

**PREVENTION AND SERVICES
RELATED TO DELINQUENCY
AND HOPELESSNESS**

DELINQUENCY: PREVENTION AND SERVICES

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DELINQUENCY: PREVENTION AND SERVICES

Introduction

Delinquent behavior among U.S. adolescents has recently received a great deal of public attention (24,272,301,398a,399,463). Many of the popular accounts of adolescent delinquency focus on serious violent offenses against persons, including the kinds of violent acts that prompted the U.S. Surgeon General in 1985 to label violence a major public health problem (406).

Violent behavior by adolescents sometimes results in injury or death, and children and adolescents who observe violent behavior may experience emotional trauma (38).¹ It is important to note, however, that the primary victims of violence by other adolescents and by other individuals are adolescents (423). The U.S. Surgeon General's report identified violence as a major cause of injury and death among young people. Furthermore, it called for increased efforts on the part of health professionals to prevent violence in order to reduce its attendant morbidity and mortality (406).

But most delinquent acts by U.S. adolescents are not violent ones, and some people believe that delinquency can be considered an adolescent health problem for reasons other than the injuries and deaths associated with violence. Such reasons include the following:

- Delinquent behavior by adolescents has been associated with their engaging in health-threatening activities, such as alcohol, tobacco, and drug abuse, risky driving behavior, and precocious sexual experimentation.²
- Delinquency and the psychiatric diagnosis of conduct disorder³ are characterized by many of the same behavioral features.⁴ A set of behaviors that might result in one adolescent's being

diagnosed with "conduct disorder" and directed to the mental health system for treatment might lead to another adolescent's being labeled "delinquent" and referred to the juvenile court for punishment and/or rehabilitation.

Adolescents held in juvenile detention and correctional facilities tend to have serious unattended health problems—before, during, and after their commitment to such facilities.⁵

This chapter examines the problem of adolescent delinquency. The first section of the chapter is devoted to background information on delinquency among adolescents. Subsequent sections deal with primary and secondary prevention efforts, services for adolescent offenders within the juvenile justice system, and major Federal policies and programs pertaining to delinquency. The chapter ends with conclusions and policy implications.

Background on Adolescent Delinquency

Despite intense societal interest in adolescent delinquency, accurate knowledge about the incidence, prevalence, causes, and consequences of adolescent delinquency is limited. This section discusses what is known about these factors. Definitional issues and limitations in data that confound analyses of delinquency are discussed below. Also discussed below are demographic and other factors associated with delinquency and information on the consequences of delinquency.

Definitional Issues

The study of adolescent delinquency has been plagued by semantic and definitional problems that confound research design and the interpretation of data. Definitions of some of the terms used in the discussion in this chapter are provided in box 13-A.

¹Early research indicates that exposure to violence hinders the emotional and intellectual development of children exposed to violence (38).

²For further discussion, see "Covariation of Adolescent Health Problems," prepared for OTA by D. Wayne Osgood and Janet K. Wilson (304).

³Conduct disorder is defined in the *Diagnostic and Statistical Manual of Mental Disorders, 3rd ed., revised (DSM-III-R)* as a "persistent pattern of conduct in which the basic rights of others and major age-appropriate societal norms or rules are violated" (10).

⁴Some acts (e.g., stealing) can be characterized both as delinquent acts and as symptoms of conduct disorder. Conduct disorder is characterized by a pattern of behavior over time; an isolated act of delinquency, therefore, would not constitute a "pattern" necessarily leading to a diagnosis of conduct disorder. Conversely, not all behaviors included as symptoms of conduct disorder are delinquent behaviors; lying, for example, is a criterion for a diagnosis of conduct disorder, but in most circumstances it is not a legal offense.

⁵A discussion of health problems within the juvenile justice system is presented below.

Box 13-A—Definitions That Pertain to Adolescent Delinquency

Adjudicated: Passed on judicially, settled, or decreed, or convicted and sentenced. An adjudicated case is one in which the court has entered a judgment.

Adolescent delinquency: For purposes of this chapter, offenses committed by adolescents that would be considered violations of criminal law if committed by adults (ranging from minor offenses such as simple assault to serious offenses such as larceny-theft or aggravated assault) and offenses committed by adolescents that are considered offenses only because they are committed by a minor (i.e., “status offenses” such as running away from home, truancy).

Aggravated assault: The unlawful intentional attempt to inflict or actual infliction of serious bodily injury or death by means of a deadly or dangerous weapon.¹

Antisocial behaviors by children: Also known as conduct problems in the criminology literature, these are hostile or harmful behaviors that deviate from the social norm (e.g., aggression, stealing, lying, fighting).

Arrest rate: The number of arrests made in a given population per some population base during a given time period (e.g., 5 arrests per 100,000 population). An arrest rate is a type of incidence rate.

Arson: Any willful or malicious burning or attempt to burn, with or without intent to defraud, a dwelling house, public building, motor vehicle, aircraft, personal property of another, etc.¹

Attention deficit hyperactivity disorder (ADHD): A mental disorder defined in the *Diagnostic and Statistical Manual of Mental Disorders, 3rd ed.*, revised (DSM-III-R) as a disturbance lasting at least 6 months that is characterized by developmentally inappropriate degrees of inattention, impulsiveness, and hyperactivity. Onset of the disorder, which is more common in males than females, is typically before the age of 4. Central nervous system abnormalities are thought to be predisposing factors. Some impairment in schoolwork or cooperating in group social activities is common.

Burglary/breaking or entering: The unlawful entry of a house or structure to commit a felony or a theft. Attempted forcible entry (e.g., by breaking a window) is included¹

Career criminals: High rate or long duration offenders who contribute most to total crime rates.

Conduct disorder: A mental disorder defined in DSM-III-R as a disturbance lasting at least 6 months in which a young person persistently violates basic rights of others and violates major age-appropriate societal norms. The diagnosis is made when an individual displays at least 3 of 13 specified behaviors (e.g., stealing, running away, frequent lying, deliberate fire-setting, frequent truancy, breaking into someone else’s property, deliberately destroying property, being physically cruel to animals, using a weapon in more than one fight). Onset is usually prepubertal. Predisposing factors are thought to include ADHD, parental rejection, absence of father, early institutional living, and association with a delinquent subgroup. Complications include school suspension, legal difficulties, and psychoactive substance use.

Cross-sectional studies: In criminology research, studies that compare individuals involved in offending behavior with those who do not commit offenses at one point in time. Some studies may be broader and, for example, compare families of very delinquent children with those of not-so-delinquent children.

Delinquent adolescents: Adolescent juvenile offenders.

Demographic factors: Age, gender, race, ethnicity, geographic location, and socioeconomic status are typically defined as demographic factors.

Drug abuse violations: State and local offenses relating to the unlawful possession, sale, use, growing, and manufacturing of a narcotic drug.¹

Forcible rape: Gaining carnal knowledge of (having sexual intercourse with) a female forcibly and against her will. Included are rape by force and attempts or assaults to rape.¹

Incidence rate for an offense: In the criminal justice field, the number of offenses of a given type that occur in a given population during a specified time period per some population base. Incidence rates are sometimes measured in terms of arrest rates, victimization rates, or offending rates for an offense. Compare *prevalence rate for an offense*.

¹These are definitions used by the Federal Bureau of Investigation of the U.S. Department of Justice in the Uniform Crime Reports.

Juvenile: A young person who has not yet reached the age at which he or she should be treated as an adult for purposes of criminal law. In some States, this **age is 17**. In law, the terms juvenile and minor are usually used in different contexts (juvenile when referring to young legal offenders and minor when referring to legal majority or capacity).

Juvenile courts: Courts having special jurisdiction, of a paternal nature, over delinquent, dependent, and neglected children.

Juvenile justice facilities: Custodial facilities for juvenile offenders (and abused, neglected, or other minors under the jurisdiction of the juvenile or family courts). These can be classified along several, often overlapping dimensions that include purpose, term of stay, type of environment (institutional or open), and sponsorship (public or private). **Juvenile detention facilities (usually called juvenile detention** centers or juvenile halls) typically hold juveniles who have been arrested for short periods prior to adjudication; they may also be used for juveniles whose cases have been adjudicated and who are awaiting transfer to long-term placements or who have been sentenced to short periods of confinement. Juvenile correctional facilities are facilities for the commitment and supervision and treatment of juvenile offenders whose cases have been adjudicated. Long-term residential facilities that serve adolescent offenders range from training schools with strict controls to less-restrictive forestry camps or farms, halfway houses, and group homes. Juvenile facilities with institutional environments typically impose restraints on residents' movements and limit access to the community. Juvenile facilities that have **open environments allow** greater movement of residents and more access to the community. Public **juvenile facilities are** under the direct administration and operational control of a State or local government and staffed by governmental employees. Private **juvenile facilities are** either profitmaking or nonprofit and subject to governmental licensing but are under the direct administration and operational control of private enterprise: such facilities may receive substantial public funding in addition to their support from private sources.

Juvenile justice system: The system--actually 50 distinct statewide juvenile justice systems--that includes law enforcement officers and others who refer delinquent and maltreated minors to the courts, juvenile courts which apply sanctions for delinquent offenses and oversee the implementation of child protective services, juvenile detention and correctional facilities, and agencies that provide protective services and care (e.g., foster care) for minors who are victims of abuse and neglect.

Juvenile offender: A juvenile who has violated Federal, State, municipal, or local criminal laws or has committed status offenses (e.g., running away from home, truancy).

Larceny-theft (except motor vehicle theft): The unlawful taking, carrying, leading, or riding away of property from the possession or constructive possession of another. Examples are thefts of bicycles or automobile accessories, shoplifting, pocket-picking, or the stealing of any property or article which is not taken by force and violence or by fraud. Attempted larcenies are included. Embezzlement, "con" games, forgery, worthless checks, etc., are excluded.¹

Learning disabilities: A generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities or of social skills.

Longitudinal studies: Studies that examine the development of individuals or families or groups over a period of time. In the field of criminology, the effects of experimental interventions at different times are investigated in longitudinal-experimental studies. The aims of longitudinal-experimental studies or surveys are to establish the course of development of criminal careers, and to establish the effects of specific events on the course of development of criminal careers in order to test hypotheses about what causes criminal behavior and what can prevent it before and reduce it after it occurs.

Meta-analysis: A statistical or quantitative analysis of a large collection of results from individual studies for the purpose of integrating the findings.

Minor: A person who is under the age of legal majority, either age 18 or 19, depending on the State.

Minor offenses: See offenses (*serious and minor*).

Motor vehicle theft: The theft or attempted theft of a motor vehicle. A motor vehicle is self-propelled and **runs** on the surface and not on rails. Specifically excluded from this category are motorboats, construction equipment, airplanes, and farming equipment.

Continued on next page

Box 13-A—Definitions That Pertain to Adolescent Delinquency-Continued

Murder and nonnegligent manslaughter: The willful (nonnegligent) killing of one human being by another. Deaths caused by negligence, attempts to kill, assaults to kill, suicides, accidental deaths, and justifiable homicides are excluded. Justifiable homicides are limited to: 1) the killing of a felon by a law enforcement officer in the line of duty and 2) the killing of a felon by a private citizen.¹

Offending rate: The number of offenses that occur in a given population during a specified time period per some population base (e.g., 5 offenses per 100,000 population). The offending rate is usually based on offenses that are self-reported by offenders. An offending rate is a type of incidence rate.

Offenses (serious and minor): Infractions of the law irrespective of the age of the offender. For purposes of this chapter, serious offenses are Federal Bureau of Investigation Part I offenses (see below) even though individual Part I offenses may not be considered serious by other definitions. **Minor offenses are Federal Bureau of Investigation Part II offenses** (see below) even though individual Part II offenses may not be considered minor by other definitions.

Part I offenses (index offenses): Under the Federal Bureau of Investigation's reporting system, these are *specified violent offenses* against a person (i.e., murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assault) and *specified property offenses* (i.e., burglary, larceny-theft, motor vehicle theft, and arson).¹ For purposes of this chapter, Part I offenses are considered *serious offenses*.

Part II offenses: Under the Federal Bureau of Investigation's reporting system, any offenses not classified as Part I offenses. Part II offenses include acts that are considered crimes if committed by adults—e.g., drug abuse violations, liquor law violations, gambling, embezzlement, fraud, forgery, weapons violations, prostitution and commercial vice, offenses against the family and children, assaults without weapons, involvement with stolen property, vagrancy, disorderly conduct, driving under the influence, and drunkenness. Part II offenses also include status offenses (e.g., violation of curfew, loitering, and runaway violations).¹ For purposes of this chapter, Part II offenses are considered *minor offenses*.

Prevalence rate for an offense: In the criminal justice field, the ratio of the number of persons engaging in an offense at a particular time period to the number of persons in that population. In studies of delinquency, the prevalence rate is typically expressed as the percentage of persons in a population who engage in one or more offenses of a given type within a specified time period. If the time period is during all of adolescence or a lifetime, the prevalence rate is known as a cumulative prevalence rate. Prevalence measures the number of people involved rather than the number of offenses. Compare *incidence rate for an offense*.¹

Prevention of adolescent delinquency: Primary prevention of adolescent delinquency means identifying individuals at risk for delinquent behavior because of their general life situations (e.g., children in stressed families) or identifying environments at risk for delinquent activity (e.g., school settings) before the delinquent behavior has occurred, and intervening to reduce the amount of delinquent behavior in that group or setting. Secondary prevention of adolescent delinquency means attempting to keep adolescents who have already shown indications of troublesome behavior (e.g., school problems) from engaging in delinquent acts such as theft or assault.

Recidivism: A tendency to relapse into a previous condition or mode of behavior (especially relapse into delinquent behavior).

Robbery: The taking or attempting to take anything of value from the care, custody, or control of a person or persons by force or threat of force or violence and/or by putting the victim in fear.¹

Self-report data: Data regarding a survey respondent's attitudes, knowledge, or behavior that are reported by the respondent himself or herself.

Serious property offenses: For purposes of this chapter, Part I offenses against property (i.e., burglary, larceny-theft, motor vehicle theft, and arson).

Serious violent offenses: For purposes for this chapter, Part I violent offenses against a person (i.e., murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assault).

Simple assault: The unlawful intentional attempt to inflict or actual infliction of less than serious bodily injury without a deadly or dangerous weapon.¹

¹These are definitions used by the Federal Bureau of Investigation of the U.S. Department of Justice in the Uniform Crime Reports.

Status offenses: Acts committed by minors that would not be considered offenses if committed by an adult (e.g., running away from home, purchasing of intoxicating liquor, truancy, curfew violations). Under the Federal Bureau of Investigation's reporting system, status offenses are considered Part 11 offenses.

Treatment of delinquent adolescents: A term often used synonymously with rehabilitative efforts and sometimes contrasted with punishment. **Institutionally based treatment interventions are interventions provided in juvenile facilities with institutional environments (e.g., training schools or ranches). Community-based treatment interventions are interventions provided in community environments or in juvenile facilities with open environments (e.g., halfway houses, group homes).**

Victimization rate: The number of offenses experienced by a given population per some population base during a given time period. For example, the victimization rate of adolescents derived from National Crime Survey data is the number of offenses experienced by individuals ages 12 years of age and over committed by individuals under age 18 per 100,000 individuals under age 18 in the population for 1 year. A victimization rate is a type of incidence rate.²

²These are definitions used by the Bureau of Justice Statistics of the U.S. Department of Justice in the National Crime Survey.

Delinquent acts are of two general types:

1. acts committed by minors that would be considered violations of criminal law⁶ if committed by an adult, and
2. status offenses—i.e., acts committed by minors that would not be considered offenses if committed by an adult (e.g., running away from home, truancy).

Adolescent delinquency can be conceptualized in various ways—e. g., in legal terms such as arrest and adjudication or in behavioral terms such as stealing, assault, murder. The use of different definitions of delinquency confounds analyses of all areas of delinquent behavior—the incidence and prevalence of delinquency, factors associated with delinquency, and, perhaps most critically, assessments of the effectiveness of delinquency prevention and treatment efforts. The definition chosen determines what type of adolescents are studied; for example, if the legal definition is used, only adolescents who are officially recorded as delinquents are included in determining the number of offenses committed by adolescents. The definition of delinquency chosen is also critical in measuring the “success” of preven-

tion and treatment programs because it determines the measure of preintervention and postintervention delinquency to be used.

Sources and Limitations of Data on Adolescent Delinquency

Estimating the extent of adolescent involvement in delinquency is difficult. Information about the four principal sources of national data on the incidence, prevalence, and demographic correlates of adolescent delinquency is shown in table 13-1:

1. the Uniform Crime Reports,
2. the National Crime Survey,
3. the National Youth Survey, and
4. the Monitoring the Future/High School Seniors Survey.

Each source has substantial limitations, and the different sources have different sample populations, have different methods, and cover different ages, offenses, and years.⁷ Most researchers and policymakers agree that *no single source provides an adequate measure of delinquency among adolescents (58,99,100,101,123, 201,202,214,353).*⁸

⁶Following the terminology of the field, the terms “crime” and “criminal” are *not* used to refer to acts committed by minors that would be considered crimes if committed by adults. Instead, the terms “offense” and “delinquent acts” are used when referring to such acts. The terms “crime” and “criminal” are only used to refer to such acts committed by adults. (Offense, however, is a generic term that may be used to describe both delinquent acts and crimes.)

⁷Extensive descriptions and comparative analyses of these sources are in the literature. See, for example, J.H. Laub, “Assessment of National Juvenile Justice Data Collection Efforts: Children/Youth as Victims of Personal Crimes and Other Offenses by Peers/Others” (257); S. Menard, “Short-Term Trends in Crime and Delinquency: A Comparison of UCR, NCS, and Self-Report Data” (282); J.G. Bachman and L.D. Johnston, *The Monitoring the Future Project: Design and Procedures* (22); J.G. Bachman, L.D. Johnston, and P.M. O’Malley, *Monitoring the Future: Questionnaire Responses From the Nation’s High School Seniors, 1976* (23).

⁸Nonetheless, the advantages and limitations of Official records and self-reports are somewhat complementary. If both types of sources shows similar results, the results have greater validity.

Table 13-I—Comparison of Sources of National Data on Adolescent Delinquency

	Uniform Crime Reports (U.S. Department of Justice)	National Crime Survey (U.S. Department of Justice)	National Youth Survey (Elliott et al.)	Monitoring the Future/ High School Seniors Survey (Bachman et al.)
Period measured	Annually since 1930	Annually since 1973	Annually from 1976- 1980, and in 1983,1986, 1989	Annually since 1975
Data source	Arrests reported by law enforcement agencies	Self-reports by victims	Self-reports by survey respondents	Self-reports by survey respondents
Data collection method	Arrests are reported to the FBI (or to centralized State agencies that then report to the FBI) by over 12,000 law enforce- ment districts	National household in- terview survey of a na- tional sample of 49,000 households with 101,000 persons	National interview sur- vey of a sample of 1,044 households with am- hort of 1,725 youth ages 11 to 17 in 1976	National survey of a sam- ple of about 16,000 to 18,000 high school sen- iors, with an annual fol- lowup survey of sample subset
Serious offenses included . . .	Murder and nonnegligent manslaughter Forcible rape Robbery Assault (aggravated) Burglary Larceny-theft Motor vehicle theft Arson	Rape Robbery (personal) Assault (aggravated) Household burglary Motor vehicle theft Household larceny Personal larceny	Rape ^a Robbery Assault (aggravated) Burglary Larceny/theft Motor vehicle theft Arson (as of 1980)	Robbery ^b Assault (aggravated) Larceny-theft Motor vehicle theft Arson
Minor offenses included	Other (nonaggravated assaults) Forgery and counterfeit- ing Fraud Embezzlement Stolen property offenses Vandalism Weapons offenses Prostitution and commer- cialized vice Sex offenses (except forcible rape and prostitution and com- mercialized vice) Drug abuse violations Gambling Offenses against family and children Liquor law violations Driving under the influ- ence Drunkness Disorderly conduct Vagrancy All other nontraffic of- fenses Suspicion Curfew and loitering of- fenses (limited to per- sons under age 18) Runaways (limited to per- sons under age 18)	Simple assault	Simple assault Stolen property: buying, receiving, possess- ing Vandalism (except 1977) Weapons: carrying, possessing, etc. Prostitution and commer- cialized vice (been paid for sex) Drug abuse violations (in- cludes marijuana) Liquor law violations (alcohol use for those under age--varies by year and jurisdiction; sale of alcohol to a minor) Drunkness Disorderly conduct Sex offenses other than prostitution and rape (obscene phone calls; sexual intercourse for those under age) Fraud (1979, 1980,1983, 1986, 1989) Forgery and counterfeit- ing (passing bad checks or phony money) (1979, 1980, 1983, 1986, 1989) Embezzlement (1983, 1986, 1989) Driving under the influ- ence (1983, 1986, 1989) Runaways (1976, 1980)	Simple assault Vandalism Liquor law violation (al- cohol use; whether this is underage may vary by jurisdiction and by year Drug abuse violations (in- cludes marijuana)

Table 13-I—Comparison of Sources of National Data on Delinquency—Continued

	Uniform Crime Reports (U.S. Department of Justice)	National Crime Survey (U.S. Department of Justice)	National Youth Survey (Elliott et al.)	Monitoring the Future/ High School Seniors Survey (Bachman et al.)
Adolescent ages ^a of offenders measured	10-12, 13-14, 15, 16, 17, 18	Under 12, 12-14, 15-17, 18-20	11-17 (1976) 12-18 (1977) 13-19 (1978) 14-20 (1979) 15-21 (1980) 18-24 (1983)	High school seniors (17 and 18)
Ages of offenders, reported	Under 10-65+	Under 12-30+	11-30	17-28

^aThe specific terms in the National Youth Survey are not exactly as listed here, but the survey items were designed to allow for comparison with the Uniform Crime Reports.

^bThe specific terms in the Monitoring the Future/High School Seniors Survey are not exactly as listed here, but most of them approximate those in the Uniform Crime Reports. It should be noted, however, that motor vehicle theft in the Monitoring the Future database corresponds only weakly with motor vehicle theft in the Uniform Crime Reports. In the Monitoring the Future survey, the term motor vehicle theft means taking a motor vehicle without permission, and there is no implication that the vehicle has been stolen.

^cAdolescents, for the purpose of this OTA report, are individuals age 10 through 18.

SOURCES: Uniform Crime Reports: U.S. Department of Justice, Federal Bureau of Investigation, *Uniform Crime Reports: Crime in the United States* (Washington, DC: U.S. Government Printing Office, various dates); **National Crime Survey: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, *Criminal Victimization in the United States, 1987***, A National Crime Survey Report, NCJ-115524 (Washington, DC: June 1989). **National Youth Survey: D.S. Elliott, S.S. Ageton, D. Huizinga, et al., *The Prevalence and Incidence of Delinquent Behavior: 1976-1980***, National Youth Survey Report No. 26 (Boulder, CO: Behavioral Research Institute, March 1983); S. Menard, Research Associate, Behavioral Research Institute, Boulder, CO, personal communication, November 1990. Monitoring the Future/High School Seniors Survey: J.G. Bachman, L.D. Johnston, and P.M. O'Malley, *Monitoring the Future: Questionnaire Responses From the Nation's High School Seniors* (Ann Arbor, MI: Institute for Social Research, University of Michigan, various dates); N. Zill, J.L. Peterson, K.A. Moore, et al., *National Statistics on Children, Youth, and Their Families: A Guide to Federal Data Programs*, 2nd ed. (Washington, DC: April 1988).

