

ADOLESCENT DRUG ABUSE AND FERTILITY:
EXISTING SURVEY DATA

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The purpose of this paper is to review existing sources of information on drug abuse, pregnancy, and problem behaviors among adolescents; specifically, to identify and describe existing surveys which collect data relevant to these problems and to describe the data. The goal is to identify antecedent, sequential, or consequential relationships using existing survey data to see whether investigators studying pregnant and parenting adolescents and drug-using adolescents are studying the same, similar, or different populations.

Unfortunately, the categorical focus of most of these surveys does not permit analyses of the topics of interest. With the notable exceptions of the National Youth Survey (Elliott, this volume) and the Woodlawn Study (Ensminger and Kane, this volume), most of the surveys focus on drug abuse with inadequate or no information on age of onset of sexual activity and pregnancy or on adolescent behaviors and health status without information regarding timing and types of drugs used.

Among the reasons for this categorical separation of data collection are the mechanisms used to reach various populations. Surveys such as Monitoring the Future develop their samples through collaboration with school systems. In such cases, questions regarding sexual attitudes and behaviors are not permitted. A problem with general household surveys is that they tend to have relatively few young persons within the samples and/or they focus on specific topics (such as participation in the work force, health status, or substance use), with the sponsor setting the limits on scope of the data collected. Problems in launching, designing, funding, and gaining access to a sample thus dictate the scope of a survey.

This categorical focus in the past limits what can be done in the present. The questions become why, how, and whether we need to study the interrelationships of drug abuse and adolescent pregnancy to develop a rationale for future survey research. This paper is thus organized around fundamental questions of why

these topics merit consideration and obstacles to studying adolescent fertility and drug abuse conjointly. It concludes with brief abstracts of the 15 surveys and projects which comprise the current state of the art.

WHAT WE CAN LEARN BY INCLUDING MEASURES OF BOTH DRUG USE AND ADOLESCENT FERTILITY IN SURVEY DESIGNS

Most researchers specialize. Even within their areas of specialization, most researchers tend to concentrate on a particular and often rather narrow topic. Fertility researchers, for example, tend to focus on such topics as contraceptive use, delayed childbearing, infertility, or adolescent fertility. Researchers studying drug use may focus on the evaluation of prevention programs or on family influences versus peer influences. The advantages of this specialization are substantial. Researchers are better able to master the relevant literature of a narrow field than of a broad subject and to develop concrete research proposals that appeal to the categorical agencies responsible for funding research projects. Yet, the losses due to this specialization are substantial also, since disciplines develop theories, paradigms, hypotheses, databases, and a knowledge base in relative isolation.

Considering the topics of concern here--adolescent fertility and drug use--a review of the two literatures will quickly indicate that few researchers studying either domain have expanded their purview to explore the interrelationships between the two domains. However, those researchers who have explored the issue have found adolescent drug use and fertility to be rather highly correlated. Moreover, when the purposes of each domain are examined, the relevance of drug use to fertility and of fertility to drug use becomes obvious. Let us consider the reasons for studying first, adolescent fertility and, second, adolescent drug use.

Why is the study of adolescent fertility important? What do we want to learn as a result of research on teenage childbearing and how is the study of substance abuse relevant to this research?

The study of adolescent fertility has attracted researchers because early childbearing affects the size and composition of a society, the health of the population, and the social and economic status of the population. Given data associating negative consequences with early parenthood in these areas, researchers have also sought to understand the determinants of early childbearing. One of the purposes of this paper is to illustrate how these fertility issues can benefit from including drug use as a determinant, outcome, or mediating variable.

The size and characteristics of a population are obviously affected by who bears children and by the timing and circumstances under which they bear children. A highly

industrialized nation with a high incidence of early childbearing will have a different population than a similar nation with a more delayed fertility timetable. If drug use is common among teenagers and teenagers frequently become parents, the characteristics of the child population may differ in unknown ways from a society in which teenagers typically don't use drugs and/or do not become parents.

The health of a population is crucial to the well-being of the people and to the vitality of the nation. Teenage parents have been found consistently to be at risk of poor pregnancy outcomes. Researchers have found that early, high-quality prenatal care can greatly improve pregnancy outcomes among teens; however, many teens do not seem to obtain the care they need. Certainly, drug use has an important influence on the health of a fetus and may be one determinant of the relatively poor health outcomes among babies born to teen mothers.

Drug use may also ensue as a consequence of early sexual activity or pregnancy experience. Numerous studies of teenage parenthood have been conducted in order to identify the consequences of early childbearing and to explore the processes by which an early pregnancy or birth leads to particular kinds of outcomes (see Moore and Burt 1982 for a review). The possibility exists that early sexual activity, pregnancy, abortion, adoption, or parenthood all increase the risk of becoming a drug user. Perhaps, for example, teens who feel overwhelmed by the responsibilities of parenthood may escape into drug use. Alternatively, it is possible that teens who make some of these transitions are at a lower risk of abusing drugs. Perhaps, for example, young mothers give up drugs as a response to their parenting responsibilities. Drug use as an explicit consequence of early sexual activity and pregnancy experience have not as yet been researched, however, so these possibilities have not been empirically tested.

