It was also found that specific behavior influenced others over time. Thus, marijuana use at age 18 had a significant impact on the use of other illicit drugs one or two years later. But thereafter, the influence of marijuana use on later drug use was negligible. Such influence of one specific behavior on another, however, was much less important than the influence of a general tendency toward deviance.

Criminal behavior was most closely associated with general deviance, although the strength of the association and the rate of criminality diminished over time. Alcohol use by high seniors was more strongly associated with general deviance than was alcohol use by young adults. For illicit drugs (other than marijuana), however, the association with the tendency toward deviance became stronger with increasing age. It appears that the degree to which a particular deviant behavior is tied to general deviance depends upon what is considered acceptable behavior at a particular age.

RIVERS, JAMES E. 1989. Drug use and criminal activity among Miami youth involved in the crack-cocaine business. Unpublished report. Miami: Office of Substance Abuse Control. 7 refs.

Although surveys of national samples of youth indicate that drug use has been declining since the late 1970s, these samples and the trends they suggest may not be representative of specific cities or subpopulations. This report examines data collected by James Inciardi (see Inciardi and Pottieger 1990*) on drug use and involvement in drug dealing and other criminal behavior among youth in Miami known to be users of crack cocaine. The 254 youths were selected by a snowball sampling technique in 1986-1987, so the youths were not a random sample of Miami or of drug-using Miami youth. The age range was from 12 to 17 years old, with the average age 14.7. The large majority (85%) were male. The ethnic composition was 43% White, 39% Black, and 17% Hispanic. Although

78% were enrolled in school, 89% had been suspended or expelled at least once.

Findings. Current use of drugs was high: 87% were current daily users of marijuana; 55% of crack; 28% of depressants; 7% of alcohol; 5% of cocaine powder; and 3% of heroin. Nearly all (90%) of the sample had been using crack for more than a year, 65% for more than two years. The average age at which any drug was first used was 7.1 years, and the average age of first regular use was 10.1 years. Forty percent said that they had at least one "bad high" from crack, 8% had three or more. Although 21% reported some type of adverse effects from crack, only 4% had entered drug abuse treatment.

Unverified self-reports revealed that these 254 youths committed an "astounding" number of criminal acts, in addition to their possession or sale of illicit drugs. In the past year, the total number of criminal acts reported was 223,439, 61% of which consisted of drug offenses; 23%, petty property offenses; 11%, vice offenses; and 4%, major felonies. The average number of offenses committed per week was 4,297; the average number of offenses per person was 880; and the average number of offenses per day was 612. The youth who were most involved in dealing crack also those with the highest reported rates of criminal activity.

Most of the youth were engaged in regular criminal activity (three times a week) before the age of 12. Nearly all (92%) of the youths (whose average age was 14.7) had been arrested at least once, 71% had been convicted at least once, and 51% had been in jail. But on the basis of the number of self-reported crimes committed by these youth, the chances of being arrested was 1 in 555 or 0.18%.

Conclusions. Crack users and dealers are deeply involved in non-drug criminal activity. Much more crime is committed by these teenagers than official records would indicate. The fear of arrest, conviction, or incarceration does little to deter crack use or dealing or criminal activity in general. Innovative intervention programs are needed for these youthful offenders, particularly treatment services and those involving greater cooperation between schools and juvenile courts.

TEMPLE, MARK, AND LADOUCEUR, PATRICIA. 1986. The alcohol-crime relationship as an age-specific phenomenon: A longitudinal study. *Contemporary Drug Problems* 13:89-115. 80 refs.

In order to clarify the relationship between alcohol and crime, this study focused on the connections between the criminal careers and the alcohol histories of a cohort of young men from Oregon. Subjects were originally surveyed in 1964 when they were age 16 and then yearly until 1979, when they were age 31. The attrition rate was 67%. The data for this study were based on the responses from 302 subjects who had acquired a record of juvenile delinquency by the time of the first year of data collection. Drinking behavior was determined from a self-report questionnaire; information on criminal behavior was gathered from the county juvenile department, the Oregon State Investigative Bureau, and the Federal Bureau of Investigation.

Alcohol Use Both drinking and heavy drinking increased steadily from age 16, reaching a peak in the early 20s. By this time, 95% of the adolescents drank, and the percentage remained at that level into the early 30s. By age 23, heavy drinking was reported by about 58% of the sample and remained at about that level until age 28, after which it gradually declined. The relationship between drinking in adolescence and drinking as an adult (age 31) was not significant.

Criminality. The prevalence of criminal offenses was highest between ages 16 and 20, with the highest level occurring at age 18 (65%). There was a sharp drop off in prevalence between ages 20 and 21, and at age 31, less than 10% had a record of criminal involvement in that year (1979). Just over half (51%) of those with juvenile offenses continued to commit crime in adulthood (as determined from official records). Those who committed serious juvenile offenses were more likely than those who committed nonserious offenses to be changed with serious crime as adults.

Correlations. If alcohol were a cause of crime, then the two prevalence curves should rise, peak, and drop at roughly the same rate and the rise, peak, and drop for alcohol should consistently precede those for criminal activity. But the results from this study showed no direct connection between alcohol use and crime: whereas delinquent activity peaked at age 18 and declined markedly thereafter, drinking and heavy drinking continued into the early twenties and either remained steady or dropped off somewhat. But the higher the seriousness of the delinquent activity, the higher was the level of drinking, whereas those with less serious delinquency tended to be moderate drinkers or abstainers. This relationship did not hold for adults at age 31, however.

Conclusions. The results indicate, first, that adolescent drinking is not part of an "alcohol career," but is an age-specific behavior that has only moderate implications for future drinking behavior. Second, in the case of crime, there does appear to be a relationship between criminal activity as an adolescent and as an adult, with serious delinquency being particularly related to adult criminal involvement. Finally, although heavy alcohol use and criminal activity are related in late adolescence, there is no significant relationship between them by age 31. At best, the often-presumed causal connection between alcohol and crime is age-specific.