The *Uniform Crime Reports* program maintains arrest data reported annually by local law enforcement agencies to the Federal Bureau of Investigation in the U.S. Department of Justice (407,408,409,410). Uniform Crime Reports data have been collected since 1930 and cover more types of offenses than data from other sources; they also cover offenses committed by individuals of all ages, and they are up-to-date and easy to interpret. One limitation of Uniform Crime Reports data, however, is that they may be affected by underreporting of arrests, particularly underreporting of arrests for minor offenses (282). Another limitation is that they may be affected by law enforcement agencies' bias toward the detection and arrest of offenders from certain groups in society (e.g., black male adolescents) (280). Furthermore, the use of arrest rate data to detect trends over time is problematic. One reason is that law enforcement agencies may focus on different types of offenses in different historical periods (e.g., a drug crisis may limit resources available for the detection of other types of crimes); another reason is that changes may occur in the definitions of offenses.

The *National Crime Survey* is a national household interview survey of Americans ages 12 and over administered annually by the Bureau of Justice

Statistics of the U.S. Department of Justice (416,419,423,447). The National Crime Survey obtains information based on victims' reports about offenses that may not have been reported to or detected by law enforcement officials and thus may not be reflected in the Uniform Crime Reports. The National Crime Survey has several important limitations with respect to adolescents. First, the designation of the ages of the victimizers relies on accurate recall by the victim. Second, the survey has been less successful in interviewing young black males than in interviewing other groups. Third, victims often do not identify victimizers whom they know (257). Other limitations of the National Crime Survey are that it does not collect data from people who do not live in households, that it does not obtain data from victims younger than age 12, that the data reports are not timely, and that only six out of eight Federal Bureau of Investigation Part I offenses (serious offenses) and only one Federal Bureau of Investigation Part II offense (minor offense) are covered. The usefulness of the National Crime Survey for trend analysis is limited because the methods of the study have changed over time (257).

The *National Youth Survey* is a confidential interview survey begun by Elliott and colleagues at the Behavioral Research Institute in Boulder, Colo-

rado (100,102,103,104). The survey began in 1976 with a national cohort of 1,725 11- to 17-year-olds (100). Since 1976, the survey has continued to follow the original cohort's involvement in delinquency and crime, substance use, and mental health problems.⁹ The 1976 and 1977 portions of the National Youth Survey, conducted when cohort members were ages 11 to 17 and ages 12 to 18, respectively, are useful in revealing the incidence and prevalence of offenses committed by adolescents, including those not known to law enforcement agencies or victims. It is important to note, however, that these data for adolescents are now about 15 years old and may not reflect current adolescents' involvement in offenses. Another limitation of the National Youth Survey is that although it includes a broad spectrum of serious and minor offenses, it does not include all Part I offenses (serious offenses). Another point is that survey respondents may underreport their involvement in delinquency (257); on the other hand, Elliott and his colleagues have had to adjust reported rates for serious offenses downward when discussion with the respondents revealed that the actions reported were not ones that would have subjected the respondents to arrest (98).

The *Monitoring the Future/High School Seniors Survey* is a national survey conducted annually since 1975 by Bachman and other researchers at the University of Michigan's Institute for Social Research (22,23,24,25). This survey, which uses a self-report instrument, annually surveys 16,000 to 18,000 high school seniors (and conducts an annual followup survey of a sample subset) (25). Although it includes some items pertaining to involvement in delinquency (and for the older respondents, crimes), the Monitoring the Future/High School Seniors Survey is limited in that it begins with those who are already high school seniors, excludes school dropouts, and does not collect data that are completely racially and ethnically representative of the country's adolescents (257).

The nationally oriented Uniform Crime Reports, National Crime Survey, National Youth Survey, and Monitoring the Future/High School Seniors Survey are complemented by *community-level, special re-*

search studies that examine the "causes" of delinquency. Most of these community-level studies are cross-sectional rather than longitudinal, however, and many have design problems that prevent them from assigning causality (126). Some study designs, for example, use measures of delinquency (e.g., arrests) for a period in the past while deriving "causal" variables from reports in the present. This temporal sequence is more likely to measure the effects of delinquency on the variables than the reverse (240). Prospective longitudinal studies offer the best opportunity for identifying "causal" factors, but they are expensive and rare. Further, even some longitudinal studies are based on retrospective self-reports that contain biases due to respondents' poor memories; others may be applicable only to specific geographic areas or social climates.

Incidence and Prevalence of Adolescent Delinquency

In considering adolescent delinquency, it is important to note that the terms incidence rates and prevalence rates mean something different in the criminal justice field than they do in public health epidemiology (see box 13-A).¹⁰ Incidence rates—the number of offenses or arrests per 100,000 adolescents in the population in any given year—will not reveal how many adolescents are involved in delinquency, because incidence rates measure the number of offenses and one adolescent could commit any number of offenses in a given year. Conversely, prevalence rates—the percentage of adolescents committing delinquent acts in a given year—will provide information on how many adolescents are committing delinquent acts in a given time period but will not reveal how many delinquent acts are committed.

How Many Delinquent Acts Are Committed by Adolescents?

Information on incidence rates for offenses committed by adolescents can give a partial understanding of the extent of adolescent involvement in delinquent behavior. Arrest, victimization, and self-reported offending rates are analogous to incidence rates, and this section reviews data on arrest,

⁹Results of analyses by Elliott and his colleagues of **covariation** among these problems are reported in "Covariation of Adolescent Health Problems," a paper prepared for OTA by D. Wayne Osgood and Janet K. Wilson (304).

¹⁰A **confounding** factor in determining the incidence and prevalence of delinquency is that most delinquent acts are committed by groups (e.g., gangs) rather than individuals (121,468). Determining the incidence and prevalence of offending by adolescents in groups such as gangs is extremely **difficult** because the composition of adolescent gangs changes very often (123).

Table 13-2—Comparison of Rates of Serious Offenses Reported by Different Sources of National Data on Adolescent Delinquency

	Uniform Crime Reports: Arrest rate 1988- under age 18 ^a	National Crime Survey: Victimization rate 1987— age 17 and under ^b	National Youth Survey: Adjusted self-reported offending rate 1979— ages 14-20 ^c
Serious violent offenses	143	573	34,570
Serious property offenses	1,067	NA	137,135

NA = not available.

^a *Arrest rates* are the number of arrests made in a given population per some population base during a given time period. The arrest rate here is the number of arrests for serious offenses (violent or property) of individuals under age 18 in 1988 per 100,000 individuals under age 18 in the population in 1988. Serious violent offenses included were murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assault. Serious property offenses included were burglary, larceny-theft, motor vehicle theft, and arson.

^b *Victimization rates* are the number of offenses experienced by a given population per some population base during a given time period. The victimization rate here is the number of serious offenses (violent or property) experienced by individuals 12 years of age and over committed by individuals under age 18 in 1987 per 100,000 individuals under age 18 in the population in 1987. Serious violent offenses included were rape, robbery, and aggravated assault.

^c *Offending rates* are the number of offenses that occur in a given population per some population base during a given time period. The offending rate here is the number of serious offenses (violent or property) self-reported by individuals 14 to 20 years of age per 100,000 individuals 14 to 20 years of age in 1979. Serious violent offenses included were rape, robbery, and assault. Serious property offenses included were larceny-theft, motor vehicle theft, and burglary. ^d Adjusted rates are rates corrected for trivial events that would not have evoked a police response.

SOURCES: Uniform Crime Reports: U.S. Department of Justice, Federal Bureau of Investigation, *Uniform Crime Reports: Crime in the United States, 1988* (Washington, DC: U.S. Government Printing Office, 1989). National Crime Survey: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, calculations based on unpublished National Crime Survey data on criminal victimization, Washington, DC, 1990. National Youth Survey, adjusted rates: D.S. Elliott and D. Huizanga, "Self-Reported Measures of Delinquency and Crime: Micro Issues and Computer Findings," Behavioral Research Institute, Boulder, CO, 1984.

victimization, and self-reported offending rates related to offenses committed by adolescents. Most of the discussion focuses on serious offenses rather than minor offenses.

In 1988, there were 1.6 million arrests of U.S. adolescents ages 10 to 17 (410,412). Uniform Crime Reports data for 1988 indicate that arrests for serious property offenses by adolescents are much more common than arrests for serious violent offenses against persons (see table 13-2). Self-reported offending rate data from the National Youth Survey (when adjusted to exclude trivial events) are consistent with arrest data in showing that serious property offenses are committed relatively more frequently by adolescents than are serious violent offenses (see table 13-2).¹¹ It is important to note, however, that the self-report data from the National Youth Survey are dated and may not apply to today.

Although current rates of arrests for serious offenses by U.S. adolescents may seem high, *there is some evidence that the aggregate arrest rates for serious violent offenses and for serious property*

offenses committed by U.S. adolescents have declined since the mid-1970s. The aggregate arrest rates among individuals under age 18 for serious violent offenses (murder, forcible rape, robbery, and aggravated assault) declined slightly (1.3 percent) from 1974 to 1983¹² then leveled off at the 1973 level (see figure 13-1). The arrest rates among individuals under age 18 for serious property offenses (burglary, larceny-theft, motor vehicle theft, and arson) declined sharply from 1975 to 1983 and have hovered around the 1983 level ever since (see figure 13-2).

The recent decline in aggregate arrest rates for serious offenses among individuals under age 18 is paralleled by a decline in the aggregate victimization rate for rape, robbery, and assault committed by persons under age 18 (see figure 13-3). Also, the victimization rate for serious offenses committed by 12- to 17-year-olds decreased 8 percent from 1973 to 1983 (256) and after that fluctuated around the 1982 level.

¹¹ As noted above, victims are, reasonably, not asked to report on property offenses. As a consequence, the relative rates of violent and property offenses cannot be compared using victimization data. Victimization rates for violent offenses are higher than arrest rates, but much lower than self-reported offending rates, for such offenses.

¹² Different data sources may use different age categories, making interpretation of trends more difficult. For example, some data are available for adolescents ages 10 to 18, while other statistics are aggregated below age 18 and the 10- to 18-year-old offenders cannot be distinguished from those younger than 10 years of age. However, the proportion of arrests for serious violent and property offenses committed by children under age 10 is extremely small (see figures 13-4 and 13-5). The relative insignificance of arrest data for children under age 10 may reflect a law enforcement bias against such arrests as well as the rarity of such offenses by young children.

Figure 13-1—Arrest Rates^a for Serious Violent Offenses^b by Persons Under Age 18 and Age 18 and Over, 1965-88

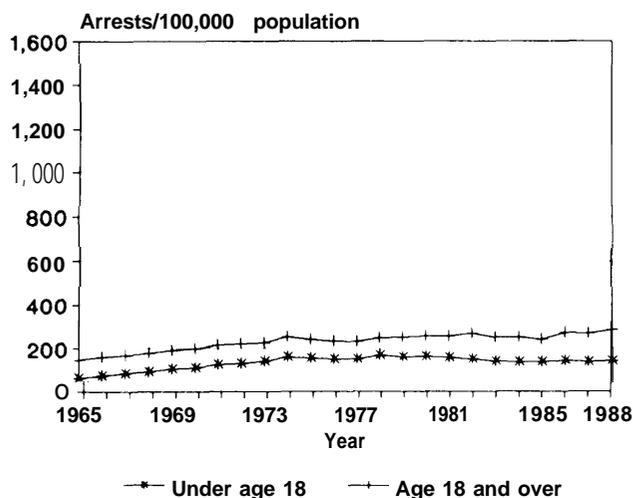
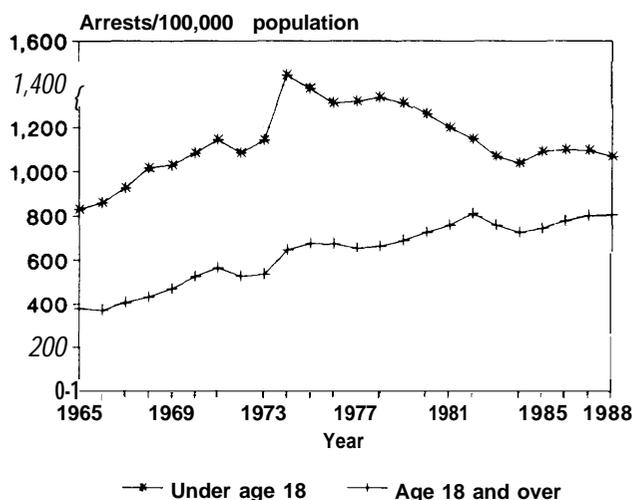


Figure 13-2—Arrest Rates^a for Serious Property Offenses^b by Persons Under Age 18 and Age 18 and Over, 1965-88



^aThe **arrest rate** is the number of arrests made in a given population per given population base. The arrest rate here is the number of arrests per 100,000 population of the same age group.

^b**Serious violent** offenses are murder and nonnegligent manslaughter, forcible rape, robbery, and aggravated assault.

SOURCE: U.S. Department of Justice, Federal Bureau of Investigation, *Age-Specific Arrest Rates and Race-Specific Arrest Rates for Selected Offenses 1965-1988* (Washington, DC: April 1990).

^aThe **arrest rate** is the number of arrests made in a given population per given population base. The arrest rate here is the number of arrests per 100,000 population of the same age group.

^b**Serious property** offenses are burglary, larceny-theft, motor vehicle theft, and arson.

SOURCE: U.S. Department of Justice, Federal Bureau of Investigation, *Age-Specific Arrest Rates and Race-Specific Arrest Rates for Selected Offenses 1965-1988* (Washington, DC: April 1990).

Trends in arrest rates among U.S. adolescents vary tremendously by type of offense, and considering aggregate figures alone, without looking at trends for specific offenses, may lead one to miss important policy implications (409). *Potentially the most troubling recent trends are increases in arrest rates among U.S. adolescents ages 13 through 18 for the serious violent offenses of murder and nonnegligent manslaughter (see figure 13-4) and for aggravated assault (see figure 13-5).* There also have been increases in arrest rates among U.S. adolescents for the less serious offenses of simple assault and weapon use (409). Fortunately, arrest rates among U.S. adolescents for some serious property offenses (robbery, burglary) and minor offenses (narcotic drug law/drug abuse violations) have recently declined. Arrests for larceny-theft have been relatively stable since 1974.

The interpretation of arrest rates is actually somewhat difficult. The reason is that changes in arrest rates over time may be biased by greater or lesser law enforcement efforts directed toward particular offenses over time, shifts in police capac-

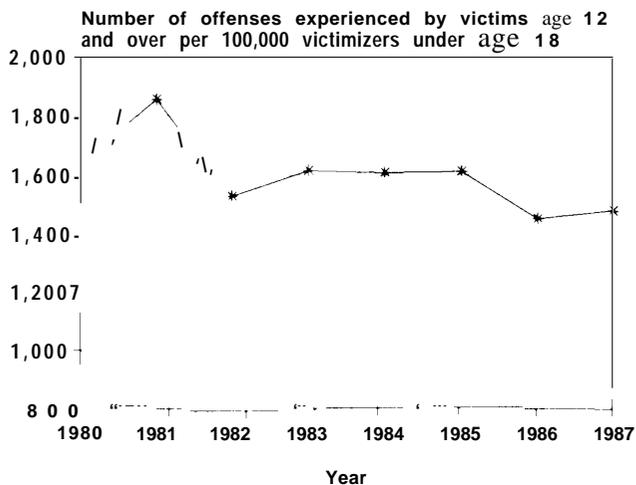


Photo credit: Benjamin Smith, Washington, DC

Recent increases in arrest rates among U.S. adolescents for the serious violent offenses of murder/nonnegligent manslaughter and aggravated assault are disturbing.

ity to apprehend offenders, or other factors unrelated to changes in adolescent behavior. It is interesting to note that self-reported offending rate data from high school seniors support somewhat the inference that there has been an increasing adolescent commission

Figure 13-3—Victimization Rates for Rape, Robbery, and Assault^a Committed by Persons Under Age 18, 1980-87



^aThe *victimization rate* is the number of offenses experienced by a given population per some population base during a given time period. The victimization rate here is the number of rapes, robberies, and assaults experienced by victims age 12 and over committed by victimizers under age 18 per 100,000 victimizers under age 18.

^bAssault includes aggravated assault and simple assault.

SOURCE: K. Whitaker, Office of Justice Programs, Bureau of Justice Statistics, U.S. Department of Justice, compilation of National Crime Survey data from *Criminal Victimization in the United States 1980-87*, Washington DC, 1989.

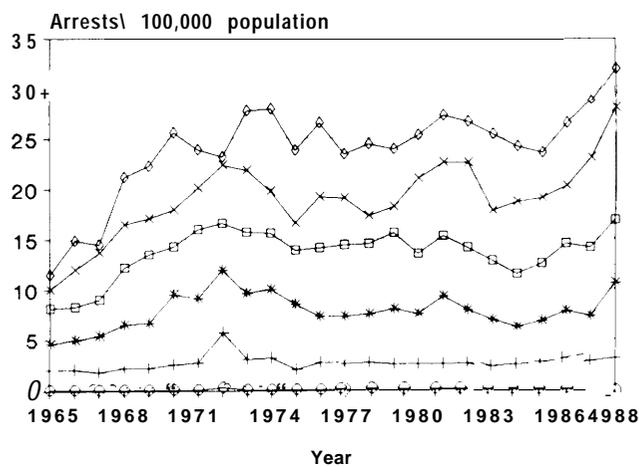
of some violent offenses; however, reports of crime victims do not support that inference (see table 13-3).¹³

*To the extent that arrest rates and adolescents' self-reported offending rates reflect adolescent behavior, the increase in rates for simple assault, aggravated assault, and murder and nonnegligent manslaughter could be indicative of a trend among adolescents to increased violent assaults against persons. This increase in violent assaults points to an increasing need for prevention.*¹⁴

How Many Adolescents Commit Delinquent Acts?

For the purposes of understanding adolescent involvement in delinquent behavior and formulating policy to prevent and control delinquency, it may be

Figure 13-4—Arrest Rates^a for Murder and Nonnegligent Manslaughter by Persons Age 18 and Under, 1965-88



^aThe *arrest rate* is the number of arrests made in a given population per given population base. The arrest rate here is the number of arrests per 100,000 population of the same age group.

SOURCE: U.S. Department of Justice, Federal Bureau of Investigation, *Age-Specific Arrest Rates and Race-Specific Arrest Rates for Selected Offenses 1965-1988* (Washington, DC: April 1990).

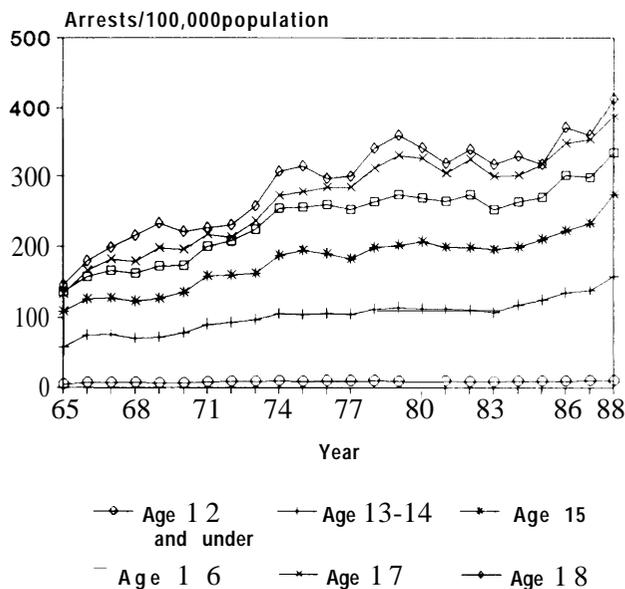
important to know not just the number of offenses but the number of adolescents who commit delinquent acts, the frequency with which such acts are committed, and the types and seriousness of the offenses. If most delinquent offenses are committed by a small number of adolescents who commit many offenses each, the implications are likely to be different from the implications that would exist if individual adolescent offenders commit only a few offenses each.

Determining how many adolescents commit delinquent acts nationwide is as difficult as determining how many offenses are committed by adolescents. Recent data on the number of U.S. adolescents

¹³Although they were not asked about other violent offenses (e.g., murder), high school seniors were increasingly likely to report having committed an aggravated assault in the period from 1975 to 1985 (303). On the other hand, victims reported no increase in being assaulted by 15- to 17-year-olds in the period from 1980 to 1987 (see table 13-3).

¹⁴As discussed below, even if arrest rates for certain violent offenses were not increasing, very little effort has been devoted to attempts to prevent adolescents' use of violence. One could argue, therefore, that the need for preventive interventions exists regardless of changes in rates.

Figure 13-5—Arrest Rates^a for Aggravated Assault by Persons Age 18 and Under, 1965-88



^aThe **arrest rate** is the number of arrests made in a given population per given population per some base. The arrest rate here is the number of arrests per 100,000 population of the same age group.

SOURCE: U.S. Department of Justice, Federal Bureau of Investigation, *Age-Specific Arrest Rates and Race-Specific Arrest Rates for Selected Offenses 7%-7988* (Washington, DC: April 1990).

engaging in delinquent acts are not available. Data on adolescents in the National Youth Survey are quite old, having been collected between 1976 and 1980. Data in the Uniform Crime Reports and the National Crime Survey provide information on the number of offenses and cannot be easily manipulated to obtain prevalence rates. Information about prevalence can be obtained from longitudinal research projects, but such studies are typically community based and may not be generalizable to other communities.

Available data from the National Youth Survey suggest that a large majority of U.S. adolescents commit minor offenses at least once and that a considerable minority of adolescents also commit

serious offenses at least once. A small percentage repeatedly engage in both serious and nonserious acts of delinquency (100). Elliott and his colleagues conducting the National Youth Survey discovered that most adolescents become involved in some level of delinquent behavior during the course of their adolescence—although their infractions are usually relatively minor (e.g., a status offense, vandalism, minor assaults) (100). In addition, they found that 21 percent of the participants in the survey had committed at least one serious offense in 1976 (100). If 21 percent of the 29.2 million adolescents who were 11 to 17 years old in 1976 committed serious offenses, then approximately 6.1 million adolescents committed one or more serious offenses that year.

The findings of many other studies parallel those of the National Youth Survey. A review published in 1981 noted that a “substantial minority of the adolescent male population has been or will be arrested or convicted” (128). The figures vary from 20 to 70 percent depending on demographic characteristics, seriousness of offense, or other factors included in the studies reviewed (128). Another review, published in 1986, noted that the best available estimates indicate that between 25 to 35 percent of urban males will be arrested for a serious crime in their lifetimes, and 15 percent will be arrested by age 18 (48).

What Is the Pattern of Committing Serious Delinquent Acts Among Adolescents?

An understanding of the duration and level of involvement of adolescents in serious delinquent behavior is important to an analysis of policy implications. Available data suggest that not all adolescents who commit a single serious offense are destined to become “career criminals.” For which adolescents does involvement in serious delinquent behavior suggest the beginning of a criminal career and for which is such involvement limited?¹⁵

¹⁵An important consideration in tracking the careers of criminals is the possible effects of involvement with the juvenile justice system. A basic question is whether being apprehended leads to worse or better behavior. Does being arrested early in life lead to exposure to older adolescents and new forms of delinquent behavior or expectations by police and others that the adolescent is “a delinquent”? Or do the adolescents who begin their careers of multiple offenses early and continue unabated do so because they have escaped apprehension? As discussed more fully below under effectiveness of the juvenile justice system, available data are unable to answer this question definitively.