Similarly, drug use may mediate the social and economic effects of early childbearing. The probability of school dropout or unemployment among teen mothers may be exacerbated by drug use, or drug use may elevate the risk of marital disruption. In addition, drug use on the part of the father may help to explain why marriage does not occur.

In view of the negative consequences associated with teenage childbearing, numerous researchers have focused on identifying the determinants of sexual activity, contraceptive use, pregnancy, abortion, marriage, or adoption. Typically, these studies are conducted with an eye to understanding why some teenagers become pregnant and/or rear children while others do not (e.g., Zelnik et al. 1981). Often, the ultimate goal is to affect the determinants of adolescent parenthood in ways that will diminish the incidence of early childbearing. Since most of these studies have ignored the possible influence of drug use, its potential as an antecedent variable has not been

explored. For example, drug use may affect the probability that a teenager will engage in sexual activity or use contraception and it may affect the quality of their decision-making on one of these topics. Drug users may use contraception less regularly or less effectively than other teens. Drug users may avoid making decisions about abortion or adoption until it is too late. Including measures of drug use might enrich our understanding of why teenagers do and do not make certain kinds of decisions.

Related to this issue of understanding the determinants of early childbearing is the issue of developing preventive and ameliorative strategies. Sex education, contraception, counseling regarding pregnancy resolution, child care, special school programs, and job training are among the many services directed toward sexually active, pregnant, and parenting teens. The efficacy of the services offered, or the way in which services should be offered, will be affected if significant portions of the intended service population are drug users; yet this issue is rarely addressed in a systematic way.

On the basis of these arguments, then, one could posit that studies of adolescent fertility would be enhanced by the inclusion of drug use as a possible causal variable--call this Pattern One--and as a potential outcome variable--Pattern Two. It also seems likely, however, that the association between adolescent fertility and drug use is one of mutual causation --Pattern Three--or of common causation due to a cluster of antecedent factors--Pattern Four.

According to Pattern One, a youth first becomes a drug user. He/she then initiates sexual activity while using street drugs but not contraceptive methods and ends up being a teen parent. With Pattern Two, a young person enters a sexual relationship, becomes a parent, and reacts to her or his life circumstances by initiating drug use. In Pattern Three, drug use and sexual activity are initiated simultaneously, perhaps in response to a new set of friends or a new dating relationship. According to Pattern Four, a set of common antecedent factors creates a readiness for sexual activity and drug use as a part of the "lifestyle" of some youth and the two behaviors tend to appear jointly, along with the other behaviors that make up the lifestyle. Of course, there are undoubtedly many youth who engage in sexual activity only and some others who use drugs only. The antecedents and consequences of their behavior may differ considerably from those following the other four patterns; these would be Patterns Five and Six, respectively (see table 1).

TABLE 1:
Potential Patterns of Association
Between Adolescent Fertility and Drug Abuse

Pattern 1	Early drug use causes other outcomes, including early sexual activity/pregnancy.
Pattern 2	Early sexual activity/pregnancy causes other outcomes, including drug use.
Pattern 3	Drug use and fertility are mutually causal.
Pattern 4	A cluster of common antecedents causes drug use and early sexual activity/pregnancy.
Pattern 5	A set of antecedents predicts drug use but not fertility.
Pattern 6	A set of antecedents predicts early sexual activity/pregnancy but not drug use.

To explore these complex possibilities, one would ideally have longitudinal data with rich information at several points in time on family relationships and household composition; peer characteristics; dating relationships; sexual activity; contraceptive use; pregnancy history; drug use over time; school performance; attitudes regarding sexual activity, drug use, and contraception; aspirations; peer influences; contact with various kinds of media; family-related values and aspirations; and information on personality characteristics. Information on neighborhood and community characteristics might also be relevant. Demographic and socioeconomic background data would be essential.

In summary, there are many reasons for the intense public and research interest in adolescent sexual and fertility behavior, and most of the research issues explored would benefit by including measures of drug use. Questions from the opposite angle are also appropriate: Why is it important to know about adolescent drug use? How is information about fertility relevant to understanding substance abuse?

The use of drugs among teenagers is of interest because it is widely viewed as a serious social and health problem. This problem takes a number of forms and includes issues ranging from the illegal status of drug use to health concerns to child care, service needs, and prevention programs. As these are discussed,

the relevance of fertility data will be highlighted. Initiating use of illicit drugs often leads users into contact with people who have a greater familiarity with and commitment to deviant activities and may, therefore, be a route into a network of deviant activities and friendships. In addition, the need for money to purchase drugs may result in criminal activity on the part of users. As in the case of other types of deviant activities, it is relevant to know the characteristics of perpetrators, including whether they have dependents whose well-being might be at risk.