It appears that certain social and personal circumstances in late adolescence combine to increase the young person's chance for involvement in both

alcohol use and crime. As adolescents enter their twenties and assume adult responsibilities, their former motivation for heavy drinking and criminal activity decreases. However, for adolescents who are involved in serious delinquency, there is a high likelihood that they will continue their involvement in crime as adults because of limited education.

U.S. DEPARTMENT OF JUSTICE, OFFICE OF JUVENILE JUSTICE AND DELINQUENCY PREVENTION. 1985. *Drug Abuse, Mental Health, and Delinquency: Summary of Proceedings of Practitioners' Conference on Juvenile Offenders with Serious Drug, Alcohol, and Mental Health Problems, September 6-7, 1984, Washington, D.C.* No refs.

This conference introduced a wide variety of strategies addressing the problem of delinquents with alcohol, drug abuse, and mental health (ADM) disorders, but the main theme put forward by presenters emphasized the need for programs, new or old, that could be effectively implemented in the real world.

The Need for Comprehensive Approaches. The most effective approach to combat ADM disorders among delinquents is a comprehensive system of intervention programs tightly coordinated to cover all stages of the problem, from early prevention, to treatment, to follow-up. Collaboration among disparate organizations, agencies, institutions, and community members is a major component of such programs as the Serious Habitual Offender/Drug Involved (SHO/DI) Project, Treatment Alternatives to Street Crime (TASC), and North Carolina's Willie M. Program.

Aftercare. Once treated in a short-term, isolated program, it becomes evident that to return youths to the same environment that contributed to their problems initially is unworkable. Instead, institutions that affect a youth's everyday life must be structured to ensure continued maintenance of positive social behavior. Such a program is the PATHE Project in South Carolina, which focuses on both individual treatment and school-wide organizational change.

Upon reentering larger society, maintenance of healthy social behavior instilled in patients during a structured treatment program is virtually impossible without an effective program of aftercare. The Lincoln Hills Correctional Facility and the Adolescent Chemical Dependency Program at St. Mary's Hospital both successfully treat the problem of returning to society, but a commitment of resources at the federal, state, and local levels is necessary for the widespread utilization of aftercare services.

Community Involvement. One important component of effective treatment of ADM disorders among youths is community involvement, as is provided in such programs as Soul-O-House, Oakland Parents in Action, Willie M., and the Parents Resources and Information of Drug Education coalition (PRIDE) of Omaha. Several methods for increasing community involvement, such as educating parents and encouraging feedback on intervention projects, have widened the sense of accountability and modes of action for entire communities.

Decision-Making Skills. A very effective form of intervention is to include youths in their own rehabilitation, providing them with the skills to make responsible life decisions and proof that they are capable of transforming their own environments in a positive way. The Lincoln Hills Correctional Facility and the Abraxas Foundation Inc. are just two institutions that implement such programs.

The Need for a Holistic Approach Upon entering a particular rehabilitation agency, juveniles with ADM disorders should not be treated for a single symptom in which the agency specializes, but for a multiple problem syndrome. Institutions ranging from law enforcement to drug and health divisions must learn to deal with the whole individual rather than with an isolated aspect of a complex problem. Generic solutions based on an understanding of normal positive social development and the roots of the multiple problem syndrome may help intervention become more fully comprehensive.

Long-Term Commitment. A long-term commitment of federal, state, and local funds is necessary to develop, test, refine, and disseminate new intervention programs. A three-step plan for development, involving experimental research, locational testing, and institutionalization of workable ideas, has been successfully implemented by the Achievement Place/Teaching Family Program. Such a plan, provided it has adequate funding, can lead toward real progress in lasting solutions.

Program Planning. Program selection and development may prove to be more cost-effective and efficient if empirically based planning (i.e., a thorough review of existing research on intervention programs) is utilized. Examination of other projects' successes and failures can be integrated with a specific community's needs to produce a workable program; however, further study of the adaptability of interventions would be required.

Program Evaluation. Despite an abundance of existing intervention programs, little evidence is available on their effectiveness in actually preventing, reducing, or controlling ADM disorders among delinquent youth. The field of human resources must work to establish empirically tested techniques to address the question of effectiveness.

WATTERS, JOHN K.; REINARMAN, CRAIG; AND FAGAN, JEFFREY. 1985. Causality, context, and contingency: Relationships between drug abuse and delinquency. *Contemporary Drug Problems* 12:351-373. 96 refs.

The relationship between substance use and violent crime is explored through a review of the relevant literature. Among criminal justice policy makers and the media, there is a persistent linking of drug use with violent crime. However, while current research on serious and violent crime suggests that drug use is frequently an aspect of criminality, the relationship between drugs and violent youth crime remains relatively uncharted and controversial territory.

Three popular models have been offered to clarify the relationship between drugs and crime: "drugs cause crime," "crime causes drug abuse," and "underlying factors cause both crime and drug abuse." The literature provides little evidence to support the hypothesis that drugs cause crime, and the evidence for the notion that crime causes drug abuse (that is, that people take up drugs after they have established themselves in their criminal careers) is only slightly more impressive. In both cases, much of the research shows a correlational rather than a causal relationship between drug use and crime. The relationship between crime and drug abuse is too complex to lend itself to such causal reductionism. What is needed instead is a model that seeks to establish the underlying causes of criminality and drug abuse. Here a more sophisticated analysis can occur, which takes into account such variables as class, motivation, and environment. As it is, most studies have been hampered by conceptual and methodological shortcomings and should be approached with a "healthy skepticism."

WEISHEIT, RALPH A. 1984. Alcohol and drug abuse prevention: Implications for delinquency prevention. *Journal of Drug Issues* 14(3):469-477. 23 refs.

Primary prevention of delinquency involves a broad-scale effort to change the physical or social environmental factors so as to minimize the development of attitudes and behaviors that lead to deviancy. Although, over the long-term, primary prevention would appear to hold considerable promise, it has received little attention from program developers or researchers. Numerous problems attend the implementation and evaluation of primary prevention programs, including determining what elements such a program should include, how they should be carried out, and ethical issues in assuming that everyone is at least a potential delinquent. Additional problems are opposition from parents, the need for long-term financial support, and the long delay in seeing positive results.