Table 13-3-Serious Offenses by 17-Year-Olds: Trends in the Incidence Rates Reported by Different Sources of National Data on Adolescent Delinquency^a

Type of offense	Years ^b	Data source			
		Uniform Crime Reports (arrest rates ^c)	National Crime Survey (victimization rates ^d)	National Youth Survey (self-reported offending rates ^e)	Monitoring the Future/High School Seniors Survey (self-reported offending rates ^e)
Aggravated assault	1976-80	Upward trend		No obvious trend	
	1975-85	Upward trend			Upward trend
	1980-87	Upward trend	No obvious trend		
	1978-88	Upward trend			
	1984-88	Upward trend			
Robbery	1976-80	Upward trend		No obvious trend	
	1975-85	No obvious trend			No obvious trend
	1980-87	Downward trend	No obvious trend		
	1978-88	Downward trend			
	1984-88	Downward trend			
Forcible rape	1976-80	Upward trend		No obvious trend	
	1980-87	No obvious trend	No obvious trend		
	1978-88	No obvious trend			
	1984-88	Downward trend			
Murder and nonnegligent manslaughter	1978-88	No obvious trend			
	1984-88	Upward trend			
Larceny-theft	1976-80	No obvious trend		No obvious trend	
	1975-85	No obvious trend			Downward trend
	1978-88	No obvious trend			
	1984-88	No obvious trend			
Burglary	1976-80	No obvious trend		No obvious trend	
	1978-88	Downward trend			
	1984-88	Downward trend			
Motor vehicle theft	1976-80	No obvious trend		No obvious trend	
	1975-85	No obvious trend, then downward trend, then upward trend			No obvious trend
	1978-88	No obvious trend, then downward trend, then upward trend			
	1984-88	Upward trend			
Arson	1975-85	Upward trend, then downward trend, then no obvious trend			No obvious trend
	1978-88	No obvious trend, then downward trend, then no obvious trend			
	1984-88	No obvious trend			

^aSince 17 was the only age included in all four national data sources, the trends described for individual offenses are for 17-year-olds.

^bThe arrest rate here refers to the number of arrests of 17-year-olds per 100,000 17-year-olds in the population. The years used as the beginning and the end points for trends in the table reflect readily available data.

^cThis column shows trends in arrest rates for serious offenses (violent or property) among 17-year-olds in 1988.

^dThe victimization rate here is the number of serious offenses (violent or property) experienced by individuals 12 years of age and over committed by individuals 17 years of age in 1987 per 100,000 individuals 17 years of age in the population.

^eThe self-reporting offending rate here is the number of serious offenses (violent or property) self-reported by individuals 17 years of age per 100,000 individuals 17 years of age in the population.

SOURCES: Uniform Crime Reports: U.S. Department of Justice, Federal Bureau of Investigation, *Uniform Crime Reports, Crime in the United States, 1988* (Washington DC: U.S. Government Printing Office, August 1989). National Crime Survey: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, *Criminal Victimization in the United States, 1987*, A National Crime Survey Report, NCJ-115524 (Washington, DC: June 1989). National Youth Survey: D.S. Elliott, S.S. Ageton, D. Huizinga, et al., *The Prevalence and Incidence of Delinquent Behavior: 1976-1980*, National Youth Survey Report No. 26 (Boulder, CO: Behavioral Research Institute, March 1983). Monitoring the Future/High School Seniors Survey: D.W. Osgood, P.M. O'Malley, J.G. Bachman, et al., "Time Trends and Age Trends in Arrests and Self-Reported Behavior," *Criminology* 27(3):389-417, 1989; J.G. Bachman, L.D. Johnston, and P.M. O'Malley, *Monitoring the Future: Questionnaire Responses From the Nation's High School Seniors, 1986* (Ann Arbor, MI: Institute for Social Research, University of Michigan, 1987).

Elliott and his colleagues conducting the National Youth Survey found that, over a 5-year period (1976 to 1980), the *majority of adolescents who committed any serious violent offense had a “career length” of 1 year (108)*. Their finding is consistent with studies of arrest histories that found that a majority of adolescent violent offenders have a single arrest for a serious violent offense and few continue violent offending into adulthood (180).

But the National Youth Survey and other studies have found that *there is a small subset of adolescent offenders who commit multiple, serious offenses (48,108,119,129,180,369,458,459)*. The estimates vary from study to study, in part because the studies use different data sources and were done at different times. Adolescent offenders who commit multiple, serious offenses have received considerable attention in the research literature because they are the adolescents most likely to go on to commit multiple crimes as adults and are responsible for most of all arrests (48, 180). Chronic offenders also appear to be different from nonchronic offenders because they are likely to have begun delinquent behaviors at an earlier age and to have continued them later (48,1 19,129,366,458).

Researchers differ as to whether adolescents who commit multiple offenses move toward increasingly serious offenses over time. Some researchers interpret the evidence to indicate that delinquent careers escalate from the nonviolent to the violent (48,458); other researchers conclude that there is no consistent sequence in the appearance of violence in the course of an adolescent’s offending (180,182).

It is likely that adolescents who commit more than one offense commit a variety of offenses, both serious and minor, rather than specializing in a single type of offense (108,126,129,180,182). According to one study, chronic offenders typically alternate between property offenses and a smaller number of violent offenses (182). The National Youth Survey found that even adolescents involved in serious violent offenses commit other types of crimes (108). Indeed, it found that adolescents

involved in serious offenses usually commit relatively few serious offenses and many minor offenses and are therefore more likely to be arrested for a less serious offense (101). The relatively small number of adolescent males who commit sex crimes do not commit other types of crimes (329).

Factors Associated With Adolescent Delinquency

The importance of understanding factors that are correlated with or predict delinquent behavior (risk factors) lies in the possible use of such understanding as the basis for targeting resources and for developing and evaluating interventions. It is important to note that conclusive information about many of the factors that have been investigated as possible correlates of adolescent delinquency is not available. Many adolescents (an average of 40 percent across studies) who have been exposed to risk factors do not become offenders, as measured by arrest before age 18 (432). Furthermore, a small number of adolescents become delinquent without any identifiable risk factors in their background (353).¹⁶ This group remains an “enigma,” testifying to lack of adequate understanding of delinquency (353).

Demographic Factors Associated With Delinquency

National data on U.S. adolescents’ involvement in delinquency are often reported in terms of demographic factors—age, gender, race, ethnicity, and urban/rural location. Current national data sources on delinquency do not report information on socioeconomic status. Communitywide analyses are the source of much data on this factor.

Age-Involvement in delinquency changes with age during adolescence. Incidence rates, as measured by arrest rates, victimization rates, and offending rates, indicate that, in general, the level of adolescent involvement in delinquent acts—whether violent or nonviolent, serious or minor—generally *peaks some time between 15 and 17 years of age and declines thereafter* (102,107,122,284,285, 412).¹⁷

¹⁶Information about factors that protect adolescents exposed to risk factors for delinquency is presented later in this Chapter. See box 13-B.

¹⁷Aggregate arrest rates for serious violent offenses and arrest rates for aggravated assault follow a slightly different pattern. Aggregate arrest rates for serious violent offenses typically peak at 18 years of age and the arrest rate for aggravated assault usually peaks at age 21 (412). The peak age for aggravated assault in arrest rate data is much higher than the peak ages of 14 to 16 reported for felony assault in the National Youth Survey (100) and the peak age of 17 reported in the Monitoring the Future/High School Seniors Survey for aggravated assault (303). Perhaps arrest data show a higher peak age than adolescents’ self-reports because older adolescents and young adults are more likely than younger adolescents to be in locations where police are readily available (e.g., bars). Assaults by younger adolescents may take place in schools and playgrounds where they have been less likely to be reported to or observed by police. Arrest rates for arson are unusual in that they have peaked at 13 to 15 years of age for more than 21 years (412).

Table 13-4-Rates of Involvement in Serious Offenses: Male-to-Female Ratios Reported by Different Sources of National Data on Adolescent Delinquency

	Male-to-female ratios			
	Uniform Crime Reports: Arrest rate, 1987—under age 18 ^a	National Crime Survey: Victimization rate, 1987—under age 18 ^b	National Youth Survey: Self-reported offending rate, 1976-ages 11-17 ^c	National Youth Survey: Prevalence rate, 1976-ages 11-17 ^d
Serious offenses	7.5:1		0.5:1 (excluding murder and arson) ^e	3:1 (excluding murder and arson)
Serious violent offenses	7.5:1	307:1 ^f	0.5:1 (excluding murder) ^e	3:1
Murder	10.8:1	NA	NA	NA
Forcible rape	44.3:1	16.6:1	NA	NA
Aggravated assault	5.2:1	5.3:1	NA	NA
Robbery	12.9:1	12.1:1	0.5:1 ^g	3:1
Felony assault ^h			0.5:1 ^g	3:1
Serious property offenses	3.6:1		NA	NA
Burglary	11.9:1		NA	NA
Larceny/theft	2.5:1		NA	NA
Motor vehicle theft	8.0:1		NA	NA
Arson	8.5:1		NA	NA
Felony theft			2:1	2:1

NA = not available.

^aArrest rates are the number of arrests made in a given population per some population base in a given time period. The male-to-female ratios for arrest rates here were calculated from arrest rates in the U.S. Department of Justice, Federal Bureau of Investigation, *Age-Specific Arrest Rates and Race-Specific Arrest Rates for Selected Offenses, 1965-1988* (412).

^bVictimization rates are the number of offenses experienced by a given population committed by individuals per some population base over a specified time period. The male-to-female ratios for victimization rates here were derived from unpublished data from the U.S. Department of Justice, Bureau of Justice Statistics, *National Crime Survey* (421).

^cOffending rates are the number of self-reported offenses that occur in a given population per some population base during a specified time period. The male-to-female ratios for offending rates here are from D.S. Elliott, S.S. Ageton, D. Huizinga, et al., *The Prevalence and Incidence of Delinquent Behavior, 1976-1980* (100).

^dPrevalence rates here are the proportion of individuals in the same population involved in a self-reported offense within a designated time period. The male-to-female ratios for prevalence rates here are from D.S. Elliott, S.S. Ageton, D. Huizinga, et al., *The Prevalence and Incidence of Delinquent Behavior, 1976-1980* (100).

^eMale-to-female ratios for serious offenses, serious violent offenses, and specific violent offenses ranged from 2:1 to 26:1, but the majority were 5:1 or greater (100).

^fSerious violent offenses included in the National Crime Survey were rape, robbery, aggravated assault, and simple assault.

^gFelony assault includes aggravated assault, sexual assault, and gang fights.

^hFelony theft includes larceny-theft, motor vehicle theft, burglary, and possession of stolen goods.

SOURCES: Uniform Crime Reports: U.S. Department of Justice, Federal Bureau of Investigation, *Uniform Crime Reports: Crime in the United States, 1987* (Washington, DC: U.S. Government Printing Office, 1988). National Crime Survey: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, *Criminal Victimization in the United States, 1987*, A National Crime Survey Report, NCJ-115524 (Washington, DC: August 1988). National Youth Survey: D.S. Elliott, S.S. Ageton, D. Huizinga, et al., *The Prevalence and Incidence of Delinquent Behavior: 1976-1980*, National Youth Survey Report No. 26 (Boulder, CO: Behavioral Research Institute, March 1983).

These incidence data are supported by prevalence data from the National Youth Survey. Elliott and colleagues found that approximately 5 percent of respondents at each age between ages 12 and 17 had committed three or more serious violent offenses; the annual prevalence rate for such offenses dropped sharply after age 17, however, and was lower at age 21 than at age 12 (108).¹⁸ Prevalence rates for serious property offenses also begin to decline at age 17. The National Youth Survey prevalence data, as well as data from other longitudinal studies, suggest

that many adolescents may abandon delinquent behavior as they mature (100).

Gender—Male adolescents are more involved in most types of delinquent behavior than female adolescents (48,69,87,100,110,162,165,209,302,386,452).¹⁹ For serious offenses, male adolescents dominate the statistics (see table 13-4), although it is important to note that male-to-female arrest rate and victimization rate ratios cover a broad range.

The gender gap in adolescent arrest rates appears to be narrowing (412). Between 1965 and

¹⁸The Monitoring the Future/High School Seniors Survey, which does not usually include adolescents under age 17, found that the proportion of individuals committing at least one robbery or one aggravated assault started to decline at age 17 (303).

¹⁹Some researchers believe that the extent to which male delinquency exceeds female delinquency is exaggerated (202,294). Whether that exaggeration is minor (as suggested by Hindelang et al. (202) or serious (as suggested by Morns (294)) is uncertain.

In contrast, the gender differential in offending rates and prevalence rates for felony assault (which includes aggravated assault, sexual assault, and gang fights), robbery, and felony theft are similar (102).

1987, the arrest rates for both sexes increased for serious violent offenses and for serious property offenses (412). The arrest rates for female adolescents changed at a greater rate than arrest rates for males. Among individuals under age 18 the ratio of male-to-female arrest rates for serious violent offenses decreased from 11.4 to 1 in 1965 to 7.5 to 1 in 1987. Similarly, the ratio of male-to-female arrest rates for serious property offenses decreased from 6.7 to 1 to 3.6 to 1 over the same period. The significance of these changes—whether they reflect an increase in serious offenses among female adolescents, manifest changing social views that permit or encourage police to arrest more female adolescent offenders, or result from some other factor—is not known.

Racial and Ethnic Background—Arrest rates for serious offenses, particularly serious violent offenses, are much higher for black adolescents than for white adolescents and are higher for white adolescents than for other adolescents (American Indians, Alaska Natives, Asians, and Pacific Islanders) (see table 13-5). In 1987, the arrest rate for serious violent offenses was about six times higher for black adolescents under age 18 than for white adolescents under age 18 (see table 13-6).²⁰

Why arrest rates for black adolescents are higher than those for white adolescents is not entirely clear. Black adolescents are more likely than white adolescents to live in families with low incomes and in urban areas. The arrest rates of adolescents in families with low income are higher than the arrest rates of adolescents of higher incomes; and arrest rates of adolescents in urban areas are higher than the arrest rates of adolescents who live in suburban or rural areas. Even after adjustments are made for income and urban location, however, there is a much greater likelihood that black adolescents who engage in delinquent behavior will be *arrested* for serious offenses (especially for serious violent offenses) than white adolescent offenders. The greater likelihood that black adolescents will be arrested may reflect greater law enforcement efforts

Table 13-5—Arrest Rates^a for Serious Offenses Among Persons Under Age 18, by Race, 1987

Type of offense	Arrests/100,000 population		
	Black	White	Other ^b
Serious violent offenses	489.8	75.0	50.8
Murder	10.9	1.6	1.9
Forcible rape	34.3	4.9	2.2
Robbery	231.9	20.0	18.5
Aggravated assault	212.7	48.5	28.1
Serious property offenses	1,933.4	959.8	684.4
Burglary	390.5	229.9	122.6
Larceny/theft	1,268.9	648.0	490.4
Motor vehicle theft	274.0	81.9	72.4
Arson	11.8	11.9	6.1

^aThe arrest rate is the number of arrests made in a given population per some population base. The arrest rate here is the number of arrests per 100,000 population of the same age group.

^bThis category includes American Indians, Alaska Natives, Asians, and Pacific Islanders.

SOURCE: U.S. Department of Justice, Federal Bureau of Investigation, *Age-Specific Arrest Rates and Race-Specific Arrest Rates for Selected Offenses, 1965-1988* (Washington, DC: April 1990).

in black neighborhoods, greater delinquent activity by individual black offenders, or discriminatory police practices. Huizinga and Elliott attribute the high arrest rates of black adolescents (as compared with white adolescents) to black adolescents' having a greater risk of being arrested regardless of their actual involvement in crime (215).

Data on victimization rates from the National Crime Survey and data on self-reported offending rates from the National Youth Survey suggest that racial differences in adolescent offending are less pronounced than is indicated by data on arrest rates. In the 1987 National Youth Survey for example, the black-to-white ratio in victimization rates for serious violent offenses was 2 to 1, very similar to the ratio of 1.9 to 1 for offending rates in a similar category (see table 13-6).²¹

In the case of minor offenses among individuals under age 18, the black-to-white ratio in 1987 *arrest rates* for minor offenses other than status offenses was 1.8 to 1 (412). For minor offenses including status offenses, the black-to-white ratio in arrest rates was only 1.5 to 1. Self-reported offending rate data from the National Youth Survey indicate that

²⁰In 1987, black adolescents were 15 percent of the population under age 18 (402) but accounted for 54.6 percent of the arrests for Serious violent offenses, 55 percent of arrests for murder, 56.7 percent of arrests for forcible rape, 67.9 percent of arrests for aggravated assault, and 44.8 percent of arrests for robbery by individuals under age 18 (409,415).

²¹There is some evidence that the low racial differential in the National Youth Survey self-report data is partially attributable to differential validity between races in reporting offenses to the survey. When self-report data were checked with official records, the National Youth Survey, as other self-report studies, found a greater degree of underreporting by black adolescents than by white adolescents, particularly for the more serious offenses (214). On the other hand, the exact magnitude of the differential in underreporting is not known (214). Many methodological problems, including small sample size and errors in official records, leaves the issue unresolved (98).

Table 13-6—Rates of Involvement in Serious Offenses: Black-to-White Ratios Reported by Different Sources of National Data on Adolescent Delinquency

	Black-to-white ratios			
	Uniform Crime Reports: Arrest rate, 1987—under age 18a	National Crime Survey: Victimization rate, 1987—under age 18b	National Youth Survey: Self-reported offending rate, 1976-ages 11-17 ^c	National Youth Survey: Prevalence rate, 1976-ages 11-17 ^d
Serious offenses	3:1	NA	NSD	1.5:1
Serious violent offenses	6.5:1	2:1 ^e	1.9:1	Not collected
Murder	6.8:1	NA	Not collected	Not collected
Forcible rape	7:1	NA	NA	NA
Aggravated assault	11.5:1	NA	NA	NA
Robbery	4.4:1	NA	NSD	2:1
Felony assault ^f	NA	NA	5:2	3:2
Serious property offenses	2:1	NA	Not collected	Not collected
Burglary	1.7:1	NA	NA	NA
Larceny/theft	2:1	NA	NA	NA
Motor vehicle theft	3.3:1			
Arson	NSD	NA	Not collected	Not collected
Felony theft ^g	NA	NA	NSD	NSD

NA = not available; NSD = no significant difference.

^aArrest rates are the number of arrests made in a given population per some population base in a given time period. The black-to-white ratios for arrest rates here were calculated from arrest rates in the U.S. Department of Justice, Federal Bureau of Investigation, *Age-Specific Arrest Rates and Race-Specific Arrest Rates for Selected Offenses, 1965-1988* (41 2).

^bVictimization rates are the number of offenses experienced by a given population committed by individuals per some population base over a specified time period. The black-to-white ratios for victimization rates here were derived from unpublished data from the U.S. Department of Justice, Bureau of Justice Statistics, National Crime Survey (421).

^cOffending rates are the number of self-reported offenses that occur in a given population per some population base during a specified time period. The black-to-white ratios for offending rates here are from D.S. Elliott, S.S. Ageton, D. Huizinga, et al., *The Prevalence and Incidence of Delinquent Behavior, 1976-1980* (1 00).

^dPrevalence rates here are the proportion of individuals in the same population involved in a self-reported offense within a designated time period. The black-to-white ratios for prevalence rates here are from D.S. Elliot, S.S. Ageton, D. Huizinga, et al., *The Prevalence and Incidence of Delinquent Behavior, 1976-1980* (1 00).

^eSerious violent offenses included in the National Crime Survey were rape, robbery, aggravated assault, and simple assault.

^fFelony assault includes aggravated assault, sexual assault, and gang fights.

^gFelony theft includes larceny-theft, motor vehicle theft, burglary, and possession of stolen goods.

SOURCES: Uniform Crime Reports: U.S. Department of Justice, Federal Bureau of investigation, *Uniform Crime Reports: Crime in the United States, 1987* (Washington, DC: U.S. Government Printing Office, 1988). National Crime Survey: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, *Criminal Victimization in the United States, 1987*, A National Crime Survey Report, NCJ-115524 (Washington, DC: June 1989). National Youth Survey: D.S. Elliott, S.S. Ageton, D. Huizinga, et al., *The Prevalence and Incidence of Delinquent Behavior: 1976-1980*, National Youth Survey Report No. 26 (Boulder, CO: Behavioral Research institute, March 1983).

the black-to-white ratio in *offending rates* for minor offenses is 1.2 to 1, and in the only two offenses for which black-white differences are statistically significant (liquor law violations and drug use), whites have higher offending rates than blacks (102).²²

Available prevalence data from the National Youth Survey, measuring the number of 11- to 17-year-olds involved in delinquent acts in 1976, also differ by race (see table 13-6). That survey found that the black-to-white ratio in *prevalence rates* for all serious offenses in 1976 was 1.5 to 1. The National Youth Survey also found racial differences in *prevalence rates* for some specific minor offenses: white adolescents had statistically signifi-

cant higher rates for some offenses (alcohol use, drunkenness, disorderly conduct, and drug use), and black adolescents had statistically significant higher rates for others (carrying a hidden weapon and prostitution) (100).

There is little information on differences in the ethnic origin of adolescent offenders. Hispanics are the only group to be differentiated in national arrest data, and the data are very inexact and cover only a short period of time.²³ In 1986, Hispanic youth under 18 years of age, who represented 9.5 percent of all youths under age 18, accounted for 11.8 percent of juvenile arrests for property crimes and 14.5 percent of arrests for violent crimes (408).

²²These findings differ from those of several early self-report studies which found no difference between blacks and whites (63, 110, 115, 171); one found no difference when social class was controlled (162). Other self-report studies found slight racial differences (203, 386), or differences only in prevalence (452).

²³Hispanics were included in the Federal Bureau of Investigation's Uniform Crime Report program as of 1980. The Federal Bureau of Investigation stopped collecting data by Hispanic/non-Hispanic categories at the end of the 1986 reporting year because of concerns about the accuracy of the data.

Hawaii has examined its adolescent population in relation to delinquent acts and found a disproportionate incidence of arrests among Native Hawaiians. Twenty-four percent of the Hawaiian population under age 18 are Native Hawaiians, yet State data indicate that Native Hawaiians account for 35 percent of all arrests among this age group (287).²⁴

Socioeconomic Status—The most common measure of social class of adolescents is parental socioeconomic status (240).²⁵ Reviews of this factor have concluded that some—albeit limited—evidence suggests that delinquent behavior is somewhat more likely and more frequent in adolescents from low socioeconomic backgrounds than in adolescents from higher socioeconomic backgrounds, but that the association is restricted to the more serious offenses (48,268,353,389).²⁶ Further, studies have found that delinquency occurs in all social groups (268,353).

Findings concerning the relationship between socioeconomic status and adolescent delinquency differ depending on the source of information used by researchers. Studies based on official arrest or court records have been more likely than studies based on self-reports to find an association between socioeconomic status and delinquency (268,353). Studies based on self-reports of nonserious delinquent behaviors generally have found little or no relationship between parental socioeconomic status and adolescent delinquency or a weaker association than studies based on official reports have found (353). A recent major study based on self-reports of *serious* offenses, however, did find a relationship between socioeconomic status and delinquency, mainly serious assaultive offenses (99). Not only did adolescents from families of lower socioeconomic

status report committing more serious offenses than adolescents from middle-class and working-class families, but a disproportionately high number of adolescents from families of lower socioeconomic status reported involvement in serious offending (100). This study did not find any difference between middle-class and lower class adolescents with respect to measures of minor delinquent activities, however (100).

Whatever relationship between socioeconomic status and adolescent delinquency there is seems to be relatively weak. Loeber and Dishion's meta-analysis of self-report and official measures of a number of early predictors of adolescent delinquency (e.g., child problem behavior) concluded that socioeconomic status is the lowest ranking predictor for delinquency and recidivism (268).²⁷ The fact that the relationship between parental socioeconomic status and adolescent delinquency is a weak one suggests that the association is indirect. A recent study based on self-reports found that economic hardship does not have a direct effect on delinquent and drug-using behaviors of males and females in the 9th through 12th grade but that it does have an indirect effect (259). That study measured the effects of the current decline in parental economic status in the Midwest Farm Belt on adolescents' behavior.²⁸ Most of the adolescents were members of working-class and lower middle-class families, Economic hardship resulted in an increase in inconsistent parental discipline, and this in turn increased delinquent and drug-using behavior, particularly in males. This finding is consistent with that of other studies which find that delinquency is not associated with social class per se but is probably

²⁴Native Hawaiians tend to have lower incomes than non-Native Hawaiians and are overrepresented by 43.1 percent in the poverty population (287). Since arrests for delinquent behavior are also higher among persons with low incomes (85), the relationship of being a Native Hawaiian to arrests for delinquent behavior, as with black adolescents, becomes entangled with the effects of low income and poverty on arrests for delinquent behavior.