The health and social aspects of using various types of drugs are a source of general concern. Although the health consequences of using some types of drugs, such as marijuana, particularly among light users, the health effects of other drugs are potentially very negative. Most concern tends to focus on the current and future health of the drug user. The possibility that a teenage male may father a child with drug-induced problems is typically ignored. Similarly, the risk that a teenage female will conceive and carry a child with either congenital defects or problems due to poor health during pregnancy is relatively ignored. As discussed by Zuckerman and Grant (this volume) and by McAnarney (this volume), infants of teens may be at particular health risk because of parent drug use during pregnancy and because drug users are less likely to seek and maintain appropriate nutrition and health care.

Teenage drug users may not only be at risk of parenthood, they may already be parents. If so, their drug use not only has implications for their own health, educational progress, job success, and economic status, but for the health and the social and economic well-being of their children. If one goal of studying drug use among teens is to understand the consequences of drug use, then understanding the consequences for their childrearing should be a high priority research concern, as well.

Another purpose of research on adolescent drug abuse is to understand the service needs of sexually active or pregnant teenagers. As in the case of developing appropriate programs for sexually active, pregnant, and parenting teens, it seems necessary to consider the characteristics of the population for whom drug-oriented services are needed. For example, a teenage mother and her child may not do well in a residential program, and a youth with a family to support may be more responsive to a job-related program than a program that places youth in a halfway house. Presumably, individual social workers learn about the particular needs of their clients. However, the absence of data at the level of the Federal, State, or local planner may result in the development of programs that overemphasize some services while overlooking other much-needed services.

Finally, the development of prevention strategies is a goal of

drug-related research. As with adolescent pregnancy, many strategies have been tried; however, little dialogue exists between researchers working in their respective fields. They tend to publish in different journals; analyze different data bases; and independently explore, reject, and accept fairly similar hypotheses. Drug abuse researchers might benefit from the research on sex education and family planning in the same way that researchers studying adolescent fertility can benefit from research on the prevention of drug abuse.

Again, patterns of influence might include one or more of the six patterns shown in table 1.

To address these kinds of issues, researchers require rich longitudinal data in which information is repeatedly collected on behaviors and attitudes in several interrelated domains. Data are needed on the young person's experience with varied kinds of drugs and related substances at different ages and in different contexts. A comparable history of sexual activity, contraceptive use, and pregnancy would enable researchers to track the onset of the two behaviors, while inclusion of rich data on family relationships, aspirations, school progress, criminal activity, peer behavior and attitudes, community characteristics, attitudes about drug use, sex, fertility, sex roles, and family, as well as personality characteristics would enable researchers to explore different patterns of association.

OBSTACLES TO STUDYING ADOLESCENT FERTILITY AND DRUG ABUSE JOINTLY

A number of factors militate against research that crosses topical boundaries. Even if a researcher attempts to explore a multifaceted problem not typically defined as within his or her research area, real effort is needed to develop a working knowledge of a new literature. New funding sources are also needed, and it is typically more difficult to raise funds to study an issue that crosses agency boundaries than to study a topic that is safely within the bureaucratic jurisdiction of a single agency, not to mention within the tastes of its peer review panels. Moreover, to conduct a study using extant data, a researcher must also have data including measures of both fertility behavior and drug use in the same data-collection instrument. The existing data sets tend to focus on either fertility issues or drug issues.

The remainder of this paper will describe those several databases which do include information on both topics.

DATABASES

Several of the more promising databases are described below. In several cases, the existing database has good information on either fertility or drug use, but it includes no data on the other topic. These are listed to suggest the possibilities for

"piggybacking" new questions on future waves of these surveys. Each database listed has weaknesses; yet, there are possibilities for useful new research employing existing data.

The National Longitudinal Survey
of the Labor Market Experience of Youth

Location: Center for Human Resource Research, Ohio State University, Columbus, OH

Description: A nationally representative sample of 12,686 youth aged 14 to 21 in 1979 has been interviewed annually through 1985. The Survey was initiated by the Department of Labor to continue a series of surveys that has provided a wealth of information on the labor market behavior and experiences of Americans. The content of the survey has been expanded, however, to include many topics in addition to employment and income. A great deal of information has also been collected on formal education; marriage and fertility histories; income and assets; family background; attitudes, aspirations, and expectations; family planning; delinquent activities and arrests; child care; maternal and child health care; as well as use of drugs and alcohol. Information on family relationships and peer influences has not been collected, however, and it is not always possible to establish the temporal ordering of events.

The sample includes an over-representation of black, Hispanic, and economically disadvantaged white youth, as well as youth in the military, to permit statistically reliable comparisons between important population subgroups.