The problems associated with primary prevention programs for delinquency may be minimized, however, by examining existing programs for preventing drug and alcohol abuse. Both delinquent behavior and drug and alcohol abuse appear to share common causes, which suggests that prevention of either requires attention to those causes rather than to either delinquency or drug abuse by itself. Many of the elements of alcohol and drug programs, particularly those having to do with self-esteem and decision-making skills, are not specific to substance use, but would presumably extend to delinquency prevention as well. In this sense, alcohol and drug prevention programs that include affective components may also serve as delinquency prevention programs.

Situating delinquency prevention within school-based substance abuse programs has several advantages. (1) Schools reach far more young people than other social agencies, and school programs are generally more cost effective than programs tailored to a specific population such as delinquents. (2) Many alcohol and drug education programs begin in the early grades and are repeated in successive years, which means that these programs are likely to affect the attitudes and behaviors of youngsters at risk for delinquency. (3) School-based drug education programs are less likely to encounter resistance from parents than delinquency programs. (4) Such programs are generally staffed by people who have teaching skills, which might not be the case for programs outside the school. (5) Existing alcohol and drug education programs have a large body of information and experience regarding implementation, evaluation, and cost effectiveness, which delinquency specialists can profit from. (6) Finally, the impact of substance use prevention programs on delinquency can be relatively easily evaluated as part of the evaluation of the drug education program. Since many drug education programs occur throughout the elementary and secondary years, the use of longitudinal designs becomes feasible.

WHITE, HELENE R.; PANDINA, ROBERT J.; AND LAGRANGE, RANDY L. 1987. Longitudinal predictors of serious substance use and delinquency. *Criminology* 25(3):715-740. 56 refs.

In order to clarify the relationship between serious drug use and serious delinquency, this study examined the similarity in the etiology of these two deviant behaviors by testing a model that consisted of a mixture of control theory, differential association theory, and various psychological variables previously found to be correlated with adolescent deviance. Control theory asserts that youth who lack strong bonds to society experience greater freedom to engage in delinquent behavior than youths who do have such bonds. Recent formula-

tions of control theory are usually integrated with differential association theory, which postulates that deviant behavior is learned through associations with peers and from definitions of normative behavior that either encourage or discourage deviance. To measures of control theory and differential association theory, the current study added various intrapersonal measures (self-esteem, impulsivity, hostility, etc.).

The sample used for the analysis consisted of subjects (n=882) who were first interviewed in 1979 or 1980 (T1) when they were 12, 15, or 18 years old and then reinterviewed three years later (T2). The young people were predominantly white and middle class. Measures of four domains (family, school, peers, intrapsychic) at T1 were used to predict serious substance use and serious delinquency at T2. Serious substance abuse was defined in terms of measures of heavy alcohol, heavy drug use, frequent problems with alcohol, and frequent problems with drugs. Serious delinquency was defined in terms of self-reported index offenses in the past three years and of being incarcerated or on probation or parole in the past three years.

Findings. The percentage of serious substance abuse ranged between 23% and 43% of the males and 16% and 39% of females. Females had a low percentage of serious delinquency (3%-4%), whereas males ranged between 11% and 20%. Overall, 23% of the total sample were either serious substance users or serious delinquents (but not both), while 7% of the total sample fell into both groups. While the majority of the serious delinquents were also serious substance abusers, the reverse was not the case; only about a third of the serious substance abusers were also serious delinquents. (There were so few females who were serious delinquents that they were eliminated from the rest of the analyses.)

The same peer and school variables are significantly related to substance use and delinquency. By contrast, most of the intrapersonal variables examined related to substance but not to delinquency. Both groups tended to be more distressed, more autonomous, and have less need for harm avoidance than nondeviant peers. There was also very little relationship between the family domain measures and either substance abuse or delinquency.

Further analysis indicated that the variables that were significantly relat o any form of serious deviance did discrimina etween adolescents who met any of the criteria for substance abuse or delinquency from those who met none of the criteria. Between 72% and 84% (depending on age) of the serious/nonserious substance abusers and between 80% and 96% of the serious/nonserious delinquents were classified correctly.

The most important discriminating variables for serious/nonserious substance abuse were (in order of relative strength), for 18 year olds, friends' tolerance of substance use, impulsivity, grade average, friends' delinquency, friends' tolerance of delinquency, and need for autonomy; and, for 21 year olds, friends' tolerance of substance use, need for achievement, and friends' delinquency. (The analysis for 15 year olds was not significant.)

The most important discriminating variables for serious/nonserious delinquency were, for 15 year olds, friends' tolerance of delinquency, distress, friends' delinquency, self-esteem, and need for harm avoidance; and, for 18 year olds, education expectations, parental nurturance, and need for autonomy. (The analysis for 21 year olds was not significant.)

Conclusions. The results of this study provided partial support for the common-cause hypothesis, that is, that a common set of etiological factors accounts for the observed association between drug use and delinquency. Although the same variables in the school and peer domains were related to both types of deviant behavior, only weak associations were found for the family variables and intrapersonal variables. It was also found that the strength of the different predictor variables varied between each type of behavior as well as across age groups. Thus, although an integrated theory combining elements from control theory and differential association theory is useful in accounting for adolescent deviance, there may be an additional set of predictors, largely related to intrapersonal characteristics, that differentiates those deviant young people who become serious delinquents from those who become serious substance abusers.

These findings have implications for prevention. The results indicate that serious AOD use and delinquency "are not necessarily concentrated in a homogeneous grouping of adolescents but rather that each group represents a somewhat unique set of individuals whose dynamic processes are qualitatively distinct." Given the influence of peer groups, combined prevention approaches may perpetuate further socialization into alternative forms of deviance....Intervention strategies may...require more individualized treatments than can be offered in joint programs" (p. 736).