²⁵Unfortunately, information on parental socioeconomic status is not routinely reported with Uniform Crime Report arrest data or the National Crime Survey victimization data; therefore, researchers must do special analyses to determine the relationships between socioeconomic status and arrests. In the light of regular reporting of racial data, this lack of regular reporting of socioeconomic status data in the Uniform Crime Report and in the National Crime Survey may skew interpretations of the data.

²⁶Kercher is more restrictive in his review and concludes that "empirical research consistently finds little or no relationship between parental socioeconomic status and the illegal behavior of teenagers whether one measures socioeconomic status by official recorded or self-recorded crimes. There is only a strong relationship under very restricted circumstances; specifically for young black adults and when socioeconomic status is measured by education and employment rather than by income and occupation, and more for violent than for property crimes" (240).

²⁷In terms of median relative improvement over chance, Loeber and Dishion found, the predictors for adolescent delinquency in rank order were 1) composite measures of parental family management techniques; 2) child problem behavior; 3) stealing, lying, or truancy; 4) criminality or antisocial behavior of family members; 5) poor educational achievement; 6) single measures of parental family management techniques; 7) separation from parents; and 8) socioeconomic status. The rank order of predictors for recidivism were 1) stealing, lying, or truancy; 2) child problem behavior; 3) criminality or antisocial behavior of family members; 4) prior delinquency; and 5) socioeconomic status (268).

²⁸Lower class people have been shown to suffer the greatest psychological distress during economic declines (21 1).

mediated by parental problems associated with low socioeconomic status (163,258,259,353,389).

One explanation offered for the disproportionate representation of black adolescents in delinquency is the economic deprivation in which most black adolescents live. As discussed elsewhere in this report, approximately half (52 percent in 1988) of black adolescents live in families with incomes below 150 percent of the Federal poverty level (about \$15,000 per year for a family of three); this compares with the one out of five (17 percent) white non-Hispanic adolescents who live in families with such low incomes.²⁹ Further, in addition to considering basic income levels, it is important to consider other characteristics of the social environments of poor black adolescents, particularly those who live in urban areas (see, e.g., (85)). Many poor black adolescents are likely to live in areas with disproportionately high levels of neighborhood unemployment, persistent poverty, and crime (85). This may be a factor in why several studies, even one using adolescent self-reports (100), have found that poor black adolescents are somewhat more likely to be delinquent than similarly poor nonblack (white) adolescents (220,398,458).³⁰

It may also be important to consider differences among black adolescents from different national and historical circumstances. For example, Dembo has suggested that the higher rates of family stability among West Indians *may* protect against the risk of delinquency associated with low income (85). It is important to note that little is known definitively about the causes of delinquency among black adolescents, and that vast amounts of knowledge are obscured when data on delinquency are reported solely by racial and ethnic group, without consideration of family, neighborhood, socioeconomic, and perhaps other, factors.

Urban/Suburban/Rural Areas--Arrest, offending, and prevalence rates are difficult to compare among urban, suburban, and rural areas. Arrest rates refer to the location of the police agency making the arrest and not necessarily the location of the offense or the residence of the offender, and offending and prevalence rates refer to the residence of the offender. Nonetheless, it appears that for most offenses, serious and minor, urban areas experience higher incidence, offending, and prevalence rates than suburban areas, and rural areas have the lowest rates of all (100,415). For some minor offenses, including liquor law violations and runaway violations, urban, suburban, and rural areas have fairly comparable arrest rates and self-reported offending rates (100,415).

Other Factors Associated With Delinquency

Information on other-i. e., nondemographic—factors linked to delinquency is derived primarily from community-level research studies. The discussion that follows is based mainly on literature reviews that examined multiple studies of factors associated with delinquency. The specific reviews consulted for a factor are noted in the section devoted to that factor.

The usefulness of incomplete or controversial information for the implementation of prevention and treatment programs is doubtful, so only those factors whose association with delinquency is supported by substantial empirical evidence are discussed (see table 13-7).³¹ 32

Theoretical Bases of Studies That Explore Why Adolescents Commit Offenses—Studies investigating why adolescents and others commit offenses typically have some theoretical basis. Many theories have been proposed over the years, but all of them are based on one of three different premises (433).

²⁹See ch.18, 'Issues in the Delivery of Services to Selected Groups of Adolescents,' in Vol. III.

³⁰The latter studies used official records to measure delinquency. As noted above, arrest rates for black adolescents are disproportionately higher than black adolescents' self-reported involvement in delinquency. Elliott and colleagues found, however, that at the higher frequencies and for more serious offenses, self-reports and police data coincide (100).

³¹Although the factors discussed here **mainly** relate to serious offenses, **the same factors are** often associated with minor offenses; **the timing and the strength** of the association for serious offenses, however, may differ from that for minor offenses. Family background appears to be related to the involvement of young children and adolescents in the commission of minor offenses but not of serious offenses. Factors related to societal pressures, such as peer influence, appear to be more related to the involvement of older adolescents and to the commission of larceny-theft and other serious offenses. A young person who has been exposed to poor family influences maybe more susceptible to societal influences if and when exposed to them (98).

³²Most research on the correlates of offending focuses on what factors differentiate offenders from **nonoffenders** and contrasts offenders and nonoffenders in one age range. Very little research examines how specific factors are correlated with specific stages in a criminal career (**onset, duration, and cessation**).

Table 13-7-Selected Factors Associated With Serious Offending by Adolescents^a

Factors	Relative strength of association with serious offending
Family factors	
Lack of parental supervision . . . . .	.Strong
Lack of parental involvement ^c . . . . .	.Modest--strong
Parental rejection . . . . .	.Strong
Poor parental disciplinary practices . . . . .	.Weak-modest-strong
Familial criminal behavior . . . . .	.Medium--strong
Poor marital relations . . . . .	.Medium for serious offenses
Parental absence due to divorce or separation . . . . .	.Small
Large family size . . . . .	.Only when associated with low income and poor housing and for males
Multivariate combination of family factors . . . . .	.Strongest--next to strongest ^e
Child abuse and neglect . . . . .	.Moderate--for delinquency in general: not significant for delinquency characterized by violence
Early socially disapproved behaviors . . . . .	.Strong--especially for serious offenses and recidivism
Attention deficit hyperactivity disorder (ADHD) . . . . .	.Moderate
Learning disability . . . . .	.Only in combination with multiple other factors
Low IQ, especially lack of verbal ability . . . . .	.Strong
Poor school performance . . . . .	.Moderate
Delinquent peers . . . . .	.Strong--during adolescent period
Neighborhood/community . . . . .	.Weak--strengthened when associated with other factors
Biological factors . . . . .	.Inconclusive
Alcohol use prior to offending . . . . .	.Moderate
Drug use prior to offending . . . . .	.Moderate--weak
Guns . . . . .	.Increase severity of outcome

^aThe factors listed here are also associated with minor offenses, but the strength of the association is not identical.

^bThe strength of the association of each factor with serious offending by adolescents was determined by OTA's analysis of published reviews. When reviewers disagreed as to their assessment of the strength of the relationship between a particular factor and delinquency, the range of various reviewers' descriptors (e.g., weak-modest-strong) is listed. The strength of the relationship between alcohol use and drug use prior to offending and gun use was determined by an analysis of survey data.

^cMeasures of lack of parental involvement include neglect, indifference, ignoring a child, and not taking the child on outings.

^dMeasures of poor marital relations are marital conflict, marital discord, marital disharmony, and excessive quarreling.

^eMultivariate combinations of family factors have the strongest relation to offending according to some researchers (268).

SOURCE: Office of Technology Assessment, 1991.

One premise, on which the current theory of deterrence and the historical classical and neoclassical theories of criminology are based, is that *criminal behavior is freely chosen and that individuals make rational decisions to promote their best interests*. In the late 1960s, deterrence theory revived a classical approach to controlling criminal behavior that had been dormant after 100 years of application. The increase in restrictive and punishment-oriented responses to juvenile offenders (e.g., increasing the length of incarceration for juveniles sent to training schools) in recent years exemplifies the punishment component of deterrence theory (246).

A second premise, on which social reaction theories, conflict theories, and Marxist theory are based, is that *crime and the characteristics of criminals are defined by society* through criminal law rather than by the behavior of individuals (433). According to

this premise, the reason that most people convicted of crimes are poor is because the actions typical of poor people are labeled as crimes and not because poverty causes crime. Furthermore, laws governing actions most commonly committed by poor people (e.g., armed robbery) are strictly defined and enforced, while laws governing actions typically committed by the middle and upper class (e.g., embezzlement) are not strictly defined or enforced.

The third premise, on which modern positivist theories are based, is that *human behavior, including criminal behavior, is partially determined by forces beyond individual control*. Positivist theories (e.g., learning theories, social control theory, strain theory, and ecological approaches) call for use of the scientific method to study the biological, psychological, and social characteristics of criminals in order to identify the causes of criminal behavior.³³ Some

³³*Learning theories* of criminal behavior are based on how learning takes place. Learning refers to habits and knowledge that develop as a result of the experiences of the individual in adjusting to the environment. *Social control theories* focus on the restraining or controlling forces imposed on individuals. These theories propose that individuals who commit crimes do so because of weakness of forces restraining them from doing so. *Strain theories* propose that there are certain socially generated pressures or forces that drive people to commit crimes. These pressures are not evenly distributed in society but are most severe among groups with the highest crime rates. *Ecological approaches* focus on the characteristics of areas.

researchers have integrated one or more positivist theories to explain the etiology of offending (100).

Neighborhood/Community Factors Associated With Delinquency—It is clear that the social and physical environments have an influence on delinquent behavior.³⁴ A consistent finding is that official rates of delinquency vary with the socioeconomic conditions of geographic areas—i. e., delinquency rates are high in areas of low socioeconomic status (77,163,372). Early research indicated that the pattern of delinquency rates in inner-city areas stayed constant over time (372), but later analysis showed that variations did occur and reflected demographic changes (57). An unresolved question is why offense rates in communities change over time and to what extent such change is a function of changes in the communities or individuals living in the communities (336).

Among boys of low socioeconomic status, those who live in areas with high offense rates are more likely to become delinquent than those who live in areas with low offense rates (336). Self-report data indicate, however, that although poor children who live in poor areas are more delinquent than other children, they are only marginally more delinquent than children who live in more affluent areas (100). One reason that adolescents living in poor neighborhoods have a higher rate of officially recorded delinquency than adolescents in other types of neighborhoods may be that they are the object of greater surveillance by police and local residents (163).

Only a few studies have examined the effect of neighborhood/community on the delinquency of individual adolescents (163,240). Most of these studies have focused on the area's socioeconomic status and not included other aspects of a neighborhood/community that might affect delinquency (240). In contrast, one recent rigorous analysis divided the characteristics of neighborhood/community into four categories: 1) economic level, 2) level of community organization/criminal subculture,³⁵ 3) level of community participation in organizations, and 4) residential stability of the community (383). Even

though this study was well-controlled for measurement errors, none of the four categories of neighborhood characteristics showed more than weak direct and indirect effects on officially recorded or self-reported crime of adolescents (240).

Possibly, a neighborhood incrementally affects the delinquency rate by interacting with individual circumstances. Communities with high delinquency rates, for example, often have a disproportionate number of households headed by females who have incomes at or below the poverty line and who have to work outside the home. This may weaken parental supervision. The weakening of parental supervision and the presence of an antisocial peer culture in the neighborhood may reinforce potential delinquent tendencies and behavior (336).

Family Factors Associated With Delinquency—Researchers have studied the association of many factors in the family environment with delinquency. While most family factors, for example lack of parental involvement, have been the object of attention for many years, the examination of the relationship of child abuse and neglect to delinquency is relatively recent.

Selected Family Factors—Several studies have established a strong association between certain family variables—e. g., a lack of parental supervision—and juvenile delinquency and adult crime (48,240,269,353,389). Evidence from official records³⁶ and self-reports agree that such family characteristics have a concurrent association with delinquency and a predictive association with later delinquent behavior and often with adult crime (269,389).³⁷

Different researchers and reviewers categorize family variables in different ways. Therefore, no one categorization fits all reviews. The family variables listed in table 13-7 are as follows:

- lack of parental supervision,
- lack of parental involvement,
- parental rejection,
- poor parental disciplinary practices,
- familial criminal behavior,

³⁴It is important to note that the interventions discussed later in this chapter concern the prevention or alteration of delinquent behavior on the individual level. Information on the effectiveness and cost-effectiveness of community interventions to reduce delinquency and crime is sparse and inconclusive (336).

³⁵*Criminal subculture* refers to the extent to which a community tolerates social disorder and criminal behavior (383).

³⁶Official records include arrest records, court records, and records of detention and correctional institutions.

³⁷For a discussion of parents and families' influence on adolescent health, see ch. 3, "Parents and Families' Influence on Adolescent Health."

- poor marital relations,
- . parental absence due to divorce or separation,
- . large family size, and
- . a multivariate combination of family factors.

This list was adapted from Loeber and Stouthamer-Loeber (269).³⁸ Child abuse and neglect are not included in this list and are therefore considered as factors in a separate discussion below.

Any arrangement of family factors listed above based on the strength of their relationship with adolescent delinquency is open to question. As table 13-7 shows, agreement about the strength of the association between each family variable and delinquency in the literature reviews OTA examined was considerable but not complete. The lack of complete consensus is not surprising. For one thing, the reviews included different studies for the most part, and the sample size, population, and findings among the studies reviewed varied. The overlap of studies among reviews was small, a situation due in part to the huge literature on the topic and to different criteria for inclusion adopted by each review. Moreover, each review used a different method of analysis of studies to rate the strength of the relationship between the variable and delinquency. Three of the literature reviews of family factors that OTA discusses in depth were traditional “narrative” reviews³⁹ and did not specify their method of analysis (48,240,353); Loeber and Stouthamer-Loeber used a meta-analysis (269).⁴

Loeber and Stouthamer-Loeber concluded from their meta-analysis that the family variables that were most strongly associated and were the most powerful predictors of delinquency were the lack of parental supervision, the lack of parental involvement, and parental rejection⁴¹ during the adolescent period and earlier (269).⁴² The authors of the other literature reviews agreed that the lack of parental supervision had a strong association with delinquency, and all but one concurred that parental

involvement had a strong association with delinquency. Snyder and Patterson described the strength of relationship between family involvement and delinquency as significant but modest, basing their conclusion on an analysis of variance of five longitudinal and cross-sectional studies (389). Kercher, who performed a traditional narrative review, noted that the strength of the effect of family supervision and family involvement varied among the studies examined; studies using more refined measures of attachment found stronger relationships (240).

The authors of most of the literature reviews agreed with Rutter and Giller’s narrative review that the methods of disciplining and the severity of punishment may not be as important a risk factor in delinquency as the “extent of supervision, the clarity of parental expectations, and the efficiency of disciplinary methods” (353). Loeber and Stouthamer-Loeber’s meta-analysis concluded that of the wide variety of childrearing practices the meta-analysis included under the term “discipline” (physical punishment and deprivation, nagging and scolding, lack of reasoning, love withdrawal, strictness and consistency, and fairness of punishment), lax and erratic discipline and strict and punitive discipline were most closely, although weakly, related to delinquency (269). Parental discipline of adolescents and younger children also showed a significant, but weak, relationship to later delinquency and aggression (269). Snyder and Patterson’s review also concluded that poor disciplinary practices, which were described as lax or neglectful, erratic or inconsistent, overly harsh or punitive, or harsh physical punishments were significant but modest contributions to delinquency (353).

On the other hand, Kercher placed discipline as one of the two most important “features of family life in current criminological research” (239). He attributes the finding by Loeber and Stouthamer-Loeber that discipline has a weaker effect on

³⁸Not all reviews examined by OTA analyzed all these variables.

³⁹A narrative review of the literature bases its conclusions on a subjective analysis by the reviewer. Among the many problems in a narrative review that may result in a misinterpretation of study findings is the possible lack of a systematic survey of the literature base and different subjective weighings of studies (400).

#A meta-analysis is a statistical or quantitative analysis of a large collection of results from individual studies for the purpose of integrating (he findings (159). In the meta-analysis used in the study by Loeber and Stouthamer-Loeber, the authors constructed a relative-improvement-over-chance measure to determine the strength of the relation between each family variable and delinquency. This measure was intended to standardize for differences across studies in the base rate of delinquents and the selection ratio used by the researchers.

⁴¹Parental rejection was included under the category of parental involvement in the other reviews examined.

⁴²The amount of supervision was associated with the frequency and the variety of delinquent offenses (269).

delinquency than supervision, involvement, and affectionate ties (269) to the need for more refined measurements of parental discipline and the necessity to control for the reciprocal effects of delinquency on discipline (240).

Snyder and Patterson suggest that poor and erratic disciplinary practices may affect the development of delinquent behavior directly by failing to correct for antisocial behavior and by providing young people with aggressive models of problem solving (389). Such practices can also have an indirect effect on delinquency, since youngsters exposed to aggressive modes of discipline may adopt the same behavior in their relations with peers and others. Such adolescents may be more likely to be rejected by most peers and resort to associating with delinquent peers (389).

There are varying opinions about the strength of the linkage between familial criminal behavior and adolescent delinquency. On the one hand, Loeber and Stouthamer-Loeber judged parental and sibling criminal behavior during adolescence and earlier to be a medium strength family variable with respect to delinquency and adult crime (269). On the other hand, Visher and Roth consider criminal activity on the part of parents, siblings, and even grandparents to be strongly associated with delinquency and adult criminal behavior (48,432). This finding agrees with Ruttier and Giller's labeling of familial criminal activity as the "most stable and consistent family characteristic" associated with delinquency (353). A recent analysis found that a parent's criminal behavior and drunkenness does not directly affect delinquency but disrupts the family process of control by increasing the inconsistency of discipline and the use of force and reducing effective supervision (258).

Poor marital relations between parents during adolescence and earlier are medium strength family variables with respect to adolescent delinquency and adult criminal behavior (269,353,389).⁴³ The discord involved in some divorces and some separations, as well as the conflict between parents in intact homes, increases the risk of adolescents' involvement in serious, but not in minor, delinquent acts.

One of the many, as yet unproven, reasons advanced as to why family discord increases adolescent delinquency is that the energy and time consumed by parents in conflict diverts parents from providing adequate discipline and supervision to their children (48,269,353). Family discord may interfere with the establishment and maintenance of healthy parent-child relationships, or mothers and fathers in conflict may provide an example of antisocial behavior for some children to copy (48).

Parental absence due to divorce or separation has been found to have either a small (48,269) or inconsistent (48) association with adolescent delinquency. Neither parental absence caused by parental death or hospitalization nor separation from parents at an early age is significantly associated with delinquency (48,129). In general, parental absence appears to have a weaker linkage with delinquency than poor marital relations does (269,353,389) and may not be associated with delinquency directly but rather through its connection with marital conflict and disharmony (353).

The reviews that examined family size as a variable found large family size was linked with other factors in its association with male delinquency but not female delinquency (48,269,353).⁴⁴ Large family size appears to be related to increased delinquency when associated with low income and poor housing (129), but not when associated with middle-class families (48). It may be that large family size is often accompanied by inappropriate discipline and supervision, which may result from the insufficient time and financial resources and overcrowding that accompany low-income and poorly housed families (48,269). Another possibility is that childrearing may be delegated to inexperienced older children in large, low-income families (269). In addition, in a larger family there is increased risk of exposure to a delinquent sibling, a variable associated with delinquency (48,269). Another unverified possibility is that the probability of inheriting characteristics associated with criminal behavior (e.g., low intelligence) or having a delinquent sibling increases as the size of a family increases (48).

In summary, it appears that family variables that directly affect family-child interactions+. g., pa-

⁴³Poor marital relations have been variously described in different studies (e.g., in terms of marital conflict, marital discord, marital disharmony, and excessive quarreling).

⁴⁴Large family size in some studies was more than two children (269).

rental rejection, lack of parental supervision, lack of parental involvement, and poor parental disciplinary practices appear to have a strong concurrent and predictive association with delinquency. Family variables that do not directly affect family-child relations—e.g., poor marital relations, divorce or separation, and family size—appear to be less strongly associated with delinquency and may act indirectly by interfering with the ability of parents to supervise or be involved with their children.

Family variables associated with adolescent offending have been investigated in combination as well as one at a time, and the *cumulative effect of several family risk variables has been found to be a better predictor of delinquency than any single variable alone* (269,389). A review by Loeber and Dishion found, for example, that single family variables improved the prediction over chance on the order of 20 percent, while the use of multiple family variables improved prediction over chance levels by 50 to 80 percent (268). Snyder and Patterson noted that 10 to 20 percent more variance is “accounted for by multivariate combinations of family variables than any one family variable alone” (389). One cannot definitively ascertain from available research, however, which combinations of risk factors are most predictive of later delinquency or adult crime (269).

*Child Abuse and Neglect*⁴⁵—Literature reviews of early studies of the relationship between child abuse and neglect and delinquency emphasize that most studies are flawed methodologically⁴⁶ and that there are extreme differences among the research efforts (150,448). The types of behavior labeled as delinquency vary widely among the studies, as do the definitions of child abuse and neglect.⁴⁷ Most of the

studies lacked appropriate comparison or control groups. Despite these methodological flaws, however, the *weight of the evidence indicates a relationship between child maltreatment and delinquency*.

In early studies of the relationship between child abuse and neglect and delinquency that used a retrospective design, child abuse and neglect were consistently found to be related to delinquency (150,448).⁴⁸ In studies reviewed by Garbarino and Plantz and Widom using retrospective designs, 8 to 88 percent of delinquent adolescents reported having been abused, with the estimates generally ranging between 8 and 29 percent⁴⁹ (150,448). Variations in the studies reviewed included sample size, the number of times the delinquent had been abused, the age when queried about abuse, the specific type of abuse, and the site of query (e.g., diagnostic center and school, private residential treatment program, detention center, training school) (150,448).

Early longitudinal studies of abused and neglected children found that about 10 to 17 percent of individuals who had been abused or neglected as children became delinquent (150,448).⁵⁰ Only two of the longitudinal studies reviewed had a comparison group. Garbarino and Plantz reported that one study with a comparison group reported that almost 10 percent of the children who were abused or neglected were subsequently reported as delinquent compared with 2 percent of controls during the same time period (150). Widom reported that another study found that 15 percent of neglected children and 10 percent of abused children committed serious offenses in childhood as compared with 7 percent of children defined as loved in the study (448). In this study, parental rejection was found to be more

⁴⁵Child abuse and neglect are considered separately from other family variables because the literature reviews evaluating studies of family variables did not include the studies included in reviews of child abuse. Although studies of discipline are included in reviews of family variables associated with delinquency, more often than not the disciplinary action is “normatively legitimate corporal punishment” which is differentiated from physical child abuse (393). One of the many definitions of physical abuse is “an assault on a child by a parent which exceeds the level of violence allowed by legal and other norms” (393). For further discussion of child abuse and neglect, see ch. 3, “Parents and Families’ Influence on Adolescent Health,” in this volume. That chapter also discusses the effects of various styles of parenting.

⁴⁶“Does Violence Beget Violence? A Critical Examination of the Literature,” by Cathy Spatz Widom, includes a scholarly analysis of the methodological problems of the literature on child abuse and neglect and violence (448).

⁴⁷Although a meta-analysis might clarify some of the association between child abuse and neglect and delinquency, noncomparability of the key variables in the literature has interfered with such an analysis (450).

⁴⁸Such retrospective studies identify samples of delinquent youths and then use reverse record checks to determine the incidence of abuse or neglect in their background.

⁴⁹Calculations of the rates of child abuse and neglect in the general population are extremely imprecise due to the lack of data, but even the highest estimates allow the above conclusion (150).