Questions on drug use and delinquency were asked in 1980 and 1984. A fertility history, a record of pregnancies not resulting in live births, and information on use of different birth control methods were collected in 1982. The fertility history and record of pregnancies not resulting in live births were repeated in 1983 and 1984. The abortion data produced by the 1984 survey appear to be affected by underreporting, a common problem when such sensitive information is requested. Pregnancy history information was only obtained from female respondents; however, information on sexual activity, birth control, and children born were obtained from males, making this one of the richest sources of available data on male fertility.

Because of its large sample size, high response rates, longitudinal design, inclusion of both males and females, extensive coverage of both drug use and fertility history, oversampling of small but important population subgroups, and the availability of rich economic, social, and demographic information, this is one of the premier extant databases for exploring the joint occurrence of adolescent pregnancy and drug use (see discussion paper by Kandel, this volume).

The Young Adult Followup Study

Location: Richard Jessor,
University of Colorado, Boulder, CO

Description: Data for this study were collected in two stages. The initial phase involved the collection of four waves of data on three cohorts of junior high students in a Colorado city. Annual interviews were conducted between the spring of 1969 and 1972, at which time 432 youths (188 males and 244 females) had completed all four questionnaires. Seven years later, additional interviews were conducted with 94% of the initial respondents. By the time of the 1979 followup, respondents were aged 23, 24, and 25.

Respondents in the sample are not representative of the United States. They are largely white and middle class, with the average educational level of the fathers being "some years of college." The strongest liability of the sample, though, is the very low initial response rate, with only 52% of those originally selected agreeing to participate. Over the initial 4 years, 82% continued to participate; and, as noted, 94% of these completed the followup questionnaire.

Since the respondents were in grades 7, 8, and 9 in the initial year of the study, the data collected are truly prospective for most of the youth. Moreover, rich and varied data were collected within an explicit theoretical structure. Most of the measures in the questionnaire were psychometrically developed, multiple-item scales exploring the youths' personalities, perceived environments, and behavior systems. The questionnaires were completed in the schools but outside of classes. The 1979 followup covered these same topics again, but was expanded to include work, family, leisure, friendships, and the occurrence of positive and negative life events. Questions on both the occurrence and the timing of drug use and sexual intercourse were asked, and analyses published by the research team indicate that the initiation of the two behaviors is rather highly correlated and that common antecedents predict both early sexual activity and early drug use.

The National Survey of Children

Location: Child Trends, Inc., Washington, D.C.

Description: In 1976, a national sample of children aged 7 to 11 was interviewed to assess the physical, social, and psychological well-being of different groups of American children. In 1981, a subsample of the original sample was reinterviewed in a study focusing on marital disruption and its effects on children. For this purpose, all children in disrupted and high-conflict families (as measured in the first interview) and a subsample of those in low- or moderate-conflict families were selected for reinterview. In both 1976 and 1981,

the child, a parent, and a teacher were interviewed.

Most of the background and outcome measures included in the 1976 survey were repeated in 1981. In addition, new data were gathered on patterns of parent-child interaction and on outcome areas more relevant for teenage children. Questions on drinking, smoking, drug use, delinquency, and running away were asked of all respondents; and questions on sexual activity and pregnancy were asked of the 15- and 16-year-olds. Very few pregnancies were reported among the 461 respondents who were asked about such events; however, 120 respondents reported having had sexual intercourse. Underreporting may be a problem among white female teens with regard to sexual activity and among black youth with regard to deviant activities. Initial tabulations of these data suggest a strong association between early sexual activity and the occurrence of other non-normative behaviors.

Sample sizes become a problem in analyzing behaviors which, despite the attention they receive, are only engaged in by a small number of teens during early adolescence. Nevertheless, exploratory analyses suggest the utility of studying the effect of family relationships on early sexual intercourse, substance abuse, and delinquency. A new wave of data will be collected in late 1986.

A Biosocial Model of Adolescent Sexuality

Location: J. Richard Udry, The University of North Carolina, Chapel Hill, NC

Description: This is a study of biological and social factors and their influences on adolescent sexuality. Data were collected in two different Southern cities. In the first city, self-administered questionnaires were completed in the fall of 1978 by 504 adolescents in their homes. This sample represents 81% of the eligible respondents at one junior high school in an urban area of North Carolina. This junior high school was selected to ensure a large enough sample and one that would be generally representative of other junior high schools in North Carolina cities. The students come from a wide variety of socioeconomic backgrounds.

A year later, a followup questionnaire was completed by 408 of the original respondents, an 81% completion rate. At this time, the students were in grades 8 through 10 and ranged in age from 12 to 17. To elicit friendship information, each respondent was given a list of all students at the junior high school and asked to write the identifying number of their three best male and three best female friends on the questionnaire. Finally, a third round of interviews was completed with this sample in 1980.