REFERENCES

*** = Abstracted Documents**

Adler, P. T., and Lutecka, L. 1973. Drug use among high school students: Patterns and correlates. *International Journal of the Addictions* 8:537-548.

Ahmed, S. W.; Bush, P. J.; Davidson, F. R.; and Iannotti, R. J. 1984. Predicting children's use and intentions to use abusable substances. Paper presented at the Annual Meeting of the American Public Health Association, Anaheim, CA.

Akers, R. L. 1977. *Deviant Behavior: A Social Learning Approach* 2nd ed. Belmont, CA: Wadsworth Press.

Akers, R. L.; Krohn, M. D.; Lanza-Kaduce, L.; and Radogevich, M. 1979. Social learning and deviant behavior: A specific test of a general theory. *American Sociological Review* 44:636-655.

Anhalt, H., and Klein, M. 1976. Drug use in junior high school populations. *American Journal of Drug and Alcohol Abuse* 3:589-603.

Annis, H. M., and Watson, C. 1973. Drug use and school dropouts: A longitudinal study. *Canadian Counsel General* 3/4:155-162.

Austin, Gregory. 1988. *Prevention Goals, Methods and Outcomes*. Prevention Research Update, 1. Western Center for Drug Free Schools and Communities, Portland, Oregon, Los Alamitos and San Francisco, Calif.

Barnum, R. 1985. Biomedical problems in juvenile delinquency: Issues in diagnosis and treatment. Paper prepared for the Harvard Office of Juvenile Justice and Delinquency Prevention Executive Sessions in Delinquency Prevention and the Family.

Baumrind, D. 1983. Why adolescents take chances--and why they don't. Paper presented at the National Institute for Child Health and Human Development, Bethesda, MD.

Beachy, Gary M.; Petersen, David M.; and Pearson, Frank S. 1979. Adolescent drug use and delinquency. *Journal of Psychedelic Drugs* 11(4):313-316.

*Beck, Allen J.; Kline, S. A.; and Greenfeld, L. A. 1987. *Survey of Youth in Custody*. Bureau of Justice Statistics Special Report, NJC-113365. Washington, DC: Bureau of Justice Statistics, U.S. Department of Justice.

*Blane, Howard T. 1982-1983. Problem drinking in delinquent and nondelinquent adolescent males. *American Journal of Drug and Alcohol Abuse* 9(2):221-232.

Blumstein, A.; Farrington, D. P.; and Moitra, S. 1985. Delinquency careers: Innocents, desisters and persisters. In: Tonry, M., and Morris, N., eds. *Career and Justice*, 6. Chicago: University of Chicago Press.

*Braukmann, Curtis J., et al. 1985. Effects of community-based group-home treatment programs on male juvenile offenders' use and abuse of drugs and alcohol. *American Journal of Drug and Alcohol Abuse* 11(3/4):249-278.

Brenna, David C. 1988. Substance abuse among juveniles: What corrections can do. *Corrections Today* April, pp. 208-211.

Bry, B.H.; McKeon, P.; and Pandina, R.J. 1982. Extent of drug use as a function of a number of risk factors. *Journal of Abnormal Psychology* 91:273-279.

Bry, B.H. 1983. Predicting drug abuse: Review and reformulation. *International Journal of the Addictic* 18(2):223-233.

Bryant, Dan. 1989. Communitywide responses crucial for dealing with youth gangs. *OJJDP Juvenile Justice Bulletin*, September.

California. State Task Force on Gangs and Drugs. 1989. *Final Report*. Sacramento, California: California Council on Criminal Justice.

Carpenter, Cheryl; Glassner, B.; Johnson, B. D.; and Loughlin, J.. 1988. *Kids, Drugs, and Crime*. Lexington, MA: Lexington Books.

Catalano, R. F.; Hawkins, J. D.; White, H.; and Pandina, R. 1985. Predicting marijuana use and delinquency in two longitudinal studies. Paper presented at the annual meeting of the American Society of Criminology, San Diego, CA.

Catalano, R. F.; Wells, E. A.; Jenson, J. M.; and Hawkins, J. D. In press. Aftercare services for drug using adjudicated youth in residential settings. *Social Science Review*.

Clayton, Richard R. 1981. The delinquency and drug use relationship among adolescents: A critical review. In: Lettieri, Dan J., and Ludford, Jacqueline P., eds. *Drug Abuse and the American Adolescent*. National Institute on Drug Abuse Research Monograph 38. Washington, D.C.: GPO. pp. 82-103.

Clayton, Richard R., and Ritter, C. 1985. The epidemiology of alcohol and drug abuse among adolescents. *Alcohol and Substance Abuse in Adolescence*, 4:69-97.

*Dawkins, Russell L., and Dawkins, Marvin P. 1983. Alcohol use and delinquency among Black, White, and Hispanic adolescent offenders. *Adolescence* 18:799-809.

*Dembo, Richard; Derke, Max; Schmeidler, James; and Washburn, Mark. 1986-1987. Prevalence, correlates and consequences of alcohol and other drug use among youths in a juvenile detention center. *Journal of Prison and Jail Health* 6(2):97-127.

*Dembo, Richard; Washburn, M., et al. 1987. Heavy marijuana and crime use among youths entering a juvenile detention center. *Journal of Psychoactive Drugs* 19(1):47-56.

Dembo, Richard, et al. 1987a. Further examination of the association between heavy marijuana use and crime among youths entering a juvenile detention center. *Journal of Psychoactive Drugs* 19(4):361-373.

Dembo, Richard, et al. 1987b. Physical abuse, sexual victimization and illicit drug use: A structural analysis among high risk adolescents. *Journal of Adolescence* 10:13-33.

Dembo, Richard, et al. 1988. The relationship between physical and sexual abuse and tobacco, alcohol, and illicit drug use among youths in a juvenile detention center. *International Journal of the Addictions* 23(4):351-378.