⁵⁰Such studies followed up children who were abused or neglected to see if they were involved in delinquency at a higher rate than adolescents who were not abused.

strongly related to delinquency than child abuse or neglect (279).

One review of studies on the association of child abuse and neglect to delinquency characterized by violence found a relationship between child abuse and neglect and violent behavior in studies that compared violent offenders with nonviolent offenders (150). A relationship between abuse and violent behavior is also suggested by findings that delinquents who were abused and neglected are involved in violent offenses more often than those who were not (150). Another review found contradictory findings among the studies reviewed (448).

A recent prospective study of the relationship between child abuse and neglect and delinquency has overcome many previous methodological problems (449). The findings are consistent with the previous literature in terms of the percentage of maltreated children who become delinquent and the fact that the majority of maltreated children do not become delinquent (45 1). The study found 26 percent of abused and neglected children had a juvenile record in contrast with 16.8 percent of the controls. Black children who were abused were particularly at risk for delinquency (45 1). In comparison to controls, individuals who were abused or neglected as children had more arrests as adults (29 v. 21 percent) and more arrests for any violent offense on a juvenile or adult record (11 v. 8 percent)⁵¹ (449).

Individual Factors Associated With Delinquency—In addition to examining variables in the external environment, i.e., in the neighborhood and in the family, researchers have inquired into the contribution of individual characteristics and individual behaviors to delinquency.

Early Expressions of Socially Disapproved Behavior(s)—Reviews of studies of the linkage between early expressions of socially disapproved behaviors and delinquency conclude that *repeated expressions of antisocial behaviors⁵² by children in preadolescence and early adolescence are strongly associated with delinquency-especially serious delinquent behavior and recidivism—in later ado-*

lescence (48,269,353). Studies have consistently found high rates of delinquency among adolescents who as children or young adolescents displayed behaviors described as aggression, stealing, lying, truancy, acting troublesome in school, fighting, being aggressive-disruptive, daring, dishonest, nervous, antisocial, or destructive or evidencing poor socialization.

One meta-analysis concluded that aggression and stealing in childhood were better predictors of adolescent delinquency than any other of the early antisocial behaviors (268). The time at which the antisocial behavior is measured apparently affects the strength of the relationship. A few studies have found, for example, that aggressiveness in early adolescence is more highly predictive of delinquency at a later age of adolescence and adult criminality than is aggressiveness in early childhood (269).

The association between early antisocial behaviors and delinquency has been found to hold in many places where young children can express antisocial behavior (e.g., at home, in school, and in clinics) when different outcome measures of official records of delinquency as well as self-reports are used and when different measures of the early behavior of children (self-reports, parent ratings, teacher ratings, and peer ratings) are employed (48,269,353). For that reason, the ability of antisocial behaviors to predict adolescent delinquency is somewhat generalizable. This generalizability is limited to white males, though, because only a few studies have involved white females, and even fewer have examined the early behavior of black and other populations (48,268,269,353).

Although there seems to be a general consensus among researchers that *problem behaviors in childhood are a predictor of delinquency*, there is less consensus about the relative importance of this predictor. One reviewer rates antisocial behavior in childhood just after poor family management as the best predictor of future delinquency (268). Other researchers rate antisocial behavior in childhood before family variables (344,345). Still other researchers regard antisocial behavior in childhood

⁵¹Abused and neglected children also began their official criminal activity approximately 1 year earlier than the control subjects and had approximately two times the number of offenses. The increased risk associated with childhood victimization is primarily with property crimes and status offenses, such as runaway, truancy, and ungovernability (459).

⁵²Antisocial behaviors by children and adolescents are also known as conduct problems in the criminology literature and are characteristic of the psychiatric diagnosis of conduct disorder (see box 13-A).

and family variables as being of equal importance as predictors of delinquency (19).

The efficiency of screening children with antisocial behaviors for some form of intervention is partially compromised by the large number of children who exhibit such behaviors and who do *not* become adolescent or adult offenders (48). Furthermore, the adolescent who commits only one delinquent act is quite similar in behaviors to the child who commits no delinquent act (353). On the other hand, the child who will eventually become a chronic delinquent or an adult criminal often differs in behaviors from the child who does not become a delinquent. It has been suggested by a review of the literature that two-thirds to almost all eventual chronic delinquents can be characterized in elementary school by their behaviors (269). However, this conclusion does not necessarily mean that all children who exhibit antisocial behaviors in elementary school will go on to become chronic delinquents.

Attention Deficit Hyperactivity Disorder—Attention deficit hyperactivity disorder (ADHD) is a childhood disorder that has been defined in numerous ways. The definition in the latest version of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders*, known as DSM-III-R, is presented in box 13-A. According to this definition, ADHD is characterized by "developmentally inappropriate degrees of inattention, impulsiveness, and hyperactivity" (10).

ADHD and antisocial behaviors or conduct problems are highly intercorrelated, and some researchers believe that they could be grouped into a single behavioral disorder category that would also include learning disabilities (125,331).⁵³ Other researchers believe that ADHD and conduct problems are both biological correlates of delinquency that reflect a developmental lag within the central nervous system (331). However, the factors that are strongly correlated with ADHD differ from the factors that are strongly correlated with conduct problems. A num-

ber of studies have found that ADHD is linked to poor cognitive and academic functioning, while early aggressiveness is linked to poor parenting factors and low socioeconomic status (125). The problem has a very early age of onset—from 2.9 to 5 years of age (125,331).

Cross-sectional and prospective longitudinal studies have found that children with ADHD have relatively high rates of delinquent behavior and of criminal behavior in later life (125,331). For example, a matched control study that followed males from 9 years of age until they were 18 years of age found that 20 percent of the ADHD males were arrested during that period in comparison with 8 percent of the controls (125).

The correlation between ADHD and delinquency was corroborated in a rigorous controlled study that collected information through parental interviews, teacher and peer ratings, and biological measures of psychomotor impulsivity to assess ADHD problems in males of 8 and 10 years of age (125). All the measures of ADHD significantly predicted juvenile convictions between the ages of 10 and 16 independent of measures of conduct problems and also with additive effects. ADHD was particularly predictive of early convictions; conduct problems were more predictive of self-reported delinquency, adult convictions, and recidivism. Both ADHD and conduct problems were significantly predictive of chronic offenders.

Learning Disabilities—Adolescents with learning disabilities⁵⁴ have higher rates of officially recorded⁵⁵ delinquency than adolescents without learning disabilities (50,255,331); they also have higher rates of recidivism and parole failure (50,255) and commit more serious offenses at rearrest (50) than those without learning disabilities. Although prevalence rates for delinquent acts vary widely, *individuals with learning disabilities compose a disproportionate segment of the delinquent population*, even when factors of age, race, and socioeconomic status are held constant (50,255). The esti-

⁵³Learning disabilities, which have not been well defined, are discussed in the next section below.

⁵⁴*Learning disabilities* have not been well defined, and diagnostic criteria are not precise. The National Conference on Learning Disabilities agreed that learning disabilities "is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities, or of social skills" (234). These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction (234). Although some experts consider learning disability a biological factor connected with delinquency, others think the biological link needs much more investigation before reaching this conclusion (331).

⁵⁵Although children with learning disabilities violate the law at the same rate as other children, they are overrepresented in official arrest and juvenile court statistics (381); many believe that such children receive differential treatment by the judicial system (50).

mated prevalence rate of learning disabilities in the delinquent population ranges from less than 12 percent to more than 70 percent in different studies. The wide range of estimates is due to the variety of definitions of learning disabled and to different methods of assessing the condition (50).

Many explanations for the linkage between learning disabilities and delinquency have been proposed, but no explanation has been firmly established. It is likely that a learning disability by itself is not sufficient to foster delinquent behavior but that a learning disability in complex interaction with multiple factors increases the risk of such behavior (50,255). One hypothesis is that individuals with learning disabilities have difficulties with language, social perception, and social relationships-attributes that place them at higher risk of delinquent behavior, particularly when associated with other factors associated with offending, such as low IQ, parental criminality, and poor parenting practices (50).

*LAW IQ and Poor School Performance*⁵⁶—Reviews of numerous studies conclude that low intelligence level as indicated by IQ⁵⁷ (48,326) and poor school achievement (48,240,268) are associated with and predictive of delinquent activity when measured by self-reports and official records, regardless of race or social class (353).⁵⁸

Delinquents generally have mean IQs of about 92—8 points lower than the mean IQ of the general population (326). Delinquents' lower IQ is attributed specifically to poor verbal abilities: about two-thirds of delinquents are lacking in verbal skills as measured by standardized tests (326). Low verbal skills may deter a child from academic achievement, thereby contributing to delinquency (326). Or the lack of verbal skills may be more complex and underlie such "personality-cognitive" functions as interpersonal problem-solving and moral reasoning, which can contribute to delinquent behavior (326).

Poor educational achievement is moderately associated with delinquency regardless of race or social

class (48,240,268).⁵⁹ One review found that by the end of elementary school, low achievement, poor vocabulary, and poor verbal reasoning are the best predictors of future adolescent delinquency (268). During the high school years, this review found, low grade point average and not being promoted are the best predictors of future adolescent delinquency and adult criminality (268).

School failure in high school and dropping out of school overlap logically. The literature shows that dropouts are more delinquent than nondropouts when in school, but delinquency among dropouts declines after they leave school. Most researchers agree that the offense rates of dropouts and high school graduates converge by the midtwenties at the latest (18 1).

Association With Delinquent Peers—Empirical evidence showing that association with delinquent peers by young adolescents is positively related to delinquent behavior when the adolescents become older and to criminal activity when they reach adulthood is consistent (48,109,125,240,315).⁶⁰ Indeed, involvement with a delinquent peer group by young adolescents emerged as the strongest predictor of delinquency among older adolescents in several studies (106,268,313).

Studies have also shown that involvement with a delinquent peer group serves to maintain delinquent status (48,125,315). In fact, a high percentage of delinquent behavior is carried out with peers (1 11). Researchers disagree, however, about whether exposure to delinquent behavior promotes delinquent behavior, or whether delinquent behavior leads to the choice of delinquent friends (240).

A recent analysis of the onset of delinquent behavior sheds some further light on the debate. The study concluded that for adolescents ages 11 to 17, "exposure to delinquent friends preceded minor delinquent behavior in a majority of the cases and

⁵⁶For a general discussion of schools and school performance, see ch. 4, "Schools and Discretionary Time," in this volume.

⁵⁷Intelligence is a controversial construct; most studies use "intelligence quotients" (IQs) as measured by standardized tests as an indicator of intelligence.

⁵⁸Although intelligence and school achievement are not the same, several studies have found that they are strongly associated (268). Poor school performance sometimes results from problems such as ADHD or learning disabilities that are not related to intelligence.

⁵⁹None of the studies in these two reviews overlapped.

⁶⁰For example, one longitudinal study found that 59 percent of males who were involved with delinquent peers at age 14 had a conviction record at age 25 in contrast to 25 percent of other males who did not have delinquent associates (19).

preceded serious delinquency in nearly all cases” (109).⁶¹

Biological Factors—Many biological factors—genetic, biochemical/hormonal, physiologic, and neurophysiologic—have been investigated for their association with delinquent behavior (331).⁶² The genetic contribution to delinquency has been examined by studying twins (126,293). Studies of twins are conducted on the premise that identical twins are more similar in heredity than fraternal twins. If identical twins are more similar in their delinquent history than fraternal twins, some genetic influence on delinquent behavior is assumed. The effect of environment on delinquent behavior, however, cannot be discounted in studies of twins who have not been reared apart because identical twins typically are raised more similarly and evoke similar responses from the social environment than fraternal twins (293). Although the weight of the evidence from studies of twins is strongly suggestive, it is not conclusive; studies to date have not been able to sort out the effects of heredity from the effects of environment.

The linkage of genetic factors to delinquency has also been examined by studying twins and other children who have been adopted outside of their biological family. Adoption studies have found that there is a positive relationship between antisocial behavior in adoptees and antisocial behavior in biological parents, but the studies vary tremendously in definitions of antisocial behavior and have various methodological problems (293).

Reviewers of the literature on twins and violence and adoptees and violence have come to different conclusions about the linkage of heredity and violence. Heredity has been characterized as having some role in violent delinquent behavior (331), as having no relationship with violent offending among adult men (395), and as possibly contributing to aggression in adolescence and early adult life (53).

The association of another genetic factor—variability in the number and length of the male sex

chromosome—with violent behavior among adolescents requires further investigation (331,395).

Some studies have examined biochemical/hormonal linkages with delinquency, but the results are inconclusive. Some studies indicate that low serum cholesterol has some association with violent behavior in children with attention deficit disorders (331). There are conflicting results among studies of testosterone levels and adolescent violent behavior (331,381,395). Evidence linking progesterone with violent behavior during the adolescent period is indirect (331) and based on studies of flawed design (395).

Current research in many aspects of neuroscience now concentrates on neurotransmitters (substances that are released by nerve cells to carry nerve impulses to adjoining cells). Some of the several substances that have been found to be neurotransmitters are associated with inhibitory effects on brain function and others are associated with excitatory effects upon brain function. Studies suggest that either inhibitory neurotransmitters, particularly serotonin, or excitatory agents, or both, may be involved in the genesis of aggressive behavior patterns. The balance of inhibitory and excitatory neurotransmitter activity may dictate the likelihood of violent behavior under certain circumstances, and this mechanism may be the final common pathway by which other variables, such as cholesterol or testosterone levels or the presence of violence-inducing illicit substances, achieve their effects (331,395). Research has been conducted on the association of many other biological factors and delinquent behavior (329), but the results are inconclusive. Thus, no single biological variable can be specifically linked with delinquency (53), although evidence about the association of biological factors and adolescent delinquency is suggestive (53,93,329). A sufficient body of evidence has not yet developed, and it is particularly difficult to use scientific sampling, control group comparisons, and other validity checks when conducting research on the linkage of biological factors and delinquency.

⁶¹ Elliott has also noted that the influence of early parent training and school bonding is channeled through the type of friends chosen during early adolescence. Adolescents who are isolated from family and conventional society are more likely to turn to peer groups who often are groups who are tolerant of and even encourage delinquent behavior (i.e., gangs) (97).

⁶²One of the methodological problems in conducting research on delinquency is that the populations in much of the research on the association of violence and biological factors are samples of adjudicated offenders who have been placed in clinical treatment settings. Thus, the findings of such research are hard to generalize. They may apply only to such delinquents rather than to delinquents as a whole. Or the studies may measure the association of biological traits with arrest or conviction rather than the association between biological factors and violence.

*Alcohol or Illicit Drug Use Immediately Before Offending*⁶³—Available evidence indicates that many delinquent acts appear to be committed while, or immediately after, the perpetrator has been drinking *beverage alcohol* (without the concomitant use of any other drug). Different sources vary somewhat in their findings regarding the strength of the association between the consumption of beverage alcohol and the commission of delinquent acts.

In 1987, the Bureau of Justice Statistics within the U.S. Department of Justice conducted a self-report interview survey of 11- to 25-year-old offenders in long-term, State-operated juvenile institutions (415). This survey found that nearly 9 percent of the institutionalized offenders under age 18 reported having committed the offense for which they were institutionalized while under the influence of alcohol (415). In 1979, Elliott and researchers conducting the National Youth Survey of 14- to 20-year-olds in the general population had somewhat different findings (105). They found that alcohol alone was used immediately prior to 24 percent of aggravated assaults (including gang fights), and it was used to a lesser extent in the commission of motor vehicle thefts, larcenies, and robberies (105). Differences between these two surveys' findings may be accounted for by a number of factors: the 8-year difference in survey administration, different populations sampled, and differences in survey techniques,

Various hypotheses have been proposed to explain the association between the intake of alcohol and the subsequent commission of delinquent acts, but no one hypothesis has been confirmed. One hypothesis is that alcohol may reduce inhibitions and provoke the expression of delinquent behavior (77). Another hypothesis is that alcohol may reduce anxiety or build up the requisite courage to commit a planned offense (105).

In some cases, alcohol use before an offense may reflect typical alcohol use for the individual committing the offense. The 1987 survey of institutionalized offenders by the Bureau of Justice Statistics found that about three-fourths (76 percent) of the institutionalized offenders under age 18 had drunk alcohol at least once in the year prior to their current offense and that more than half (55.5 percent) of them had

drunk alcohol one or more times a week before admission to the facility (415).

Sources of information on the association between the use of *illicit drugs* alone and the commission of delinquent acts disagree as to the importance of the association. The Bureau of Justice Statistics' 1987 survey of 11- to 25-year-old offenders in long-term, State-operated juvenile institutions found that 15.7 percent of the offenders under age 18 reported having committed the offense for which they were institutionalized while they were under the influence of illicit drugs alone (415). On the other hand, the 1979 National Youth Survey of 14- to 20-year-olds in the general population found that robbery was the only offense which was immediately preceded by drug use alone in more than 10 percent of the incidents (105). Elliott and his colleagues who conducted the National Youth Survey are careful to point out that alcohol or drug use is not necessarily the cause of any delinquent behavior.

According to the Bureau of Justice Statistics' 1987 survey of institutionalized 11- to 25-year-old offenders, it appears that more offenders are affected by using *a combination of alcohol and drugs* before they commit an offense than by *only drinking alcohol* or taking drugs (415). This survey found that more than 23 percent of institutionalized offenders under age 18 used both illicit drugs and alcohol immediately before they committed the offense for which they were institutionalized (415).⁶⁴

In Summary, the Bureau of Justice Statistics' 1987 survey and the 1979 National Youth Survey agree that the *use of alcohol or illegal drugs is associated with a substantial percentage of serious delinquent acts*. However, neither alcohol nor illegal drugs alone or in combination is involved in most delinquent acts, nor do adolescents use these substances only when committing offenses.

Possession of a Gun--Guns are often used while committing delinquent acts in the United States, particularly those that result in death. To OTA's knowledge, however, no research has been conducted to determine whether, and if so, to what extent, the presence of a gun increases the probab-

⁶³For a discussion of alcohol and drug use by adolescents, see ch.12, "Alcohol, Tobacco, and Drug Abuse: Prevention and Services," in this volume.

⁶⁴As just noted, the percentage of institutionalized offenders who used both illegal drugs and alcohol immediately before they committed the offense for which they were incarcerated was higher than the percentage of those who used alcohol only (8.5 percent) or illegal drugs only (15.7 percent) (415).

Table 13-8—Use of a Weapon by Institutionalized Offenders Under Age 18 Who Were Sentenced for a Violent Offense, 1987^a

	Offenders sentenced for:					
	All violent offenses	Homicide ^b	Sexual assault ^c	Robbery	Assault	Other violent offenses
Used a weapon	40,994.	77.8%	5.3%	44.0%	43.9%	28.1%
Gun	19.7	56.9	1.5	23.7	15.4	13.0
Knife	10.1	17.8	2.6	11.2	9.9	9.5
Other ^d	11.1	3.1	1.2	9.1	18.6	5.6
Did not use a weapon	59,227 ^e	22.3%	94.7%	56.0%	56.1%	71.9%
Number of offenders	8,194	563	955	3,204	2,985	488

^aSurvey respondents were residents of long-term, State-operated juvenile facilities. Detail may not total 100 percent because of rounding.

^bHomicide includes murder and all forms of manslaughter.

^cSexual assault includes rape and other sexual assaults.

^dThis category includes weapons such as axes, ice picks, scissors, clubs, baseball bats, ropes, vehicles, and objects used for strangulation or suffocation.

SOURCE: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, unpublished data from the "Survey of Youth in Custody, 1987," prepared by A.J. Beck, S.A. Kline, and L.A. Greenfeld, Washington, DC, 1990. -

ity that a delinquent act will occur. It is clear, however, that the use of a gun worsens the outcome of a violent act that would have occurred anyway.

The Bureau of Justice Statistics' 1987 survey of 11- to 25-year-old offenders in long-term, State-operated juvenile institutions found that about 41 percent of the offenders under age 18 who were sentenced for a violent crime used a weapon in the commission of that crime (see table 13-8). The vast majority (77.8 percent) of institutionalized offenders under age 18 who were sentenced for homicide (murder or manslaughter) used a weapon, and more than half (56.9 percent) used a gun (415).

Federal law prohibits the sale of handguns and handgun ammunition to individuals under the age of 21 and the sale of rifles, shotguns, and ammunition for them to individuals under the age of 18 (Title 18 of the U.S. Code section 922, subsection 1). State laws also limit the ownership, purchase, and possession of firearms by minors. As noted elsewhere in this Report, 40 percent of 8th and 10th graders responding to the 1987 National Adolescent Student Health Survey reported having used a gun sometime during the year prior to the survey; 35 percent of the

respondents who had used a gun in the last year had used a gun more than 10 times (12).⁶⁵ Almost 40 percent of 10th graders (and almost half of male 10th graders) said that they could get access to a handgun, and 1.6 percent reported carrying a handgun to school during the year before the survey.⁶⁶

Nationwide, the number of adolescents identified as murder offenders and the use of guns by adolescent murder offenders have been increasing (see table 13-9). In 1976, 1,859 10- to 18-year-olds in the United States were identified as murder offenders; 993 (53 percent) of them used guns and 866 (47 percent) used other weapons (41 1). In 1988, 1,926 10- to 18-year-olds were identified as murder offenders; 1,136 (59 percent) of them used guns and 790 (41 percent) used other weapons. Thus, from 1976 to 1988, the number of 10- to 18-year-olds identified as murder offenders increased by about 4 percent, and the number of murders where guns were used by 10- to 18-year-olds increased by 14 percent, although the size of the adolescent population decreased (41 1).

The number of adolescents who were murder victims and the number whose murder resulted from

⁶⁵See ch. 5, "Accidental Injuries: Prevention and Services," in this volume. The question did not distinguish between possible legal and illegal use of guns; rather the question was stated broadly ("During the past year, about how many times did you use a handgun, rifle, or shotgun for any reason [including hunting or target shooting]?") (12). Results were reported in the category of "exercise safety and high-risk sports," although the questionnaire included the question about guns in a more general list of questions about high-risk behaviors (including questions about taking medicine prescribed for someone else; driving or riding on a go-cart, snowmobile, or all-terrain vehicle; using alcohol or drugs while swimming or boating). Responses listed as pertaining to "access to weapons" were limited to carrying various types of weapons to school and the perceived availability of handguns.

⁶⁶Fifteen percent reported carrying a knife to school, and 8 percent reported carrying another weapon (12).

Table 13-9—Use of Guns and Other Weapons by Adolescent Murder Offenders, 1976 and 1988

Offender's age	Adolescent murder offenders, 1976			Adolescent murder offenders, 1988		
	Total	Used a gun	Used another weapon	Total	Used a gun	Used another weapon
10.....	4	1	3	1	1	0
11.....	15	9	6	7	3	4
12.....	12	6	6	14	8	6
13.....	39	22	17	41	21	20
14.....	95	38	57	98	63	35
15.....	215	125	90	221	137	84
16.....	385	207	178	373	244	129
17.....	527	289	238	571	377	194
18.....	567	296	271	600	282	318
Total.....	1,859	993	866	1,926	1,136	790

SOURCE: U.S. Department of Justice, Federal Bureau of Investigation, unpublished 1976 and 1988 data from the Uniform Crime Reports, Washington, DC, December 1989.