A number of questions were asked of these respondents in each

year regarding their dating and sexual activity. Respondents were also asked whether they had ever drunk alcohol, ever driven a car, ever smoked cigarettes, and ever cheated on a test. No questions on the use of drugs were included, however. In 1980, a second data-collection effort was initiated. Again, interviews were conducted with young adolescents attending a junior high school in a medium-sized Southern city. Fourteen hundred interviews were completed and, in 1982, reinterviews were completed with about three-quarters of the original respondents. In this second interview, a number of questions were asked on sexual activity and deviant behaviors, including whether the youth had been drunk, lied, cut class, used marijuana, been in a fight, robbed, been out all night without permission, or run away.

The data could be made publicly available, but some cost would be involved in getting a public use tape ready.

Kandel Longitudinal Study of Drug Use

Location: Denise Kandel, Columbia University, New York, NY

Description: In 1971, a representative sample of students enrolled in grades 10 and 11 in public secondary schools in the State of New York was selected. Eighteen high schools were chosen and students were cluster sampled from homerooms stratified to represent the different grades within each school. Ten years later, a followup sample was drawn to include those students enrolled in half of the homerooms, with classes using marijuana frequently having twice the probability of selection. In addition, students who had not participated in the initial study, who were presumed to be chronic absentees, were also selected to permit unbiased estimates of the former student population at a time 10 years later. Personal household interviews were obtained with 1,325 persons, for a completion rate of 81%.

A structured interview schedule was used together with two charts designed to reconstruct on a monthly basis the respondents' drug and life histories. Detailed information was collected on the use of 12 drugs: 2 legal, 4 illegal, and 6 prescription. A pregnancy history was also obtained: only 54 cases of premarital pregnancy were reported; however, other pregnancies within marriage were reported.

The Woodlawn Study

Location: Sheppard Kellam, The Johns Hopkins University, Baltimore, MD

Description: In 1966-67, psychological assessments of mothers and their first grade children were completed in Woodlawn--a black, poor urban community on Chicago's South Side--as part of a prospective, longitudinal program of service

delivery and research. Rich psychological, social, and demographic information were obtained from the mother, the teacher, and a clinical assessment. Ten years later, the original population was followed up. The data file includes information on the mothers and their families from the time that each mother bore her first child to the time that the study child was aged 16 or 17. Thus, this is a community-specific study of an age cohort.

The target population for the long-term followup included the entire first grade population of students who remained in their Woodlawn first grade classroom during the full school year. By 1975, two-thirds of these families no longer lived in Woodlawn; however, three-quarters of the target sample (939 of 1,241 mothers) were located and reinterviewed.

At the time of the followup, both the mother and the teenager were interviewed, and the types of data collected are broad, including child outcomes, family structure, sexual activity of the offspring, and substance use. Specifically, data were obtained on contraceptive use and pregnancy among the teens; on attitudes toward sex, contraception, and abortion; on family interaction patterns from the mother and from the teen; and on peer behavior as assessed by the teens. In addition, psychological assessments for the mother and teen were completed, and school records were obtained for all years for those study participants enrolled in the Chicago public schools (see Ensminger and Kane, this volume).

Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth

Location: Jerald Bachman, University of Michigan,
Ann Arbor, MI

Description: Every year since 1975, a national sample of more than 18,000 seniors enrolled in U.S. high schools has been interviewed regarding their values, lifestyles, and behaviors. Drug use and related attitudes receive the most extensive coverage. In addition, questions are asked regarding education, work and leisure, sex roles, family plans, religion, politics, social change, social problems, the military, interpersonal relationships, race relations, social institutions, personality, deviant behavior, and victimization. Demographic and background information are also obtained. A randomly selected subsample has been followed longitudinally for up to 10 years.

While this database has been a signal source of information on the changing attitudes and behaviors of American youth, it has several shortcomings from the perspective of studying adolescent fertility and drug abuse. For one, the youth are high school seniors. Thus, those who have dropped out of school by the spring of the senior year--15% to 20% of all youth--are not

included. Moreover, dropouts may well over-represent the groups of principal interest, in that teen parents, delinquent youth, and youth of low socioeconomic status are more likely to have stopped attending school before graduation. In addition, some of the greatest concern regarding pregnancy and substance abuse focuses on youth in the early years of adolescence, and only partial information is available on these years. Finally, minimal information is obtained on parent background and family characteristics; and no data are collected on sexual activity, contraceptive use, or pregnancy.

Since this is a large, ongoing survey, the possibility of adding a few questions on fertility exists. However, because the sample includes only high school seniors and because questionnaires are completed in a high school setting, the prospects for obtaining any information on fertility seem limited. The investigators have attempted to do so, but without success.

National Survey on Drug Abuse

Location: National Institute on Drug Abuse, Rockville, MD

Description: The purpose of this series of surveys is to provide estimates of the prevalence of illicit drug use over time. Cross-sectional surveys were completed in 1971, 1972, 1974, 1976, 1977, 1979, and 1982; and another survey is planned for 1985.

Individuals age 12 and over who live in households in the contiguous United States are included. Youth aged 12 to 17 are sampled independently of adults 18 and older, and, among adults, those aged 18 to 34 are over-sampled.