Dembo, Richard, et al. In Press. A longitudinal study of the relationships among marijuana/hashish use, cocaine use, and delinquency in a cohort of high risk youths. *Journal of Drug Issues.*

*Donovan, John E., and Jessor, R. 1985. Structure of problem behavior in adolescence and young adulthood. *Journal of Consulting and Clinical Psychology* 53:890-904.

Donovan, John E.; Jessor, R.; and Costa, F. M. 1988. Syndrome of problem behavior in adolescence: A replication. *Journal of Consulting and Clinical Psychology* 56:762-763.

Elliott, Delbert S., and Ageton, A.R. 1976. The relationship between drug use and crime among adolescents. In: Research Triangle Institute. *Drug Use and Crime: Report of the Panel on Drug Use and Criminal Behavior*. Springfield, Va.: National Technical Information Service. pp. 297-322.

Elliott, Delbert S., and Huizinga, D. 1984. *The Relationship between Delinquent Behavior and ADM Problems*. Boulder, CO: Behavioral Research Institute.

Elliott, Delbert S., and Voss, H. L. 1974. *Delinquency and Dropout*. Lexington, MA: D. C. Heath and Company.

*Elliott, D. S.; Huizinga, D.; and Ageton, S. S. 1985. *Exploring Delinquency and Drug Use*. Beverly Hills, CA: Sage.

*Fagan, Jeffrey. 1989. The social organization of drug use and drug dealing among urban gangs. *Criminology* 27(4):633-669.

Farnworth, M. 1984. Family structure, family attributes, and delinquency in a sample of low-income minority males and females. *Journal of Youth and Adolescence* 13:349-364.

Farrington, D. P. 1985. Predicting self-reported and official delinquency. In: Farrington, D.P., and Tarling, R., eds. *Prediction in Criminology*. Albany: State University of New York Press.

Farrington, D. P. 1986. Stepping stones to adult criminal careers. In: Olweus, D.; Block, J.; and Radke-Yarros, M., eds. *Development of Antisocial and Prosocial Behaviors*. Orlando, FL: Academic Press.

Farrington, D. P., and West, D. J. 1981. The Cambridge study in delinquent development United Kingdom. In: Mednick, S.A., and Baert, A.E., eds. *Prospective Longitudinal Research: An Empirical Base for the Primary Prevention of Psychosocial Disorders*. Oxford: Oxford University Press.

*Farrow, J. A., and French, J. 1986. The drug abuse-delinquency connection revisited. *Adolescence* 21:951-960.

Felner, R. D.; Primavera, J.; and Cauce, A. M. 1981. The impact of school transitions: A focus for preventive efforts. *American Journal of Community Psychology* 9:449-459.

Fenwick, P. 1985. The EEG. In: Rutter, M., and Heisov. L, eds. *Child and Adolescent Psychiatry*. Oxford: Blackwell Scientific Publications.

Figueira-McDonough, J. 1985. Discrimination of sex differences? Criteria for evaluating the juvenile justice system's handling of minor offenses. Paper prepared for the National Workshop on Female Offenders, St. Paul, Minnesota. Michigan State University and Institute for Social Research, University of Michigan.

Friedman, A. S. 1983. High school drug abuse clients. In: *Treatment Research Notes*. Division of Clinical Research, National Institute on Drug Abuse, Rockville, MD.

*Frost Reed, Barbara J., and May, Philip A. 1984. Inhalant abuse and juvenile delinquency: A control study in Albuquerque, New Mexico. *International Journal of the Addictions* 19(7):788-803.

Gibbs, Jewelle T. 1982. Psychosocial factors related to substance abuse among delinquent females: Implications for prevention and treatment. *American Journal of Orthopsychiatry* 52(2):261-271.

*Goodstein, Lynne; Kovacevic, Michael; and Sontheimer, Henry. 1989. A social and moral profile of serious urban juvenile delinquents. Paper presented at the annual meeting of the American Society of Criminology, Reno, Nevada, November 10, 1989.

Gottfredson, G. D. 1981. Schooling and delinquency. In: Martin, S.E.; Sechrest; L.B.; and Redner, R., eds. *New Directions in the Rehabilitation of Criminal Offenders*. Washington, DC: National Academy Press.

Greenberg, D. 1985. Age, crime and social explanation. *American Journal of Sociology* 91:1-21.

Greenspan, S.I. 1985. Research strategies to identify developmental vulnerabilities for drug abuse. In: Jones, C.L., and Battjes, R.J., eds. *Etiology of Drug Abuse: Implications for Prevention*. NIDA Research Monograph 56, pp. 137-154.

*Haggerty, K. P.; Wells, E. A.; Jenson, J. M.; Catalano, R. F.; and Hawkins, J. D. 1989. Delinquents and drug use: A model program for community reintegration. *Adolescence* 24:439-456.

Hawkins, J. D., and Lishner, D. M. 1987. Schooling and delinquency. In:Johnson, H.E., ed. *Handbook on Crime and Delinquency Prevention*. Westport, CT: Greenwood Press.

Hawkins, J. D.; Lishner, D. M.; Jenson, J. M.; and Catalano, R. F. 1987. Delinquents and drugs: What the evidence suggests about prevention and treatment programming. In: *Youth at High Risk for Substance Abuse*, National Institute on Drug Abuse, DHHS Publication No. ADM 87-1537. Reprinted by the Wisconsin Clearinghouse, Madison, Wisconsin.

*Hawkins, J. David; Jenson, Jeffrey M.; Catalano, Richard F.; and Lishner, Denise M. 1988. Delinquency and drug abuse: Implications for social services. *Social Service Review* 62(2):258-284.

Hays, R. D.; Widaman, K. F.; DiMatteo, M. R.; and Stacy, A. W. 1986. Structural-equation models of current drug use: Are appropriate models so simplex? *Journal of Personality ana Social Psychology* 52:134-44.

Heck, Robert O.; Pindur, Wolfgang; and Wells, Donna K. 1985. The juvenile serious habitual offender/drug involved program: A means to implement recommendations of the national council of juvenile and family court judges. *Juvenile and Family Court Journal* 36(2):27-37.