Table 13-10—Use of Guns and Other Weapons To Kill Adolescent Murder Victims Ages 10 to 18, 1976 and 1988

Victim's age	Adolescent murder victims, 1976			Adolescent murder victims, 1988		
	Total	Killed by a gun	Killed by another weapon	Total	Killed by a gun	Killed by another weapon
10.....	29	14	15	27	17	10
11.....	18	7	11	32	12	20
12.....	54	27	27	38	20	18
13.....	47	30	17	51	29	22
14.....	65	40	25	78	59	19
15.....	101	55	46	194	102	92
16.....	204	150	54	237	192	45
17.....	296	212	84	340	276	64
18.....	324	222	102	435	330	105
Total.....	1,138	757	381	1,432	1,037	395

SOURCE: U.S. Department of Justice, Federal Bureau of Investigation, unpublished 1976 and 1988 data from the Uniform Crime Reports, Washington, DC, December 1989.

the use of guns also increased from 1976 to 1988 (411).⁶⁷ As shown in table 13-10, in 1976, there were 1,138 victims of murder from 10 to 18 years of age; 757 (67 percent) of them died from the use of a gun, and 381 (33 percent) of them died from the use of other weapons. In 1988, there were 1,432 victims of murder from 10 to 18 years of age; 1,037 (72 percent) of them died from the use of a gun, and 395 (28 percent) of them died from the use of another weapon.

The lethality of guns for adolescents in the United States is confined by mortality data from the National Center for Health Statistics within the U.S. Department of Health and Human Services. These data indicate that in 1987, 65 percent of the homicide deaths among U.S. adolescents 10 to 14 years of age involved the use of a gun, and 71 percent of the homicides among U.S. adolescents ages 15 to 19 involved the use of a gun (404). Furthermore, 80 percent of the homicide deaths among black males

⁶⁷As noted above, Uniform Crime Reports data are based on crime reports and may not reflect the universe of homicides or other crimes. In addition, there are other differences between available Uniform Crime Reports and available vital statistics data. For example, 1988 vital statistics data were not available at the time this Report was being prepared; readily available vital statistics data are for 10- to 19-year-olds rather than 10- to 18-year-olds; and vital statistics data include homicide by legal intervention. However, Uniform Crime Reports numbers are similar to (though, as would be expected, lower than) vital statistics data. National Centers for Health Statistics' mortality data indicated that in 1987, there were 2,104 homicide deaths among 10- to 19-year-olds (404), compared with 1,432 murders reported to the Uniform Crime Reports in 1988. Vital statistics data for 1987 included 16 homicides as a result of legal intervention.

ages 15 to 19 were associated with guns (404).⁶⁸ The United States has a much higher number of gun-related homicides among adolescents than do other industrialized countries. Among males ages 15 to 19, in 1986, there were 1,043 gun-related homicides (out of a total of 1,432; thus, 73 percent⁶⁹) in the United States; there were 6 (29 percent) gun-related homicides out of a total of 21 in Canada, and there were 2 (10 percent) gun-related homicides out of a total of 21 in Japan (140a).

The Importance of Interactions Between Age and Factors Related to Delinquency

The interaction of specific factors and delinquency depends on the developmental status of the child or adolescent (268). Preliminary research indicates that the best predictors of delinquency when a child is 6 years of age are family characteristics and that the best predictors from 9 years onward are early childhood antisocial behaviors (268). At age 10, parent criminality appears to be the best predictor of delinquency, and at age 15, grade point average becomes the best predictor (268).

Interactions between age and a number of factors related to delinquency influence not only whether delinquency occurs but also what course delinquency takes if it occurs (353). Children who exhibit problem behaviors at an early age⁷⁰ tend to be the most delinquent and aggressive at later ages—particularly children who were delinquent when unusually young and who had a broad spectrum of interpersonal and social difficulties (e.g., lack of parental supervision, low intelligence, and low socioeconomic status (353).

Interactions Among Factors Associated With Delinquency

Although the exact mechanism of interaction is not understood in most cases, the interaction among factors with respect to delinquent behavior appears to be profound. A few of the many examples of factors that are thought to interact are described below.

- Certain family variables that have a direct effect on family-child relations+. g., parental rejection, the absence of parental supervision, the lack of parental involvement, poor parental disciplinary practices-appear to be fairly strongly and directly associated with delinquent behavior.⁷¹ Other family variables-poor marital relations as expressed by family discord, family disruption, and family size-appear to be less strongly associated with adolescent delinquency and may act indirectly by interfering with the ability of parents to appropriately supervise, or be involved with, their children or adolescents (269). Homes where parents provide only weak control over their children's behavior seem to facilitate adolescents' adhering to a delinquent peer group (106,320).
- A child who has ADHD and is impulsive and hyperactive may be difficult to handle. Parents who might be capable of supervising a child of normal temperament may not have the ability to be good parents for an impulsive or hyperactive child. Low socioeconomic status, poor parental health, social isolation, marital discord, and large family size are other factors that could further aggravate the situation (269).
- Child maltreatment and delinquent behaviors may be causal in both directions and maybe the result of a common etiology in nonfunctional families and among cultural practices that legitimize family violence (150).
- Neighborhood factors (e.g, high neighborhood delinquency rates) seem to be indirectly associated with delinquency and to operate in conjunction with family factors and peer factors (353,383).

Factors Associated With Continued Official Delinquent Activity

The previous discussion for the most part has focused on factors that are correlated with or predictive of an adolescent's decision to engage in delinquent behavior. Many factors have also been

⁶⁸As noted in ch.18, 'Issues in the Delivery of Services to Selected Populations,' in Vol. III, homicides are the leading cause of death among black males ages 15 to 19 in the United States. Firearms have been responsible for 75 to 80 percent of all black male adolescent homicides since 1968. Between 1984 and 1987 the firearm-related homicide rate increased 66 percent from 29.6 to 49.2, which accounts for 95 percent of the increase in the total homicide rate for the 1984-87 period among black males 15 to 19 years of age (40).

⁶⁹Note that these data are from the U.S. vital statistics system, and not from the Uniform Crime Reports.

⁷⁰Studies have examined the onset of problem behaviors in children as young as 5 to 10 years and older. The interval between onset of problem behaviors and later delinquency varies among the studies.

⁷¹For a discussion of the general effect of different parenting styles, see ch. 3, 'Parents and Families' Influence on Adolescent Health,' in this volume.

identified that are predictive of *continued* officially recorded delinquent activity, some of which are also associated with initial involvement in delinquent behavior.

Factors that are predictive of continued official delinquent activity include the age of first court contact, inconsistent discipline in the home, expulsion or suspensions in school, diagnosis of need for special education services, referral to protective services for abuse and neglect, parental substance abuse and criminality, sibling criminality, being behind grade level in school, and alcohol or drug use (170,439).

In addition, there are system factors such as prior probation, prior out-of-home placement for abuse and neglect, prior efforts to run away from home or out-of-home placement, number of court adjudications or referrals, and number of felony adjudications or referrals. All of these factors are highly correlated with one another, and usually a set of 8 or 12 of these variables is predictive of continued official delinquent activity (170,439).

Summary: Factors Associated With Delinquency

Understanding what factors put adolescents at risk for delinquent behavior and the strength of the relationship between such factors and delinquency would be useful in the development of interventions to prevent delinquency or to treat young offenders. Various demographic factors have been identified as risk factors for delinquency, but definitive knowledge about the strength of their linkage with delinquency is lacking. It is clear that delinquency rates generally increase with the age of the adolescent, peaking from 15 to 17 years of age and then declining for most offenses. It is also known that for most offenses, urban areas experience higher delinquency rates than suburban and rural areas.

Male adolescents are more involved in almost all categories of offenses than female adolescents, and black adolescents are more involved in almost all categories of offenses than white adolescents, but the gender/delinquency and race/delinquency relationships appear stronger if one looks at arrest records than if one looks at victim survey data and self-report data. Furthermore, gender differences in arrest rates appear to be narrowing, with arrest rates for adolescent females changing at a greater rate than arrest rates for adolescent males. The strength of the race/delinquency relationship as measured by arrest

rates can be questioned, because 1) low income and living in urban areas are associated with delinquency and 2) low income and living in urban areas are more typical of black adolescents than other adolescents.

The strength of the linkage between most non-demographic factors and adolescent delinquency is similarly open to interpretation. The strength of the linkage between the factors listed in table 13-7 and delinquent behavior varies not only among the factors and age of the individual but also among studies. The statistical associations of delinquency and some factors—family factors (e.g., parental rejection, lack of parental supervision, lack of parental involvement, familial criminal behavior, and poor disciplinary practices), early socially disapproved behaviors, low IQ (particularly poor verbal ability), and associating with delinquent peers during the adolescent period—is significant and well-established in a relative sense. Other factors that also seem to be associated with adolescent delinquency include child abuse and neglect, learning disabilities and problems such as ADHD, poor school performance, and drug or alcohol use.

Some neighborhood and community factors are associated with delinquent behavior only if other factors are present and, even then, may have a low association with delinquency. The role of guns in delinquency is unclear, although the use of guns by adolescents who commit homicide and their use against adolescent homicide victims has been increasing. Alcohol and drug use seem to precipitate the commission of delinquent acts, but early delinquent behavior also precedes initiation of alcohol and drug use.

In the design of prevention and treatment strategies, it is extremely important to recognize that *few, if any, risk factors for delinquency act independently. Many of the risk factors for adolescent delinquency are interrelated in ways that are still not well understood.* It is clear that no one factor by itself is correlated with or predicts delinquency very well, but rather for most adolescents, delinquency is the result of the interaction of multiple risk factors (including individual, familial, social, and situational factors), each of which incrementally increases the risk of delinquent behavior. The importance of each factor also depends on the age of the individual.

An extremely critical question is why not all of the adolescents who have been exposed to any one risk

Box 13-B—Factors That Protect Adolescents Exposed to Risk Factors for Delinquency

A striking finding of studies of risk factors associated with offending is that many adolescents who are exposed to risk factors do *not* become delinquent. A longitudinal study in England by West and Barrington found that at least half of the high-risk adolescents in the study who did not become delinquent were at the age of 22 “socially impaired” in other ways—for example, they were social isolates, unemployed, abnormally nervous, withdrawn, and unhappy (443,445).² A few young men in this study, however, were living productive lives and were socially adjusted (443,445). The authors posited that some of the differences in individual reactions were due to differences in the seriousness or chronicity of the environmental risk factors and some to the differences in individual temperaments.

Other studies have found that a positive temperament, including positive mood and a tendency to evoke positive responses from others, high IQ, positive school and work experiences, high self-esteem, some degree of structure in the environment, and one good relationship with a parent or other adult reduce the risk of delinquency and are related to positive (nondelinquent) outcomes in children exposed to risk factors associated with offending (295,353). Additional factors identified as having protective value include advanced self-help skills, more internal locus of control, higher self-esteem, and an informal network of family and friends who are available for support in times of crisis (295). Overall, a picture emerges of the resilient child as having an easy temperament and a higher IQ, being more autonomous, having a good relationship with at least one adult, and being more successful and involved in school.³

¹High risk was defined as having a parent or sibling who had a criminal record and exposure to two other risk factors, including a family on social welfare and permanent separation from one or both parents by the age of 15 (443).

²This finding led Rutter and Giller to suggest that for many recidivists, delinquency maybe one aspect of a head range of personal problems (353).

³For further discussion of resilient children, see in ch. 18, “Issues in the Delivery of services to Selected Groups of Adolescents,” in Vol. m.

factor become offenders. What protects them from becoming delinquent? As noted in box 13-B, some evidence suggests that having a good relationship with at least one adult and having a supportive school environment are among the factors that contribute to “resiliency” among children exposed to risk factors. Further research on this topic could provide informed directions for interventions.

Consequences of Adolescent Delinquency

Any attempt to evaluate the consequences of adolescent delinquency on adolescent offenders, on victims, and on society is problematic because the dimensions of the problem of adolescent delinquency have not been established. As noted earlier, the volume and distribution of delinquent acts and

the number and characteristics of adolescents involved in delinquency in any one year are not definitively known. Furthermore, data sources and studies that directly address the issue of the consequences of adolescent delinquency—e. g., exact national mortality and morbidity attributable to delinquent acts by adolescents—are not available.⁷²

Clearly, though, society and individuals bear many costs as the result of adolescent delinquency, some of which may not be measurable. In addition to the economic and physical harm that delinquency causes individuals of all ages,⁷³ there are unmeasured, and perhaps immeasurable, costs due to adolescent delinquency, particularly violent delinquent acts. These include the cost associated with the pain, suffering, the reduced quality of life of

⁷²A recent analysis of the cost of injury provides some evidence on effects of homicide and other intentional injuries (340). That analysis notes that 19,830 deaths in the United States in 1985 were the result of homicides and that about 130,869 persons were hospitalized as the result of injuries intentionally inflicted by others. (The data to categorize intentional injuries other than those requiring hospitalization are not available.) The authors do not specify ages of those who committed the homicides and inflicted injuries serious enough to require hospitalization, or the ages of their victims.

Valid information on injuries sustained as a result of crime is also presented in a report on all physical injuries resulting from a rape, robbery, or assault and reported to the National Crime Survey (420). That report does not add to information on personal consequences of adolescent delinquency, since the age of the offender is not provided.

⁷³The extent to which adolescents are victims of crime and delinquency is discussed below in the section entitled “Adolescents as Victims of Crime and Delinquency.”

victims and their families, and the fear of violence experienced by members of society that restrains them from pursuing their normal activities of living. Violent delinquent acts also result in a high death toll, high costs for the hospital and other care of injured persons, and the prevalence of long-term disabling conditions. The trauma centers of many hospitals, particularly in large metropolitan areas, are facing financial crises, in part, because of shootings and stabbings of individuals, many of whom are adolescents and most of whom are reported to have no insurance coverage (437).⁷⁴

At present, there is no solid foundation upon which to base estimates of the costs of offending in adolescence. The most critical deficiency is the lack of data on the costs of offending disaggregated by age+. g., Are burglaries committed by adolescents as costly as those committed by adults? Do aggravated assaults committed by adolescents result in more serious health impairments than those committed by adults?—and the lack of self-report data that would allow researchers to ascertain what proportion of offenses are committed by adolescents as opposed to adults. Arrest rates might provide some basis for making such estimates, but we do not know whether the likelihood of arrest varies by age+. g., Are adolescent burglars more or less likely to get caught than adult burglars?

Only partial data are available for use in estimating the costs of offending by offenders of all ages. The Federal Bureau of Investigation in the U.S. Department of Justice provides estimates of economic losses due to robberies, burglaries, larceny/theft, motor vehicle theft, and arson in its annual Uniform Crime Reports (409). Estimates of the economic costs and the time lost from work due to robbery, rape, assault, and theft are also available from the National Crime Survey conducted by the Bureau of Justice Statistics in the U.S. Department of Justice (414). The National Crime Survey also provides estimates for medical expenses due to robbery and assault. Many costs are not in the Uniform Crime Reports or National Crime Survey

estimates, however, including the costs associated with most minor offenses, the cost of premature death, the costs of private security devices and services, losses from tax revenues for illegal activities, and the cost of the criminal justice system.

Estimates of the cost of offending are highly variable. For 1980, Siegel reported Federal Bureau of Investigation estimates that the cost of organized crime was \$130 billion and the cost of white collar crime \$100 billion (38 1). Conklin reported estimates from various sources that would suggest that the Federal Bureau of Investigation figures reported by Siegel should be 50-percent lower than they were (77). The Bureau of Justice Statistics presented estimates of the total receipts of criminal activity, ranging from \$27 billion (less than the estimates reported by Conklin for white collar crime alone) to \$137 billion (a little higher than the Federal Bureau of Investigation estimate for organized crime reported by Siegel) (415). Even allowing for the fact that the “costs” of crime may be much greater than the “receipts” generated, the latter range of estimates for receipts of criminal activity, a range of \$110 billion, is terribly large. Even if age-specific data were available, it would seem best—given these variations in estimates of the costs of crime (or the gains from crime)—to avoid using them as a basis for estimating the costs of offending in adolescence.

Annual operating expenditures on juvenile confinement in public and private juvenile facilities alone exceeds \$2 billion per year (418). State spending on juvenile services varies greatly: Southern States spend the least per incarcerated adolescent and Northeastern States the most (414).

Some juvenile corrections agencies receive partial financial assistance through Federal and State educational, vocational, and welfare funding.⁷⁵ A recent California legislative analysis reported, for example, that over \$150 million annually in Aid to Families With Dependent Children funds is spent on group homes and foster placements for juvenile court clients (246).

⁷⁴& noted in chs. 5 and 6 in this volume, hospital discharge data are not coded by cause of injury, and emergency department and facility data are not available on a systematic basis; thus, it would be difficult to determine systematically the amount of care for intentional injuries afforded to adolescents without health insurance coverage. Demographic data that adolescent victims and perpetrators of violent crime are also those less likely to be insured (see chs. 16 and 18 in Vol. III) suggest that anecdotal evidence from hospital emergency departments, such as that reported by the *Washington Post*, is accurate (437).

⁷⁵See ch. 19, “The Role of Federal Agencies in Adolescent Health,” in Vol. III for a discussion of various Federal programs related to adolescent health.

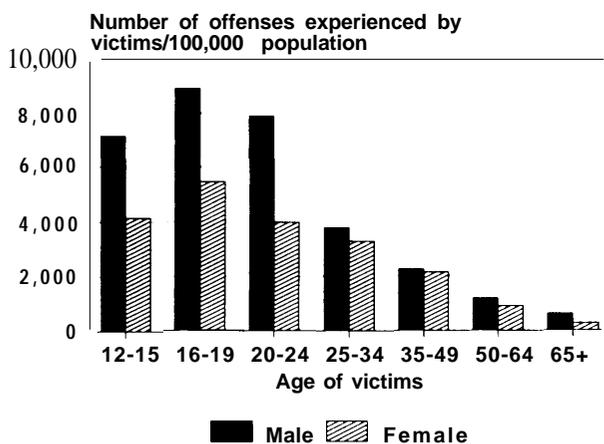
Adolescents as Victims of Crime and Delinquency

In 1988, as shown in figure 13-6, adolescents and young adults ages 12 through 24 experienced the highest victimization rates of all age groups for the violent offenses of robbery, rape, and assault committed by persons of all ages. Indeed, adolescents ages 16 to 19 have the highest rate of being victims of violence (423). Young males are far more often the victims of violent acts than females in the same age groups (423).

As shown in figure 13-7, adolescent and young adults ages 12 through 24 also experience the highest victimization rates of all age groups for theft in 1988. Whereas the victims of violence were most often young males, the victims of theft were often just as likely, if not more likely, to be young females.

Young blacks are overrepresented among the victims of most offenses committed by people of all ages. Blacks of all ages are also more likely to be the victims of all violent crimes, particularly homicide, than are whites or members of other minority groups (415). Mortality data indicate that black male adolescents ages 10 to 19 are more likely to die from homicide than are white males in the same age group (404). In 1985, 689 black males from 10 to 19 years of age died from homicide, as compared with 657 white males in this age group. The higher number of

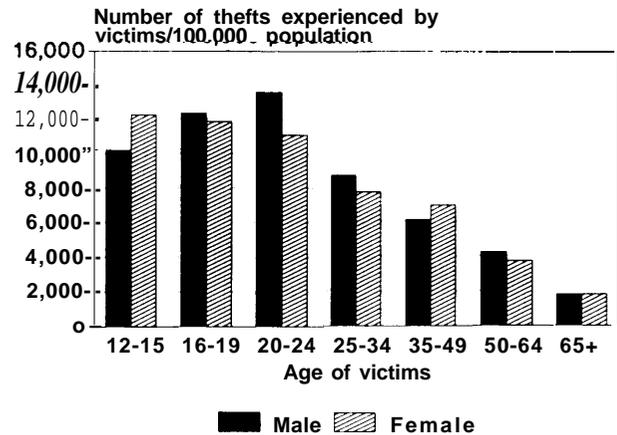
Figure 13-6—Victimization Rates* for Rape, Robbery, and Assault by Age and Sex, 1988



*The victimization rate is the number of offenses experienced by a given population per some population base during a given time period.

SOURCE: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, *Criminal Victimization in the United States, 1988* (Washington, DC: forthcoming).

Figure 13-7—Victimization Rates* for Theft by Age and Sex, 1988



*The victimization rate is the number of offenses experienced by a given population per some population base during a given time period.

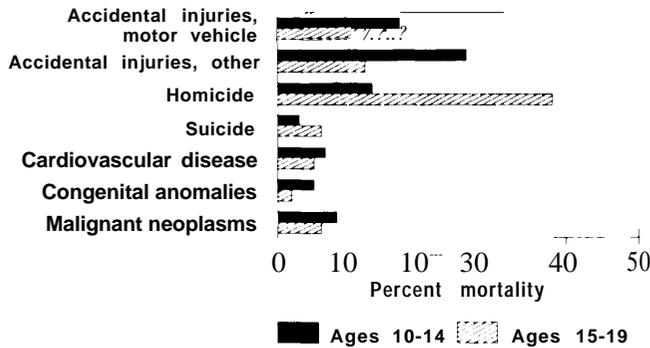
SOURCE: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, *Criminal Victimization in the United States, 1988* (Washington, DC: forthcoming).

deaths among blacks is startling in light of the fact that there were almost 5.5 times as many white males as black males ages 10 to 19 in 1985 (402). The leading cause of death among black adolescents ages 15 to 19 in 1987 was homicide, while the leading cause of death among white adolescents ages 15 to 19 in 1987 was motor vehicle injuries (see figure 13-8 and figure 13-9). Although homicide is not the leading cause of mortality for either white or black 10- to 14-year-olds, black 10- to 14-year-olds are still disproportionately affected by homicide.

Young blacks from 12 to 19 years of age are also considerably more likely to be victims of robbery, rape, and assault committed by people of all ages than are young whites ages 12 to 19 (see figure 13-10). In the case of theft, the pattern is somewhat different. Black adolescents ages 12 to 15 are somewhat more likely to be victims of theft than white adolescents of those ages, but blacks ages 16 to 19 are much less likely to be victims of theft than white adolescents of those ages (see figure 13-11).

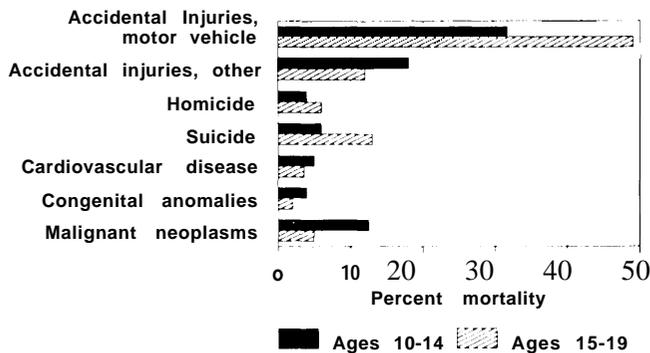
As in the case of delinquency, it is hard to disentangle the factors of race, location, and poverty in analyses of victimization. Adolescents who live in inner cities experience higher victimization rates than those who live in the suburbs (446), and a large proportion of black and Hispanic adolescents live in inner cities (157).

Figure 13-8—Percent Mortality Due to Seven Leading Causes of Death for Black Adolescents Ages 10 to 14 and 15 to 19, 1987



SOURCE: National Center for Education in Maternal and Child Health, *The Health of America's Youth* (Washington, DC: September 1990).

Figure 13-9—Percent Mortality Due to Seven Leading Causes of Death for White Adolescents Ages 10 to 14 and 15 to 19, 1987

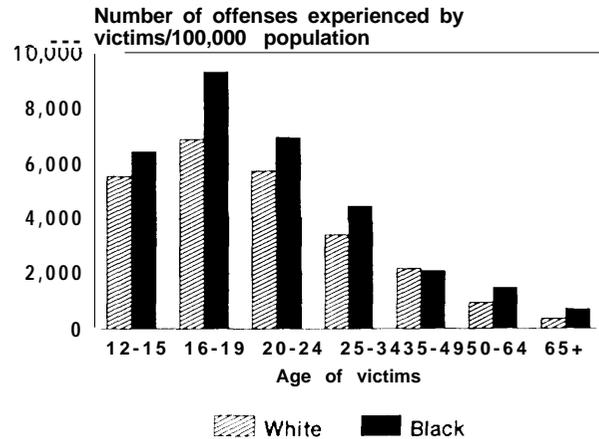


SOURCE: National Center for Education in Maternal and Child Health, *The Health of America's Youth* (Washington, DC: September 1990).