Data are obtained by in-person interviews. The interviewer reads the questions to the respondent. For confidential questions, the respondent puts his or her answers on a confidential answer sheet. Unfortunately, since this is a prevalence survey, little information is collected on topics other than drug use. No data are collected on the parents; on the family context; on peer and community influences, aspirations, and values; or on sexual activity, contraceptive use, or pregnancy. However, considerable information is obtained on contact with a variety of drugs, ranging from marijuana, hallucinogens, cocaine, and heroin to tranquilizers, stimulants, and analgesics.

The National Youth Survey

Location: Delbert Elliott, Behavioral Research Institute, Boulder, CO

Description: In 1976, an initial nationally representative survey of 1,725 youth aged 11 through 17 was

conducted. Followup interviews were completed annually through 1980, and in 1983, with funding from the Center for Studies of Crime and Delinquency of the National Institute of Mental Health and from the National Institute for Juvenile Justice and Delinquency Prevention.

The goals of this longitudinal data-collection effort included providing data on the incidence, geographical distribution, patterns and styles of drug use, and delinquent behavior; exploring the relationship between substance abuse and other kinds of delinquent behavior; investigating factors associated with changes in patterns of drug use and delinquent behavior over time; and testing a theoretical model developed to explain delinquent behavior for its utility in explaining drug use.

Rich information was collected on peer and family influences, on sexual activity, and on involvement with many kinds of substances and types of delinquency in each year and for youth of both sexes. In addition, in 1983, retrospective data were collected to create a birth history for all respondents. Although data have not been collected on contraceptive use or on pregnancies not ending in live births, and sample sizes are small for many subgroup analyses, this is an excellent database for studying the joint occurrence of early sexual activity, parenthood, and substance abuse (see Elliott, this volume).

The National Survey of Family Growth

Location: National Center for Health Statistics,
Hyattsville, MD

Description: The National Survey of Family Growth is a periodic survey conducted by the National Center for Health Statistics. It represents a primary source of data on U.S. fertility patterns, contraceptive use, infertility, reproductive health, fertility intentions, unwed and adolescent childbearing, prenatal and postnatal care, adoption, and infant health. In addition, information is obtained on a variety of social, economic, and family characteristics. Information is obtained on cigarette smoking and alcohol use during the woman's last pregnancy; however, the use of other kinds of drugs is not explored.

Respondents in this survey represent women aged 15 to 44 of all marital statuses. In the most recent survey in 1982, teenagers were over-sampled, so the total sample of approximately 8,000 women includes 1,900 teenagers. Disadvantages of this database for current purposes include the fact that this is not a longitudinal database, and no males are included in the sample. In addition, information on family interaction patterns, aspirations, values, and peer influences is very limited. Nevertheless, the possibility of enhancing the value of the data that are collected through the addition of several items on drug use in future waves might be considered.

Baltimore Study of Adolescent Mothers

Location: Frank Furstenberg, The University of Pennsylvania, Philadelphia, PA

Description: The Baltimore study was initiated in 1966 as an evaluation of a comprehensive care program for adolescent mothers situated in a large community hospital serving a disproportionate number of young, unmarried blacks. The initial evaluation led to a 5-year followup study of a cohort of some 400 adolescent mothers and their first-born children. A comparison sample of classmates who delayed childbearing was also followed. At the 5-year interview, 80% of the original sample (331 young mothers and 306 of their children) was reinterviewed.

A decade later, it was decided to attempt reinterviews with the teenage mothers and their children, who were by that time adolescents. Since funds were not available to reinterview the control sample, numerous items from the 1981 National Survey of Children were included, to facilitate use of the National Survey of Children as a comparison for the Baltimore sample. Eighty-nine percent of the original sample was relocated and interviews were completed with 90% of the potential respondents.

Both the mother and her adolescent child were reinterviewed. The parent interview contains a life history calendar and obtains detailed information on the events and circumstances of the mothers' lives. Interviews with the adolescent children collected information on school progress, sexual activity and pregnancy, aspirations, and involvement with drugs and delinquency. Many of the items on problem behavior, including those on drug, alcohol, and cigarette use, are the same items included in the 1981 National Survey of Children.

In all, interviews were conducted with the sample during pregnancy in 1966 to 1968, and then 1 year after delivery, 3 years after delivery, 5 years after delivery, and 16 to 17 years after delivery. The data file as a whole contains extensive information on the early lives of the adolescent children, as well as their attitudes and behaviors during their teens. While the database describes primarily black women who were low-income teenage mothers, the information it contains on this subsample is very rich.