Hindelang, M. J. 1973. Causes of delinquency: A partial replication and extension. *Social Problems* 20:471-487.

Hirschi, T. 1969. *Causes of Delinquency*. Berkeley, CA: University of California Press.

Hirschi, T., and Gottfredson, M. 1983. Age and the explanation of crime. *American Journal of Sociology* 89:552-584.

Hollin, C. R. 1983. Young offenders and alcohol: A survey of the drinking behavior of a Borstal population. *Journal of Adolescence* 6:161-174.

Holmberg, M. B. 1985. Longitudinal studies of drug abuse in a fifteen-year-old population. *Acta Psychiatrica Scandinavica* 16:129-136.

Hundleby, J. D. 1986. Drug usage and outstanding performance among young adolescents. *Addictive Behaviors* 10:419-423.

*Hundleby, J. D. 1987. Adolescent drug use in a behavioral matrix: A confirmation and comparison of the sexes. *Addictive Behaviors* 12:103-112.

*Inciardi, James A., and Pottieger, Anne E. Forthcoming (1990). Kids, crack, and crime. *Journal of Drug Issues*.

Jessor, R. 1976. Predicting time of onset of marijuana use: A developmental study of high school youth. *Journal of Consulting and Clinical Psychology* 44:125-134.

Jessor, R., and Jessor, S. 1977. *Problem Behavior and Psychosocial Development: A Longitudinal Study of Youth*. New York: Academic Press.

Jessor, R., and Jessor, S. 1978. Theory testing in longitudinal research on marijuana use. In D. Kandel Ed. *Longitudinal Research on Drug Use*. Washington, DC: Hemisphere Publishing Co.

Jessor, R.; Close, J. A.; and Donovan, J. E. 1980. Psychological correlates of marijuana use and problem drinking in a national sample of adolescents. *American Journal of Public Health* 70:604-613.

Johnson, Bruce D.; Wish, Eric; and Huizinga, David. 1983. The concentration of delinquent offending: The contribution of serious drug involvement to high-rate delinquency. Paper presented at the annual meeting of the American Society of Criminology, Denver, November 1983.

Johnson, G. M.; Schoutz, F. C.; and Locke, T. P. 1984. Relationships between adolescent drug use and parental drug behaviors. *Adolescence* 19:295-299.

Johnson, R. E. 1979. *Juvenile Delinquency and its Origins: An Integrated Theoretical Approach*. New York: Cambridge University Press.

Johnston, L. D. 1973. *Drugs and American youth*. Ann Arbor, MI: Institute for Social Research.

Johnston, L. D.; O'Malley, P. M.; and Eveland, L. K. 1978. Drugs and delinquency: A search for causal connections. In: Kandel, D.B., ed. *Longitudinal Research on Drug Use: Empirical Findings and Methodological Issues*. Washington, DC: Hemisphere.

Johnston, L. D.; O'Malley, P. M.; and Bachman, J. G. 1985. *Use of Licit and Illicit Drugs by America's High School Students, 1975-84*. Rockville, MD: National Institute of Drug Abuse.

Johnston, L.D.; O'Malley, P. M.; and Bachman, J. G. 1986. *Drug Use Among American High School Students, College Students, and Other Young Adults: National Trends Through 1985*. Rockville, MD: National Institute of Drug Abuse.

Kandel, Denise B. 1978. Convergences in prospective longitudinal surveys of drug use in normal populations. In: Kandel, D.B., ed. *Longitudinal Research in Drug Use: Empirical Findings and Methodological Issues*. Washington, DC: Hemisphere Publishing.

Kandel, Denise B. 1982. Epidemiological and psychosocial perspectives on adolescent drug use. *Journal of American Academic Clinical Psychiatry* 21:328-347.

Kandel, Denies B. 1985. On the process of peer influence in adolescent drug use: A developmental prospective. *Alcohol and Substance Abuse in Adolescense* 4(3-4):139-163.

Kandel, Denise B., and Adler, I. 1982. Socialization into marijuana use among French adolescents: A cross-cultural comparison to the United States. *Journal of Health and Social Behavior* 23:294-309.

Kandel, Denise B.; Kessler, R. C.; and Margulies, R. Z. 1978. Antecedents of adolescent initiation into stages of drug use: A developmental analysis. *Journal of Youth and Adolescence* 7:13-40.

*Kandel, Denise B.; Simcha-Fagan, O.; and Davies, M. 1986. Risk factors for delinquency and illicit drug use from adolescence to young adulthood. *Journal of Drug Issues* 16:67-90.

Kandel, Denise B., and Raveis, V. H. 1989. Cessation of illicit drug use in young adulthood. *Archives of General Psychiatry* 46:109-116.

Kaplan, H.; Martin, S.; and Robbins, C. 1984. Pathways to adolescent drug use: Self-derogation, peer influence, weakening of social controls, and early substance use. *Journal of Health and Social Behavior* 25:270-289.

Karoly, P. 1975. Comparison of "psychological styles" in delinquent and nondelinquent females. *Psychological Reports* 36:567-570.

Kellam, S. G., and Brown, H. 1982. *Social Adaptational and Psychological Antecedents of Adolescent Psychopathology Ten Years Later*. Baltimore: Johns Hopkins University.

Kelly, D. H., and Balch, R. W. 1971. Social origins and school failure: A re-examination of Cohen's theory of working-class delinquency. *Pacific Sociological Review* 14:413-430.

Kim, S. 1979. *An Evaluation of Ombudsmen Primary Prevention Program on Student Drug Abuse*. Charlotte: Charlotte Drug Education Center, Inc.

Klein, Malcolm; Maxson, C.; and Cunningham, L. 1988. Gang involvement in Cocaine Rock Trafficking. Final Report to the National Institute of Justice. Los Angeles: University of Southern California, Social Science Research Institute.

Kleinman, P. H.; Wish, E. D.; Deren, S.; and Rainone, G. A. 1986. Multiple drug use: A symptomatic behavior. *Journal of Psychoactive Drugs* 18:77-85.