It is clear, however, that adolescents themselves pose a risk to adolescents. Individuals ages 12 to 19 are by far the major victims of the violent offenses of robbery, rape, and assault committed by individuals ages 12 to 20.⁷⁶ In 1987, more than 60 percent of the 1,711,840 reported violent offenses of robbery, rape, and assault committed against victims 12 to 19 years of age were committed by offenders ages 12 to 20 (419).⁷⁷

Another category of victim is the adolescent who views delinquent behavior, particularly violent acts.

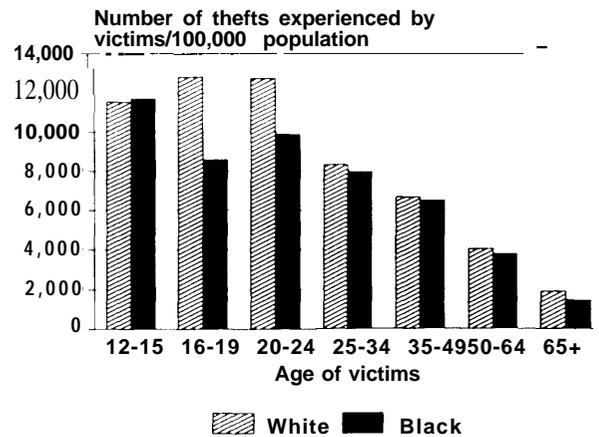
Figure 13-10—Victimization Rates^a for Rape, Robbery, and Assault by Age and Race, 1988



^aThe *victimization rate* is the number of offenses experienced by a given population per some population base during a given time period.

SOURCE: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, *Criminal Victimization in the United States, 1988* (Washington, DC: forthcoming).

Figure 13-11—Victimization Rates^a for Theft by Age and Race, 1988



^aThe *victimization rate* of victims is the number of offenses experienced by a given population per some population base during a given time period.

SOURCE: Office of Justice Programs, Bureau of Justice Statistics, *Criminal Victimization in the United States, 1988* (Washington, DC: forthcoming).

Preliminary research indicates that significant numbers of children and adolescents have seen violent acts, such as shootings and stabbings (38,158). The

⁷⁶The focus of this OTA Report is on 10- through 18-year-olds. Some of the data presented in this discussion are for other age groupings because data for 10- through 18-year-olds are not readily available.

⁷⁷National data relating both the age and race of offenders to the age and race of their victims are not available. Thus, while it is known that the great majority of violent offenses against whites are committed by whites (79 percent of robberies, rapes, and assaults, and 88 percent of murders) and that the great majority of violent offenses against blacks are committed by blacks (82 percent of robberies, rapes, and assaults, and 94 percent of murders), the ages of victims relative to the victimizers within races are not known (408,419).

early findings also indicate that viewing violence is deleterious to the normal emotional and intellectual development of children exposed to violence (38).

Prevention of Adolescent Delinquency⁷⁸

When considering approaches to preventing delinquency among adolescents, it is important to note methodological and other problems in the literature evaluating past prevention efforts. One is the problem of different definitions of delinquency, noted in the first section of this chapter. The definition of delinquency is critical when designing, implementing, evaluating, and comparing prevention programs.

Another critical issue is the paucity of evaluations of many interventions to prevent delinquency, particularly of programs developed and implemented by schools and communities in response to pressing social problems. Programs developed by university-based researchers have generally been more rigorously evaluated (455). However, a general problem is that the evaluations that are conducted are typically performed by the same organizations and individuals who design and implement the interventions.

A major problem in all methods used to evaluate prevention and treatment interventions is that the researchers in delinquency have typically but incorrectly assumed that programs that fall under the same general rubric (e.g., group homes) are all providing the same type of service to a uniform degree to the adolescents involved. As a result, only outcomes are evaluated, although processes that affect the implementation or strength of an **intervention** may have a greater influence on the program's effectiveness than the program's overall intervention strategy per se (177,362). Systematic documentation or investigation of outcome and process factors in evaluation reports is rare, which makes it impossible to tell whether a strategy failed because it **was** implemented badly, its impact **was limited by** mediating processes, or the underlying theoretical assumptions were wrong.

Another issue of importance is that although information gleaned from the knowledge of factors linked to delinquency has potential for designing preventive strategies, many programs do not make use of such information. In devising prevention strategies, it would be useful to incorporate knowledge about the relationship of particular factors, and knowledge of the development of delinquent behavior. Interventions should **not be expected to be** equally effective across all stages of child and adolescent development. As an obvious example, family approaches might be expected to have better outcomes with younger adolescents than with older adolescents.

Strategies for the primary and secondary prevention of adolescent delinquency are discussed below. Table 13-11 displays several types of primary and secondary prevention interventions.

Primary Prevention of Delinquency

Primary prevention of adolescent delinquency means identifying individuals **at risk** for delinquent behavior because of their general life situations (e.g., children in stressed families) or identifying environments at risk for delinquent activity (e.g., school settings) before the delinquent behavior has occurred, and intervening to reduce the eventual amount of delinquent behavior in **that** group or setting .79

Family-Based Primary Prevention⁸⁰

Provision of Family Support Services--The provision of family support services refers to the provision **to** families of a broad array of social support services, including day care, medical care, counseling, family needs assessment, and referrals to other social service agencies. Although numerous studies have examined the effects of family support on infants and disadvantaged families (40,71,72,278, 318,330), only a few have examined the long-term effects of day care and other family support interventions on later delinquency and antisocial behavior.

A notable exception is the Yale Child Welfare Research Program (364,365), an intervention that provided **to** low-income mothers and their first-born

⁷⁸This section is based on a paper entitled "Review of Programs for the Prevention and Treatment of Delinquency," prepared for OTA under contract by Edward Mulvey, Michael A. Arthur, and N. Dickon Reppucci (295).

⁷⁹In many health areas, primary prevention is not limited to high-risk individuals.

⁸⁰Since, as noted earlier, **poor family functioning is strongly related to delinquency, intervention with families has** received wide endorsement as a locus for preventive intervention (29,55,186,267,269,389).

Table 13-1 I—Illustrative Primary and Secondary Preventive Interventions for Delinquency

Primary prevention
<i>Family-based</i>
● Family support
. Parent skill training
<i>School-based</i>
● Preschool programs
● Cognitive-behavioral programs
. Social process interventions
<i>Community-based</i>
. Community watch organizations
. Adolescent support organizations
● Youth recreation
Secondary prevention
. Vocational and alternative education programs
● Family therapy and family communication skills training
SOURCE: Office of Technology Assessment, 1991.

children a coordinated set of social work, pediatric, child care, and psychological services for 30 months following the child's birth. Ten years following the end of intervention, when they were 12.5 years of age, boys whose families were involved in the program were found less likely to exhibit predelinquent behavior problems, such as truancy, than comparison boys whose families were not involved (364,365). These long-term results may not be generalizable because they were based on comparisons of only 15 matched experimental and control low-income families, none of whom were suffering from serious health or emotional problems.

The Yale Child Welfare Program cited evidence for approximately \$40,000 in benefits per year after a total program cost per child of \$20,000 (364). The analysis on which these figures were based, however, was not comprehensive enough to represent a complete picture of the cost-benefit ratio (30).

Parent Skill Training—Parent skill training involves teaching child development and parenting skills to parents. Documentation that this is an effective primary preventive strategy for delinquency is limited. The only evidence comes from a small number of reports which found that the siblings of delinquent youths whose parents received parent skill training were less likely to exhibit problem behaviors (20) and delinquency (244) than were siblings of delinquent youth whose parents did not receive such services. These data suggest,

however, that parent training may be effective for adolescents at high risk of delinquency.

Some studies have assessed parent training as a component of larger prevention packages. An intervention with low-income Mexican Americans with children ages 1 to 3 (227) and a carefully assessed delinquency prevention project based in eight, inner-city Seattle schools (186) were found to have positive attitudinal and behavioral outcomes for the parents and children. The Seattle project also reported that children in the experimental classes were less likely than children who were not in such classes to have started drug use or delinquent activity by the fifth grade (185). In neither of these programs, however, can the effects of parent training be separated from other aspects of the intervention.

A consistent finding is that high-risk parents, i.e., those subject to multiple stresses, often do not complete a family training program or a program with a family training component (89,90,227,435).

School-Based Primary Prevention

Preschool Programs⁸¹—Head Start is the Federal Government's comprehensive child-development program designed to enhance the social competence of low-income 3- to 5-year-olds. Along with educational instruction, the program delivers health and dental care, immunizations, and hot meals to its preschoolers while connecting children's families with needed social services to help them achieve self-sufficiency.

On balance, followup evaluations of Head Start programs indicate that many of the programs produce short-lived improvements in children's IQ and academic performance and long-term improvements in school functioning, including a reduced need for special education placement and an increased likelihood of grade promotion and graduation (183,465). Because there is an association of factors that affect school functioning with delinquent behavior, many Head Start programs can be said to have an indirect preventive effect on delinquency.

Followup evaluations on the effects of Head Start in *directly* preventing delinquency, however, are sparse. One exception, a longitudinal evaluation of

⁸¹As noted in the section on factors associated with delinquency, a large body of research has shown that 10W IQ, learning disability, and school failure are related to and often precede official and self-reports of delinquent behavior. School-system-level interventions intended to prevent delinquent behavior have only recently been tried (126,286), bolstered by research showing that school processes and climate are related to academic achievement and rates of delinquent behavior by students (137,352). For a general discussion of how schools affect adolescents, see ch. 4, "Schools and Discretionary Time," in this volume.

the Perry Preschool Project, found evidence of reductions in delinquency, adolescent pregnancy, and crime (43,44,361). Fifty-eight 3- to 4-year-olds who were participants in the Perry Preschool Project were followed up through age 19, as were matched controls. In comparison to the control group, program participants at age 19 were less likely to have been arrested at all, to have had five or more arrests, to have had special education placements in school, to have dropped out of high school, or to have been on welfare. Participants also had lower rates of adolescent pregnancy and adult arrests and higher rates of adult employment and postsecondary school enrollment (43,44,361). The program appeared to have a greater effect on adult arrests than on juvenile arrests.

The evaluation of the Perry Preschool Project reported that the program resulted in benefits to taxpayers of approximately \$28,000 per child participant, about six times the annual program operation cost of about \$5,000 per child (361). The analysis included a broad range of calculated benefits and costs and discounting for the time difference between costs and long-term benefits (30,43).

Cognitive-Behavioral Skills Training Programs--Cognitive-behavioral interventions are based on the idea that delinquency sometimes results from an inability to develop and maintain positive social relationships due to deficits in social skills (59,288,391).⁸²

Evaluations of cognitive-behavioral skills training programs have shown that such programs yield consistent, short-term improvements in problem-solving abilities (e.g., 92,175,379,380,441), particularly for younger, disadvantaged children. Evaluations of such programs also provide evidence that such programs produce behavioral improvements

(37,349,379,380), but the evidence for long-term behavioral improvements is not clear (92,175,288). Cognitive-behavioral skills training has also been used as a secondary preventive intervention with children who have conduct disorders, and investigators have found that changes in behavior at home, at school, and in the community are evident up to a year later (235).

An interesting approach that incorporates many of the techniques used in cognitive-behavioral strategies has been mounted in Massachusetts, the aim being to change adolescents' attitudes toward the use of violence (323). Using a standard curriculum of information provision and role-playing, the Violence Prevention Curriculum Project specifically addresses the issue of anger and the control of violence. This program is attractive for its focus and direction, but interpreting the only evaluation of its overall effectiveness is somewhat problematic because the curriculum was published and evaluated by the same organization (455). The evaluation found that the curriculum had a statistically significant impact on students' knowledge and locus of control.⁸³ Marginal, but not statistically significant, differences were found for positive self-esteem and for self-reports of arrest. The final report emphasizes the problems of implementing the rigorous study design and concludes that the findings should be viewed as preliminary.⁸⁴

Social Process Interventions--The major focus of school-based social process interventions is to change the social structures and processes of schools to encourage greater involvement and commitment among students (54,61,133,168,188). Some of the interventions also incorporate social skills training.

Evaluations of a project that trained seventh grade teachers in inner-city schools to apply proactive

⁸²*Interpersonal cognitive problem-solving (ICPS) programs focus on processes such as interpreting social cues and Others' intentions, generating alternative solutions to social problem situations, evaluating the likely outcomes of different solutions, and means-ends thinking (379). Behavioral social skills training (BSST) interventions focus on teaching specific behaviors such as entering a peer group, accepting criticism, giving compliments, and resisting peer pressure (288). Many programs incorporate aspects of both ICPS and BSST (37,59,288). These are generally presented as a part of a school curriculum and done in small groups of students.*

⁸³Twenty-five constructs were measured in a survey, including frustration, tolerance, self-esteem, impulse control, locus Of control, self-reported behaviors, fighting, life stress, peer attitudes, school climate, family conflict style, knowledge and attitudes about violence and its consequences, and sociodemographics. Locus of control describes individuals' sense of control over their environment. People with an internal locus of control believe they are the predominant source of desirable outcomes; those with an external locus of control believe that others, or chance events, determine the occurrence of desirable outcomes.

⁸⁴During development of the school-based curriculum, the developers decided that a school-based intervention alone was insufficient, and a community-based component was developed to reinforce nonviolent options learned in the classroom. Thus, the Violence Prevention Program, a Health Promotion Program for Urban Youth, was initiated in 1986 by the Boston Department of Health and Hospitals. Community educators are using as many community settings as possible to deliver the "violence prevention" message. An outside evaluation team is now analyzing outcome data from this intervention (455).

classroom management, interactive teaching, and cooperative learning strategies reported generally positive results regarding teacher behavior and the relationship of the adolescents to the school environment after 1 year (187,189). Students in experimental classes had fewer disciplinary actions and days suspended and reported less frequent drug use at school than students in control classes but did not differ in self-reported school delinquency (187, 189).

Although many studies have reported that changes in teacher and classroom procedures have positive results on classroom behavior (52,54,61,133,134, 168, 188,442), very few studies (e.g., 48a) have demonstrated that such interventions can have a positive effect on subsequent achievement and delinquency.

Community-Based Primary Prevention

Community organization interventions to prevent delinquency are based on Shaw and McKay's pioneering work that showed that community disorganization is related to higher rates of offending (371). As noted earlier in the section on factors associated with offending, the relation appears to be indirect (116,383). As noted below, there is a paucity of evidence on the effectiveness of all types of community-based preventive interventions, a situation which is probably due to the primitive state of measurement connected with assessing variables at a community level, and the difficulty of teasing out the many interactions among community, family, and individual level factors.

Community Watch Organizations--Neighborhood and Block Watch organizations and citizen patrols such as the Guardian Angels are attempts to decrease offending through community involvement (42,15 1,3 17,348). While such programs reduce crime and fear of crime (42,317), they are hard to organize and have been found to be less effective in high-crime neighborhoods (290,348,384,385). Evidence on the effectiveness of these programs in terms of reducing delinquency is sparse. A recent evaluation of neighborhood watch programs in inner city areas concluded that such programs, by themselves, rarely reduce delinquency and crime in inner cities areas (290). They appear, however, to help support a broader strategy that includes reducing school dropout rates, providing job training, and providing job opportunities in inner city neighborhoods (290).

Adolescent Support Organizations---Adolescent support programs provide multiple services, attempting to be responsive to the particular life situation of the individuals who come to them for help,⁸⁵ Evaluations of such targeted community-based programs offering a supportive place for adolescents to go with a variety of problems-e. g., Argus Community in the South Bronx, Delaney Street in San Francisco, or House of Umoja in West Philadelphia—are sparse and not methodologically rigorous (290). Informal assessments (i.e., assessments without formal control groups) of high-risk adolescents in the Argus Community, the House of Umoja, and the Dorchester Youth Collaborative suggest that enrollees in these programs have been less likely to commit delinquent acts than similar high-risk adolescents in the general community (290).

Youth Recreation—Numerous youth recreation programs such as the Police Athletic League, Boys' Clubs, and the Fresh Air Fund provide constructive activities for youth and theoretically reduce their involvement in antisocial activity (45). Although organized sports may have tremendous potential for promoting competence and preventing delinquency (56,8 1,337), this potential has never been systematically assessed. A few studies have shown a relationship between participation in organized athletic programs and lower levels of delinquent activity, particularly for working class boys (356,363).

Secondary Prevention of Delinquency

Secondary prevention of adolescents for delinquency means attempting to keep adolescents who have already shown indications of troublesome behavior (e.g., school problems) from engaging in delinquent acts such as theft or assault. (The distinction between secondary prevention programs and treatment programs may at times be arbitrary because the populations enrolled in some programs are sometimes heterogeneous. In any one program, some participants may only have indications of troublesome behavior, while others may have committed delinquent acts. Some programs that target adolescents with self-reported delinquency and official delinquency—for example, some diversion programs—are discussed in the section on treatment programs below.)

⁸⁵These programs can also be considered secondary prevention interventions, because some of the attendees are adolescents at high risk of delinquency (e.g., adolescents who have school problems or adolescents who have committed one or more delinquent acts).

Vocational and Alternative Education Programs⁸⁶

Hope for vocational training and other alternatives to traditional school programs is based on the consistent finding that adolescents with behavior problems are frequently doing poorly in school, are not engaged by common classroom procedures, and are lacking in job-related skills (172,382). Evidence from a number of evaluations shows that when vocational education programs carefully integrate classroom and work experience, are perceived by students as being relevant to their interests, and are closely monitored, the programs reduce school dropout rates and increase learning and school attendance among adolescents at high risk of delinquency (168).

For the most part, the direct effect of the vocational and alternative education programs on delinquency has not been evaluated.⁸⁷ Exceptions include a series of rigorous followup studies of male adolescents who had just been expelled or dropped out of high school and then received a comprehensive intervention that combined job placement, remedial education, and psychotherapy. All aspects of the intervention were administered by one therapist. Services, which began 24 hours after the males left school, were individualized, intensive, and flexible as to time, place, and activity (277,375,376, 377,378). Data from these followup studies showed that recipients of this vocational and psychotherapeutic intervention had adjusted well in terms of employment, schooling, and marital status, and that delinquency was clearly lower among these adolescents than among adolescents in a control group. Even after 15 years, the males who had received the treatment showed much better social adaptation with respect to family life, employment success, and avoidance of legal difficulties than those in the control group. The generalizability of the studies is limited, however, because the researchers compared only 10 participants with 10 control adolescents and used a very talented therapist. Nonetheless, this study is unique in illustrating that long-term effects are possible and suggesting the importance of multiple components of treatment.

Family Therapy and Family Communication Skills Training

Family therapy and family communication skills training has been found to be effective in reducing problem behaviors among conduct-disordered children of treated families (2,32,144,235,236,3 14). The effects are maintained up to 1 year and occasionally longer, and programs have been found to be effective among children with conduct problems varying in severity of dysfunction (235).

Family therapy and family communication skills training does have several limitations. One is that it is not effective for some types of children and parents—e. g., parents who are dysfunctional or parents who have reached the limits in coping with a child with a conduct disorder (235). Furthermore, the method has yet to demonstrate either a long-lasting effect on delinquent behavior or success with severely antisocial adolescents.

Summary: The Effectiveness of Adolescent Delinquency Prevention Efforts

Although efforts at *primary prevention* of delinquency are relatively new, recent research has provided some evidence that *primary prevention programs at an early age may have an enduring effect in terms of reducing delinquent behavior in early adolescence*. For any given approach, the evidence on effectiveness is inconclusive and at times indirect, but the cumulative evidence from a variety of approaches—parent training programs, family support interventions, and school-based interventions—is encouraging. There are, however, too few controlled trials to draw definitive conclusions. Given what we know about the complex, socially embedded nature of delinquency and the realities of service provision, it is unreasonable to expect that any single preventive approach would be uniformly applicable and efficacious.

The overall record of strategies for efforts at secondary prevention of delinquency is less impressive. One intensive and flexible vocationally oriented program that included psychotherapy, remedial education, and job placement clearly reduced

⁸⁶For a discussion of schools and adolescent health, see ch. 4, "Schools and Discretionary Time," in this volume.

⁸⁷For example, other alternative programs such as City Lights in Washington, DC (397a) and the Phoenix Program in Akron, Ohio (290) appear to be successful in involving failing students with behavior problems, but have not been evaluated in academic and vocational training programs, correcting their educational problems, or reducing behavioral problems. Preliminary evaluations indicate success in increasing the school attendance rate of failing students and the Phoenix Program has shown a decline in recidivism rates (290).



Photo credit: Education Week

Adolescents who do well seem to have strong and developmentally appropriate social support, preferably from their families, but if not from their families, from some other adult or adults.

delinquency in the long term (375,377). The quality of the findings suggests that such programs may be a promising way to prevent delinquent behavior, but the program that was evaluated had a very small sample size, which hinders application of findings to other populations. Promising early evidence suggest that organizations providing multiple elements—e.g., advocacy, mentoring, nutrition, social support, employment training, and/or employment placement to high-risk adolescents—result in multiple advantages to high-risk youth. These advantages include less involvement with delinquency than similar high-risk adolescents (290). However, more scientifically rigorous evidence is needed for definitive conclusions about the effectiveness of these interventions in preventing adolescent delinquency.

Following their review of prevention programs on behalf of OTA, Mulvey and his colleagues concluded that three general lessons can be drawn (290). One lesson is that policymakers at all levels should seriously plan for service provision as an ongoing,

rather than “one shot, ’ enterprise. For adolescents who appear to have an identifiable propensity for antisocial behavior, interventions should be conceptualized as a series of possible treatments for a problem that is likely to appear again in a different form as the adolescent becomes older and new issues and challenges arise.

A second major lesson would seem to be that successful prevention programs appear to take a broadly based approach, addressing behavior in its social context. Because delinquency is not unidimensional or independent of a variety of social forces, interventions must address multiple issues of the youth’s family, school, and peer life to show any real progress. There is little evidence that any service, regardless of its modality or theoretical rationale, can produce impressive results when applied in isolation. Early intervention programs that provide comprehensive care to families, cognitive behavioral curriculums that are coupled with changes in the school environment, and individual interventions that work with the adolescents’ home, school, and peer environment appear to provide more impressive results than programs that are focused on a single facet of an adolescent’s life.

The third clear lesson is that preventive services (e.g., family support services) are not delivered uniformly and that it is counterproductive to continue to evaluate them as if this were true. Comparing services only according to their avowed theoretical approach or stated program type appears to be a task with limited return. Better measures of particular program dimensions independent of theoretical justification or basic program type (such as intensity or comprehensiveness of service delivery) as well as operational measures of program operation are clearly needed.

Services and Interventions for Adolescents in the Juvenile Justice System⁸⁸

The source of almost all services and interventions explicitly aimed at reducing adolescent delinquency once it has been officially detected is the juvenile justice system, which includes law enforce-

⁸⁸This discussion is based partially on a paper entitled ‘Review of Programs for the Prevention and Treatment of Delinquency,’ which was prepared under contract for OTA by Edward Mulvey, Michael A. Arthur, and N. Dickon Repucci (290), and on a paper entitled ‘Juvenile Justice: A Critical Examination’ prepared by B. Krisberg under contract to the Carnegie Corporation of New York and the Carnegie Council on Adolescent Development in support of the OTA study on adolescent health (246).

Table 13-12-Age at Which Criminal Courts in Different States Gain Jurisdiction of Young Offenders

Age of offender when under criminal court jurisdiction	States
16 years	Connecticut, New York, North Carolina
17 years	Georgia, Illinois, Louisiana, Massachusetts, Missouri, South Carolina, Texas
18 years	Alabama, Alaska, Arizona, Arkansas, California, Colorado, Delaware, District of Columbia, Florida, Hawaii, Idaho, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Michigan, Minnesota, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Federal districts
19 years	Wyoming

SOURCE: L.A. Szymanski, "Upper Age of Juvenile Court Jurisdiction Statutes Analysis," National Center for Juvenile Justice, Pittsburgh, PA, March 1987.

ment officers and others who refer delinquent and maltreated juveniles to the courts, juvenile courts which apply sanctions for delinquent offenses and oversee the execution of child protective services, juvenile detention and correctional facilities, and agencies that provide protective services and care (e.g., foster care) for juvenile victims of abuse and neglect. The discussion that follows focuses primarily on the handling of adolescents by juvenile courts and juvenile detention and correctional facilities.