Longitudinal Study of Urban Black Youth

Location: Ann Brunswick, Columbia University, New York, NY)

Description: Personal interviews were conducted with a representative probability sample of black inner-city adolescents over a 2-year period beginning in 1968. A total of 668 non-Hispanic black teenagers aged 12 through 17, both male and female, were interviewed on the topics of health,

sex, school achievement, health behaviors, psychosocial attitudes, and fertility. To obtain data, personal interviews were conducted with the adolescents in their homes; medical examinations were completed with about 500 of the adolescents in a major municipal hospital; and information was also collected from the youths' school records.

In 1975-76, a followup study was conducted on 536 young people then aged 18 to 23; these individuals represent 89% of the surviving sample who were not located outside of New York City. Reinterviewed respondents were similar to the original sample. By the time of the reinterview, 52% of the females and 28% of the males had at least one child. More than half of the sample reported using marijuana in the past month, while two-thirds reported alcohol use, and substantial minorities reported the use of various other drugs. Detailed data were collected on drug use, including onset, frequency, duration, peak use, intentions for future use, types of drugs used, problems related to drug use, treatment, health conditions, disabilities, psychological well-being, aspirations, social networks, education, employment, marital status, pregnancy experience, fertility aspirations, and demographic information.

A third wave of data was collected on these respondents between October of 1983 and March of 1984. Similar batteries of questions were included, and the data are being analyzed.

National Natality Survey

Location: National Center for Health Statistics,
Hyattsville, MD

Description: This survey is sponsored by the National Center for Health Statistics in order to extend the range of information beyond the data available in the vital registration system. Half of the funds for the 1980 National Natality Survey were provided by a consortium of agencies who pooled resources: 1) the National Institute on Drug Abuse, which sought data on smoking before and during pregnancy; 2) the National Institute on Alcohol Abuse and Alcoholism, which wanted information on maternal drinking before and during pregnancy; 3) the National Institute for Occupational Safety and Health, which sought data on occupations and shift work of mothers and fathers; 4) the National Institute of Child Health and Human Development, which wanted data on maternal and infant health and breast-feeding; 5) the National Center for Devices and Radiological Health of the Food and Drug Administration, which needed data on maternal exposure to X-ray, ultrasound, and nuclear medicine; 6) the Bureau of Health Care Delivery and Assistance of the Health Resources and Services Administration, which supported an oversampling of low birthweight infants; and 7) the Center for Health Promotion and Education of the Centers for Disease Control, which sought information on family planning and sterilization.

The sample was drawn from birth certificates. One in every 350 certificates were sampled, and questionnaires were mailed to the mother, physician(s), hospital(s), and other medical providers involved with the pregnancy. In cases of nonresponse, a telephone interview was sought. The primary weakness in the data generation plan is that unmarried mothers were not sent questionnaires, so complete data are not available on this population. The total sample includes 9,941 births, of which 2,200 are low birthweight babies.

High School and Beyond

Location: The National Center for Education Statistics,
Department of Education, Washington, D.C.

Description: High School and Beyond is a nationally representative survey of high school students initiated to provide data on the transition from secondary school to early adulthood. It focuses on school progress and educational expectations, work experience and aspirations, curricular and extracurricular activities, and attitudes about schooling and postsecondary plans. Basic demographic data are also obtained, and the questionnaire ascertains whether the student respondents have any children who live with them. No questions are included on drug use.

The first wave of this survey was conducted among high school seniors and sophomores in 1980. Additional waves were conducted in 1982 and 1984, and additional waves are planned through the year 1990. A new sophomore cohort is planned for 1988. Whether questions will be included on drug use or fertility in this survey is not known.

The High School and Beyond sample includes 30,030 high school sophomores and 28,240 seniors. Schools were stratified and selected with a probability proportional to their enrollment, with some types of schools being over-sampled. Then, 36 sophomores and 36 seniors were selected in each of the schools sampled. Students not enrolled in school are not included in the sample. Students completed self-administered questionnaires during the school day. In addition, the principal of each school provided information about the school; teachers filled out forms about each student in the sample; and, for a subsample of 3,500 students, information was collected from the parents.

Although data on drug use have not been collected as yet, the possibility exists of adding questions to future waves or to the questionnaires developed for new cohorts. The other shortcoming of the database is the fact that no data are obtained for youth not enrolled in school.

National Health and Nutrition Examination Survey

Location: The National Center for Health Statistics,
Hyattsville, MD

Description: Data for the 1976-80 National Health and Nutrition Examination Survey (HANES II), like HANES I and the Health Examination Survey that preceded it, are obtained by direct physical examination and through questionnaires that include both health and sociodemographic data. The survey, completed between 1976 and 1980, included persons between the ages of 6 months and 74 years; 1,725 adolescents aged 12 to 17 were included. In 1983-84, a Health and Examination Survey among Hispanic Americans was conducted. This is a study of the health and utilization status of the Mexican-American population in the Southwest, the Cuban population in Miami, and the Puerto Rican population in New York City. The samples for all cycles of the survey have been multistage, highly clustered probability samples.