Kobrin, S., and Schuerman, L. A. 1981. Interaction between neighborhood change and criminal activity. Interim report to the National Institute of Justice. Washington, DC.

Kovach, J. A., and Glickman, N. W. 1986. Levels and psychosocial correlates of adolescent drug use. *Journal of Youth and Adolescence* 15:61-77.

Kraus, J. 1981. Juvenile drug abuse and delinquency: Some differential associations. *British Journal of Psychiatry* 139:422-430.

Krohn, Marvin D., and Massey, James L.. 1979. *Social Bonding Theory, Drug Use and Delinquent Behavior*. University of Iowa Sociology Working Paper Series. Iowa City: University of Iowa.

Krohn, Marvin D., and Massey, James L. 1980. Social control and delinquent behavior: An examination of the elements of the social bond. *Sociological Quarterly* 21:529-544.

Krohn, M D.; Lanza-Kaduce, L; and Akers, R. L. 1984. Community context and theories of deviant behavior: An examination of social learning and social bonding theories. *Sociological Quarterly* 25:353-371.

Ladouceur, Patricia. 1984. Criminal careers, alcohol and drug use: A longitudinal study. Ph.D. dissertation, University of Oregon.

LaGrange, R. L., and White, H. R. 1985. Age differences in delinquency: A test of theory. *Criminology* 23:19-42.

Langner, T. S.; Gersten, J. C.; Wills, T. A.; and Simcha-Fagan, O. 1983. The relative roles of early environment and early behavior as predictors of later child behavior. In: Ricks, D.F., and Dohrenwend, B.S., eds. *Origins of Psychopathology*. New York: Cambridge University Press.

Lawrence, R. 1985. School performance, containment theory, and delinquency behavior. *Youth and Society* 17:69-75.

Lawrence, T. S., and Vellerman, J. D. 1974. Correlates of student drug use in a suburban high school. *Psychiatry* 35:129-136.

Lipsey, M. W. 1983. Measurement issues in the evaluation of the effects of juvenile delinquency programs Project 80-IJ-CX-0036. Washington, DC: National Institute of Justice, Office of Research and Evaluation Methods. National Criminal Justice Reference Service Document No. NCJ-84968.

Lipsey, M. W. 1990. Juvenile delinquency treatment: A meta-analytic inquiry into the variability of effects. Unpublished document.

Lipton, D.; Martinson, R.; and Wilks, J. 1975. *The Effectiveness of Correctional Treatment: A Survey of Treatment Evaluation Etudies*. New York: Praeger.

Loeber, R. 1985. Patterns of development of antisocial child behavior. *Annals of Child Development* 2:77-115.

Loeber, R., and Dishion, T. 1983. Early predictors of male delinquency: A review. *Psychological Bulletin* 93:68-99.

Loeber, R., and Stouthamer-Loeber, M. 1987. Prediction. In: Quay, H.C., ed. *Handbook of Juvenile Delinquency*. New York: John Wiley and Sons.

McCord, J. 1979. Some child-rearing antecedents of criminal behavior in adult men. *American Journal of Public Health* 70:719-721.

McCord, J. 1981. Alcoholism and criminality. Confounding and differentiating factors. *Journal of Studies on Alcohol* 42:739-748.

Mednick, S. A.; Volavka, J.; Gabrielli, W. F.; and Itil, T. M. 1981. EEG as a predictor of antisocial behavior. *Criminology* 19:212-229.

Moberg, David P. The social control of deviance: Integration with adolescent alcohol and other drug users. Ph.D. dissertation, University of Wisconsin, Madison.

Moore, Joan. 1990. The need for specificity in research on gangs and drug-realted violence. Paper presented at the National Conference on Substance Abuse and Gang Violence, Los Angeles, California, March 30-31, 1990. Sponsored by California School of Professional Psychology at Los Angeles. and the US Office of Substance Abuse Prevention.

Morales, Armando. 1990. Gangs, violence, and drugs: The numbers game. Paper presented at the National Conference on Substance Abuse and Gang Violence, Los Angeles, California, March 30-31, 1990. Sponsored by California School of Professional Psychology at Los Angeles. and the US Office of Substance Abuse Prevention.

Murray, C. A. 1983. The physical environment and community control of crime. In: Wilson, J.Q., Ed. *Crime and Public Policy*. San Francisco: Institute for Contemporary Studies.

Newcomb, Michael, and Bentler, P. 1988. *Consequences of Adolescent Drug Use: Impact on the Lives of Young Adults*. Newbury Park, Calif.: Sage Publications. [Abstracted in *Prevention Research Update* 1.]

Norem-Hebeisen, A.; Johnson, D. W.; Anderson, D.; and Johnson, R. 1984. Predictors and concomitants of changes in drug use patterns among teenagers. *Journal of Social Psychology* 124:43-50.

O'Donnell, J. A., and Clayton, R. R. 1979. Determinants of early marijuana use. In: Beschner, G.M., and Friedman, A.S., eds. *Youth Drug Abuse: Problems, Issues and Treatment*. Lexington, MA: Lexington Books.

Olweus, D. 1979. Stability of aggressive reaction patterns in males: A review. *Psychological Bulletin* 85:852-875.

*Osgood, D. W.; Johnston, L. D.; O'Malley, P. M.; and Bachman, J. G. 1988. The generality of deviance in late adolescence and early adulthood. *American Sociological Review* 53:81-93.

Patterson, G. R. 1982. The management and disruption of families. In: *A Social Learning Approach: Coercive Family Process*, 3, Eugene, OR: Castalia Publishing Co.

Penning, M., and Barnes, G. E 1982. Adolescent marijuana use review. *International Journal of the Addictions* 17:749-791.

Peterson, L. Homer, A. L.; and Wonderlich, S. A. 1982. The integrity of independent variables in behavior analysis. *Journal of Applied Behavior Analysis* 15:477-492.

Quay, H.C. 1987. Intelligence. In: Quay, H.C., ed. *Handbook of Juvenile Delinquency*. New York: John Wiley & Sons.

Rachal, J.V.; Guess, L.L.; et al. 1980. Adolescent Drinking Behavior, Volume I: The Extent and Nature of Adolescent Alcohol and Drug Use: The 1974 and 1978 National Sample Studies. Research Triangle Park, N.C.: Research Triangle Institute.

Rachal, J. V.; Guess, L. L.; Hubbard, R. L.; Maisto, S. A.; Cavanaugh, E. R.; Waddell, R.; and Benrud, C. H. 1982. Factors for planning No. 4: Alcohol misuse by adolescents. *Alcohol Health and Research World*, 61-68.

*Rivers, James E. 1989. Drug use and criminal activity among Miami youth involved in the crack-cocaine business. Unpublished report. Miami: Office of Substance Abuse Control.

Robins, L. N. 1978. Sturdy childhood predictors of adult antisocial behavior: Replications from longitudinal studies. *Psychological Medicine* 8:611-622.

Robins, L. N. 1980. The natural history of drug abuse. In: *Evaluation of Treatment of Drug Abusers*, ACTA. Psych. Scand. Suppl., 62.

Rothstein, Robert N. 1987. Teen court: A way to combat teenage crime and chemical abuse. *Juvenile and Family Court Journal* 38(1):1-4.

Rutter, M., and Giller, H. 1983. *Juvenile Delinquency: Trends and Perspectives*. New York: Penguin Books.

Sampson, R. J.; Castellano, T. C.; and Laub, J. H. 1981. Juvenile criminal behavior and its relation to neighborhood characteristics. Washington, DC: Office of Juvenile Justice and Delinquency Prevention, U.S. Dept. of Justice.

Satinder, K. P., and Black, A. 1984. Cannabis use and sensation-seeking orientation. *Journal of Psychology* 16:101-105.

Schlossman, S.; Zellman, G.; Schavelson, R.; Dedlak, M.; and Cobb, J. 1984. *Delinquency Prevention in South Chicago*. Santa Monica: Rand.

Simcha-Fagan, O., and Gersten, J. C. 1986. Early precursors and concurrent correlates of illicit drug use in adolescents. *Journal of Drug Issues* 60:7-28.

Simonds, J.F., and Kashani, J. 1980. Specific drug use and violence in delinquent boys. *American Journal of Drug and Alcohol Abuse* 7:305-322.

Spivack, G. 1983. *High Risk Early Behaviors Indicating Vulnerability to Delinquency in the Community and School*. National Institute of Juvenile Justice and Delinquency Prevention, Office of Juvenile Justice and Delinquency Prevention. Washington, DC: U. S. Government Printing Office.

Spotts, J. W., and Shontz, F. C. 1984. Correlates of sensation seeking by heavy, chronic drug users. *Perceptual and Motor Skills* 58:427-435.

*Temple, Mark, and Ladouceur, P. 1986. The alcohol-crime relationship as an age-specific phenomenon: A longitudinal study. *Contemporary Drug Problems* 13:89-115.

Thornberry, T. P., and Farnworth, M. 1982. Social correlates of criminal involvement: Further evidence on the relationship between social status and criminal behavior. *American Sociological Review* 47:505-518.

Thorne, G. L. 1971. Sensation seeking scale with deviant populations. *Journal of Consulting and Clinical Psychology* 37:106-110.

Thorne, C. R., and DeBlassie, K. K. 1985. Adolescent substance abuse. *Adolescence* 20:335-347.

Thorton, William E. 1981. Marijuana use and delinquency: A re-examination. *Youth & Society* 13(1):23-37.

Tinklenberg, J. R.; Murphy, P. I.; Darley, C.F.; Roth, W. T.; and Kopell, B. S. 1974. Drug involvement in criminal assaults by adolescents. *Archives of General Psychiatry* 30:685-689.

Tinklenberg, J. R.; Murphy, P.; Murphy, P. L.; and Pfefferbaum, A. 1981. Drugs and criminal assaults by adolescents: A replication study. *Journal of Psychoactive Drugs* 13:277-287.

Tobler, N.S. 1986. Mata-analysis of 143 adolescent drug prevention programs: Quantitative outcome results of program participants compared to a control or comparison group. *Journal of Drug Issues* 16(4):537-567.

Tuchfeld, Barry S.; Clayton, Richard R.; and Logan, John A. 1982. Alcohol, drug use, and delinquent and criminal behaviors among male adolescents and young adults. *Journal of Drug Issues* 12(2):185-198.

*U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention. 1985. *Drug Abuse, Mental Health, and Delinquency: Summary of Proceedings of Practitioners' Conference on Juvenile Offenders with Serious Drug, Alcohol, and Mental Health Problems, September 6-7, 1984, Washington, D.C.*.

Van Dusen, K. T.; Mednick, S.; Gabrielli, W. F.; and Hutchings, B. 1983. Social class and crime in an adoption court. *Journal of Criminal Law and Criminology* 74:249-269.

*Watters, John K.; Reinarman, C.; and Fagan, J. 1985. Causality, context, and contingency: Relationships between drug use and delinquency. *Contemporary Drug Problems* 12:351-373.

*Weisheit, Ralph A. 1984. Alcohol and drug abuse prevention: Implications for delinquency prevention. *Journal of Drug Issues* 14(3):469-477.

Weiss, G. 1983. Long-term outcome: Findings, concepts and practical implications. In: Rutter, M., ed. *Developmental Neuropsychiatry*. New York: Guilford Press.

West, D. J. 1982. *Delinquency: Its Roots, Careers and Prospects*. Cambridge: Harvard University Press.

West, D. J., and Farrington, D. P. 1973. *Who Becomes Delinquent?* London: Heinemann.

West, D. J., and Farrington, D. P. 1977. *The Delinquent Way of Life*. London: Heinemann.

White, H. R.; Johnson, V.; and Garrison, C. G. 1985. The drug-crime nexus among adolescents and their peers. *Deviant Behavior* 6:183-204.

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