Rich and varied data have been collected in this survey, including measures of nutritional intake; a variety of hematological and biochemical tests; careful measurement of height, weight, and skinfold; data on dental health, blood pressure, cardiovascular condition, and respiratory disease; and tests of vision and hearing. Extensive background data on the children and their families were also collected.

In HANES II, adolescents aged 12 and older were asked questions concerning pregnancy history, smoking habits, alcohol use, caffeine intake, food consumption, medication, and health conditions. Although questions on drug use were not included in HANES II, a set of questions was included in the Hispanic HANES. Questions were asked about marijuana, inhalants, cocaine, and sedatives. Respondents were asked when they first had an opportunity to try these drugs; when, if ever, they first used these drugs; and how recently they had used these drugs. The possibility of including these items or an expanded set of items in the next wave--HANES III--is currently being considered. This next wave will be initiated in 1988.

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Table 1: Percent Sexually Experienced Among 15-16 Year-Olds, by Race and Sex of Teen, and Measures of Deviant Activities, 1981

	<u>Non-Black</u> <u>Females</u> (n*)		<u>Non-Black</u> <u>Males</u> (n*)		<u>Black</u> <u>Females</u> (n*)		<u>Black</u> <u>Males</u> (n*)	
Smoked?								
Never	2	(57)	26	(75)	21	(30)	34	(30)
More than 2 weeks ago	12	(82)	23	(74)	45	(21)	34	(13)
Less than 2 weeks ago	39	(37)	61	(28)	45	(8)	74	(7)
Use Alcohol?								
Never	1	(55)	12	(47)	30	(34)	23	(27)
More than 2 weeks ago	19	(76)	25	(89)	33	(23)	73	(16)
Less than 2 weeks ago	27	(45)	44	(41)	--	(2)	40	(7)
Used Marijuana?								
Never	7	(124)	19	(124)	28	(41)	33	(43)
More than 2 weeks ago	19	(38)	42	(43)	32	(15)	--	(4)
Less than 2 weeks ago	62	(14)	74	(10)	--	(3)	100	(5)
Shoplifted?								
Never	13	(159)	24	(155)	31	(56)	35	(43)
Once	40	(10)	13	(16)	--	(2)	76	(6)
≥ Twice	34	(7)	82	(6)	--	(1)	--	(3)
Run away in past 5 years?								
No	12	(165)	28	(167)	31	(58)	39	(52)
Yes	51	(11)	49	(10)	--	(1)	--	(0)

*Unweighted. Percents are based on weighted figures.

Source: Child Trends, Inc., The 1981 National Survey of Children

Table 2: Social, Family and Peer Characteristics of U.S. 15-16 Year Olds, Who are Sexually Experienced, Use Marijuana, Both, or Neither, for Males and Females (1981)

	(n)	Percent From Excellent or Very Good <u>Neighborhood</u>	Percent High in <u>Religiiosity</u>	Percent Low in Communication <u>With Parents</u>	Percent With Mothers High on Demands and <u>Expectations</u>	Percent With Mothers High on <u>Affection</u>	Percent Saying Majority of Peers <u>Have Had Sex</u>	Percent Whose Friends are Same <u>Age or Younger</u>
<u>Males</u>								
Neither	(102)	56	64	57	24	37	5	85
Sex Only	(18)	33	79	40	21	43	19	86
Marijuana Only	(31)	46	63	73	24	27	9	84
Both	(21)	64	36	78	25	17	60	48
TOTAL	(172)	52	63	60	24	34	13	81
<u>Females</u>								
Neither	(112)	57	77	36	38	40	4	80
Sex Only	(9)	36	92	42	46	33	33	43
Marijuana Only	(34)	45	71	61	20	27	4	70
Both	(16)	14	44	56	0	19	35	26
TOTAL	(171)	49	73	44	30	34	9	70

Source: Child Trends, Inc., The National Survey of Children.

Data Bases with Information on Drug Use and/or Fertility

1. The National Longitudinal Survey of the Labor Market Experience of Youth (Center for Human Resource Research, Ohio State University)
2. The National Youth Survey (Delbert Elliott, Behavioral Research Institute, Boulder, Colorado)
3. Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth (Jerald Bachman, University of Michigan)
4. The Young Adult Follow-up Study (Richard Jessor, University of Colorado)
5. A Biosocial Model of Adolescent Sexuality (J. Richard Udry, University of North Carolina)
6. The National Survey of Young Women (John Kantner and Melvin Zelnik, Johns Hopkins University, Baltimore, Maryland)
7. Kandel Longitudinal Study of Drug Use (Denise Kandel, Columbia University, New York, New York)
8. The Woodlawn Study (Sheppard Kellam, Johns Hopkins University, Baltimore, Maryland)
9. National Survey on Drug Abuse (National Institute on Drug Abuse, Department of Health and Human Services)
10. The National Survey of Family Growth (National Center for Health Statistics, Department of Health and Human Services)
11. National Survey of Children (Nicholas Zill, Child Trends, Washington D.C.).