What Is the Juvenile Justice System?

The juvenile justice system is actually 50 distinct statewide juvenile justice systems. State statutes that establish the legal authority for the delivery of juvenile justice services vary widely from State to State. The upper age of juvenile court jurisdiction differs from State to State (see table 13-12), as does the scope of misconduct leading to juvenile court intervention (see table 13-13). Washington State, for example, excludes status offenses from court authority, whereas States such as California merely limit the range of sanctions to be used with status

Table 13-13-Reasons for Referral of Delinquency Cases to Juvenile Courts, 1987

Reasons for referral	Number of cases	Percentage
Serious violent offense ^a	64,000	5.6 ^a
Murder and nonnegligent manslaughter	1,500	0.1
Forcible rape	4,000	0.3
Robbery	21,500	1.9
Aggravated assault	37,400	3.3
Serious property offense ^a	498,000	43.5
Burglary	131,700	11.5
Larceny-theft	311,600	27.2
Motor vehicle theft	48,600	4.2
Arson	6,100	0.5
Minor delinquent offense ^b	583,000	50.9
Simple assault	99,700	8.7
Stolen property offenses, ,,,	27,900	2.4
Trespassing	50,200	4.4
Vandalism	84,300	7.4
Weapons offenses	20,000	1.7
Other sex offenses	18,200	1.6
Drug law violations	73,700	6.4
Obstruction of justice	80,900	7.1
Liquor law violations	16,300	1.4
Disorderly conduct	47,800	4.2
Other delinquent acts	63,700	5.6
Total delinquency	1,145,000	100.0

NOTE: Detail may not add to total because of rounding.

^aSerious offenses are Federal Bureau of Investigation Part I offenses (i.e., murder and nonnegligent manslaughter, forcible rape, robbery, aggravated assault, burglary, larceny/theft, motor vehicle theft, and arson). Individual Part I offenses may not be considered serious by other definitions, however.

^bMinor offenses are Federal Bureau of Investigation Part II offenses. Individual Part II offenses may not be considered minor by other definitions, however.

SOURCE: H.N. Snyder, T.A. Finnegan, E.H. Nimich, et al., prepublication draft of "Juvenile Court Statistics, 1987," National Center for Juvenile Justice, Pittsburgh, PA, 1990.

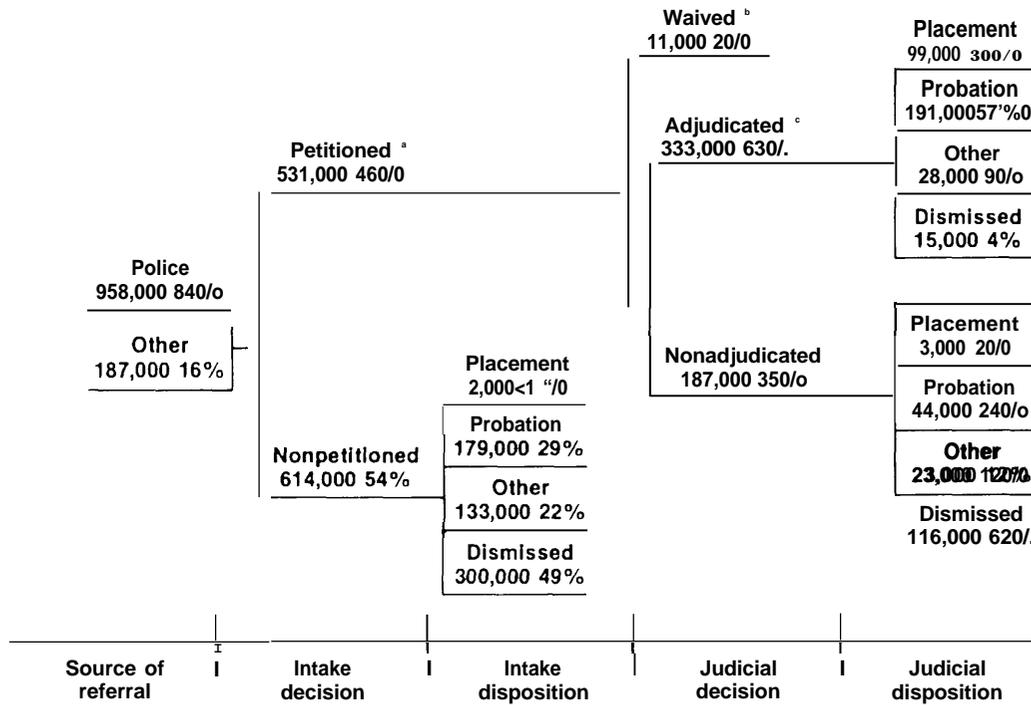
offenders (246). Some States have full-time juvenile court judges, whereas others rotate judges in and out of juvenile court assignments. Juvenile court judges vary dramatically in their legislatively mandated powers and the extent of their judicial training and experience (35 1).

The manner in which most juvenile courts process delinquency cases is illustrated in figure 13-12 in simplified form (388). Police are the primary source of referrals to the juvenile court,⁸⁹ but school authorities, social welfare agencies,⁹⁰ and parents

⁸⁹The police make the initial decision about adolescents whom they have recognized as committing offenses. In some locales virtually all, and in others only half, the young people stopped by the police are arrested (453,458). Police may informally warn and verbally reprimand adolescents who they do not arrest, or they may refer them to nonjudicial agencies (e.g., youth service bureaus and community-based organizations) or to their guardians.

⁹⁰In some cases, an adolescent is a delinquent, an abused child, a youth in need of special education services, and a welfare recipient. Such adolescents may be referred to juvenile courts, despite other needs that maybe more pressing. Social service agencies may adopt selection criteria that exclude clients, particularly older adolescents with histories of mental illness and aggressive behavior. However, public correctional agencies cannot refuse to take custody of adolescents lawfully committed to their care.

Figure 13-12-Juvenile Court Processing of Delinquency Cases, 1987



^aA petition is filing a document in juvenile court alleging that a juvenile is a delinquent, a status offender, or dependent. A petition requests that the court assume jurisdiction over the juvenile or that the juvenile be transferred to criminal court for prosecution as an adult.
^bA waived case is one that is transferred to the criminal court.
^cAn adjudicated case is one in which the court has entered a judgment.

SOURCE: H.N. Snyder, T.A. Finnegan, E.H. Himick, et al., prepublication draft of "Juvenile Court Statistics, 1987,"

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also refer cases.⁹¹ Between referral and some delinquency cases (20 percent in 1987) are held in detention facilities (388). At court intake, an intake officer makes a decision about whether or not to file a delinquency petition (i.e., to process the case formally by the courts). About half the cases (54 percent in 1987) are handled informally at the intake level and the adolescent is dismissed, referred to social service agencies, placed on probation, or placed in secure confinement (388). Intake officers also recommend to judges whether adolescents should be detained pending their case being heard by a judge.

At the next stage, judges or their designated assistants (referees) decide on the legal merits of the

delinquency, petition. Of formally petitioned cases, 35 percent are either dismissed or handled without a juvenile court adjudication hearing and 63 percent have a juvenile court adjudication hearing. As figure 13-12 shows, the possible dispositions of adjudicated or nonadjudicated cases are similar to nonpetitioned cases, except that a small number of nonadjudicated cases, generally cases involving the most serious offenses, receive special hearings and are transferred or waived to the *al court system.

The juvenile courts tend to use informal, diversionary case dispositions. In 1987, only 30 percent of the delinquency cases referred to the courts resulted in formal adjudication and only 9 percent

⁹¹The data in this and the Succeed@ section are mainly from a nonprobability sample of 1,133 courts with jurisdiction over roughly 49 percent Of the Nation's at-risk youth population-the National Juvenile Court Data Archives (388). The National Juvenile Court Data Archives uses a complex weighting procedure to generate national estimates based on data from the reporting jurisdictions. Because the data are not based on a probability sample, the sampling error or confidence intervals around the statistics presented are unknown.

ended with a placement in a private or public residential facility.

Who Are the Adolescents in the Juvenile Justice System?

Adolescents Referred to the Juvenile Courts

Adolescents may be referred to the juvenile courts for delinquent offenses or because they are victims of neglect or abuse (418).⁹² Those referred for delinquent offenses are usually referred by the police. Not surprisingly, therefore, the numbers and types of delinquency offenses for which juveniles are arrested are similar to the numbers and types of offenses for which adolescents are referred to the juvenile courts.⁹³ In 1987, for example, serious violent offenses made up only a small fraction of delinquency offenses for which juveniles were arrested or referred to the court; serious property offenses made up a larger fraction; and minor offenses made up the largest fraction (see table 13-1 3).⁹⁴

Juveniles referred to juvenile courts for delinquent behavior are demographically similar to juveniles who are arrested. In 1987, for example, the overall delinquency case rate⁹⁵ and overall arrest rates increased consistently from 10 years of age up to 17 years of age, with drug law violation cases showing the sharpest increase in the older age groups (388).⁹⁶ The delinquency case rate was much higher for males than for females for all categories of delinquent offenses. Females received less severe dispositions than male adolescents who are arrested for similar delinquency offenses (136,387,396). In

contrast, females who are arrested for status offenses receive harsher punishment than male status offenders (65,252,374).

Racial differentials in overall delinquency case rates are similar to those in arrest rates. In 1987, for example, the delinquency case rate for nonwhites was 76 percent higher than the rate for whites, with the greatest difference (209 percent higher) in offenses against persons (388). Differences in socioeconomic status and family structure have also been found among adolescents processed by the courts. State and local studies have reported that most court-processed adolescents come from low-income, female-headed households (247,387,458).

Several observers have expressed concern that the juvenile courts appear to handle nonwhite adolescents much more harshly than their white counterparts. The majority of delinquency cases involving white juveniles are handled informally (i.e., “not petitioned”), while the majority of cases involving nonwhite juveniles are handled formally (i.e., ‘petitioned’ (388). Furthermore, delinquency cases involving nonwhite juveniles are more likely to be waived to criminal court than are delinquency cases involving whites (428). It is important to note that no one has conducted an analysis of differential referral patterns that takes into account different levels of the seriousness of the offense. As noted above, arrested black adolescents have been found to commit somewhat more serious offenses than white adolescents. It is unclear whether the level of seriousness would totally account for the differences in treatment by the juvenile courts.⁹⁷

⁹²For a discussion of maltreated adolescents and the existing child welfare services, see ch. 3, “Parents and Families’ Influence on Adolescent Health,” in this volume.

⁹³The numbers are not identical, in part because the upper age of juvenile court jurisdiction is defined by statute in each State. In some States, the upper age of juvenile court jurisdiction is 16 years of age. Thus, while arrest data maintained by the U.S. Department of Justice, Federal Bureau of Investigation includes arrests for all 17-year-olds, not all 17-year-olds are under juvenile court jurisdiction. In 1987, 1,520,325 adolescents from 10 to 17 years of age were arrested for delinquent offenses, but only 1,145,000 delinquency cases of adolescents 10 years of age and over were processed in courts with juvenile jurisdiction (41 O).

⁹⁴In 1985, the fraction of status offenses cases handled by the Nation’s juvenile courts was about twice as high as the fraction of serious violent offenses handled (425).

⁹⁵The delinquency case rate is the number of delinquency cases per 1,000 adolescents age 10 or above who resided in the United States and were under the jurisdiction of a juvenile court. It is important to note that these data do not include status offenses (388).

⁹⁶In 1985, the peak age for referral of delinquency offenses was 17, but the peak age for referral for status offenses was 15 and decreased for older adolescents (425). This age-specific pattern may reflect juvenile justice practices more than adolescent behavior. Juvenile justice officials often use status offense labels to deal with the minor delinquency of younger adolescents. Similar misconduct by older adolescents may be treated as delinquent violations. Also, the juvenile justice system is less willing to intercede in family or school conflicts as adolescents approach the age when they can legally leave school or their families.

⁹⁷Racial and ethnic differences in institutionalization patterns are discussed below.

Adolescents in Juvenile Detention and Correctional Facilities

Types of Juvenile Justice Facilities—As noted in box 13-A, custodial facilities for juvenile offenders (and other minors under the jurisdiction of the juvenile or family courts⁹⁸) can be classified along several, often overlapping dimensions that include purpose, term of stay, type of environment (institutional or open), and sponsorship (public or private) (424,428).

Juvenile detention facilities, which are usually called juvenile detention centers or juvenile halls, typically hold juveniles who have been arrested for short periods prior to adjudication (424). Such facilities may also be used for juveniles who have been found to be delinquent and are awaiting transfer to long-term placements or who have been sentenced to short periods of confinement (424). Juvenile detention facilities typically provide a physically restrictive environment. Shelters are usually short-term facilities that hold juveniles who are awaiting transfer to other placements, but they offer an environment that is not physically restricted.

Juvenile correctional facilities are facilities for the commitment and supervision and treatment of juvenile offenders whose cases have been adjudicated (424). Long-term residential facilities that serve adolescent offenders (and other adolescents) range from training schools, which typically have strict physical and staff controls, to facilities such as ranches, forestry camps or farms, halfway houses, and group homes. Ranches and forestry camps or farms tend to be less restrictive than training schools, and residents in halfway houses or group homes are allowed extensive access to community resources (424).

Juvenile facilities that have *institutional environments* typically impose restraints on residents' movements and limit access to the community. Juvenile facilities that have *open environments* allow greater movement of residents and more access to the community (428). *Public juvenile*

facilities are under the direct administration and operational control of a State or local government and staffed by governmental employees. *Private facilities* are either profitmaking or nonprofit and subject to governmental licensing but under the direct administrative and operational control of private enterprise; these facilities may receive substantial public funding in addition to support from private sources (428).

Number of Adolescents in Juvenile Justice Facilities—In the course of a year, about 700,000 adolescents are confined to *public and private* juvenile justice facilities (418,424).⁹⁹In addition there are about 479,000 juveniles in adult jails, some because they were waived to adult criminal court (254,431). The vast majority (83 percent) of adolescents in all juvenile facilities are incarcerated for nonviolent offenses (79).

Most of the adolescents in *public juvenile facilities* are in custody for delinquent offenses. About 90 percent (94 percent in 1987) of the adolescents who are in public juvenile facilities are in custody for offenses that would be considered crimes if committed by an adult (418). Most of the rest (5 percent) are held in custody for status offenses such as running away or buying liquor. A very small percentage (1 percent) are held in public juvenile facilities because they were dependent, neglected, or abused juveniles or emotionally disturbed or mentally retarded juveniles over whom a juvenile court assumed jurisdiction to ensure adequate care, or because, without having been adjudicated by a court, they were referred as "voluntary admissions" to the facility by parents, school, or a social agency (418,424).

Private juvenile facilities serve a somewhat different population. A little more than half (55 percent) of the adolescents in private juvenile facilities are in custody for delinquent offenses (about 34 percent for delinquent offenses that would be considered crimes if committed by an adult and about 21 percent for status offenses). Almost all of the remaining 45 percent of the adolescents in private facilities are dependent, abused, neglected,

⁹⁸Minors may be under the jurisdiction of the courts for reasons unrelated to juvenile delinquency, for example, because they have been abandoned, neglected, or abused by their parents. Juvenile facilities may also be used for minors who are mentally disturbed or mentally retarded, as well as minors who are admitted by their parents or a social agency as "voluntary admissions" (418).

⁹⁹In 1987, an estimated 590,000 juveniles were placed in public juvenile detention and correctional facilities, and perhaps another 115,000 in private facilities (446). This statistic is difficult to correlate with arrests (1,520,325) and referrals to juvenile court (1,145,000) for the same year. The statistics on arrests and referrals to juvenile court pertain to offenses, and the statistics on facilities refer to intakes regardless of the number of offenses committed by any individual, or whether any individual has been admitted multiple times. In addition, adolescents may be detained in juvenile facilities prior to or after the disposition of their cases in the juvenile court.

emotionally disturbed, or other minors over whom a juvenile court has assumed jurisdiction to ensure adequate care (429).

Trends in the Population Makeup of Juvenile Justice Facilities—Between 1977 and 1987, there was a 43-percent increase in custody rates in public and private juvenile justice facilities combined (see table 13-14).

A change also appears to be occurring in the population makeup of juvenile facilities. Although the number of juveniles in both public and private facilities increased from 1985 to 1987, data taken on a single census day in 1985, 1986, and 1987,¹⁰⁰ suggest that the number of juveniles held for serious (index) violent and property offenses has decreased (418,428).¹⁰¹ The number of adolescents held in public and private juvenile facilities for offenses other than serious violent or property offenses, particularly alcohol- or drug-related offenses, increased 36 percent and 50 percent, respectively, from 1985 to 1987 (418,428).

Demographic Characteristics of Adolescents in Juvenile Justice Facilities—The demographic characteristics of adolescents in juvenile facilities correspond to those of adolescents arrested and to those of adolescents referred to juvenile court. Adolescents ages 14 to 17 makeup by far the largest number of juveniles held in public and private juvenile facilities (429). The vast majority of adolescents in juvenile facilities for offenses that would be a crime if committed by an adult are males (89 percent). The majority of adolescents in custody in public facilities for status offenses are females (418); the majority of adolescents in private facilities for status offenses are males (428).

Nonwhite adolescents are disproportionately represented in both public and private juvenile justice facilities, but the discrepancy is greater in public facilities. On census day in 1987, almost 60 percent of the 53,503 juveniles in custody in public juvenile facilities were nonwhite or Hispanic, including 39 percent who were black (but not Hispanic), 15 percent who were Hispanic, and 3 percent who were of other racial or ethnic minority origins (see figure

Table 13-14—Juveniles in Custody in Public and Private Juvenile Detention, Correctional, and Shelter Facilities, 1977-87^a

	Number of juveniles in custody/100,000 juveniles					Percent change 1977-87
	1977	1979	1983	1985	1987	
U.S. total	247	251	290	313	353	+43%
Public	149	151	176	185	208	+40%
Private	98	100	114	128	145	+48%

^aRates are computed for juveniles ages 10 to the upper age of juvenile court jurisdiction in each State.

SOURCE: B. Krisberg, T. Thornberry, and J. Austin, *Juveniles Taken Into Custody.* *Developing National Statistics* (San Francisco, CA: National Council of Crime and Delinquency, 1989).

13-13). By comparison, less than 40 percent of the 38,143 juveniles in private facilities on census day in 1987 were nonwhite or Hispanic (see figure 13-14).

Nonwhite and Hispanic juveniles in public juvenile facilities were more likely to be placed in institutional environments than in open environments (see figure 13-13). Furthermore, there was a 15-percent increase in the number of black adolescents and a 20-percent increase in the number of Hispanic adolescents held in public juvenile facilities from 1985 to 1987 (418).

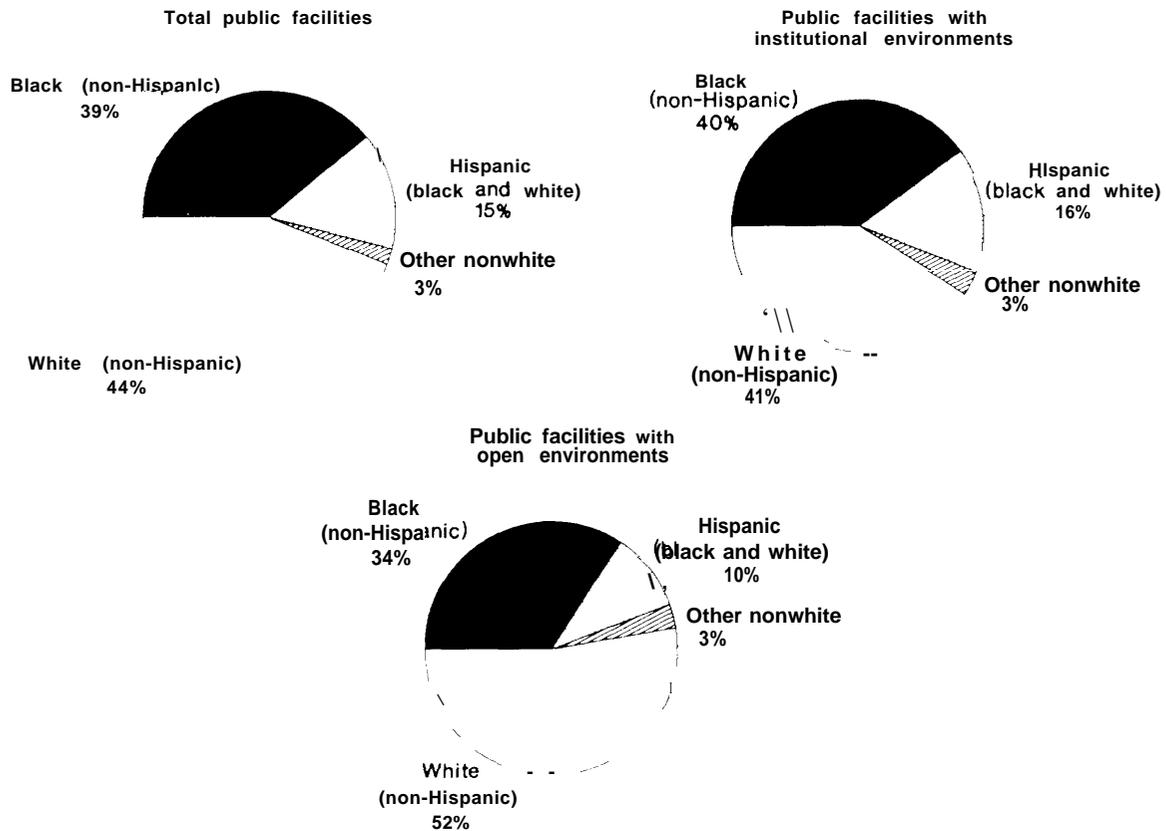
Researchers have not been able to estimate precisely the possibly differential effects of adolescent behavior and system processing in producing the disproportionate nonwhite and Hispanic presence in the juvenile justice system. Socioeconomic status, family, and community variables may also be factors. Although prejudiced justice system workers may be in part responsible, more subtle and intractable forces may also be at work. Real and perceived differences about the existence of community-based alternatives for inner-city adolescents, the strength of family supervision, and the extent of gang activity and drug trafficking in minority communities might lead some court officials to place adolescents out of their homes for reasons of child protection rather than for punitive purposes (246).

In sum, a juvenile held in a *public juvenile justice facility*-- short- or long-term, detention or correc-

¹⁰⁰The census day is the day on which the U.S. Bureau of the Census surveys more than 3,500 public and private institutions that provide custody and care for adolescents (418).

¹⁰¹The decline appears unusual since the number of arrests for serious violent and serious property offenses increased from 1983 to 1987, and from 1985 to 1987. However the two sets of data are incomparable. As noted earlier, arrest data describe number of offenses, and data on juveniles in facilities describe number of people. In addition, the trend data cited on juveniles in facilities are derived from one census day, unlike the arrest data which are derived from an annual report.

Figure 13-13—Distribution of Juveniles in Public Juvenile Justice Facilities on Census Day in 1987, by Racial and Ethnic Group^{ab}



^aThe total population in public juvenile justice facilities on census day 1987 was 53,503. More than 90 percent of the juveniles in public juvenile justice facilities are in custody for delinquent offenses (see text).

^bAccording to the office of Juvenile Justice and Delinquency Prevention, the vast majority (91 percent) of admissions to public juvenile facilities in 1987 were to facilities with institutional rather than open environments; 67 percent of admissions to public juvenile facilities were to long-term facilities and 33 percent were to short-term facilities.

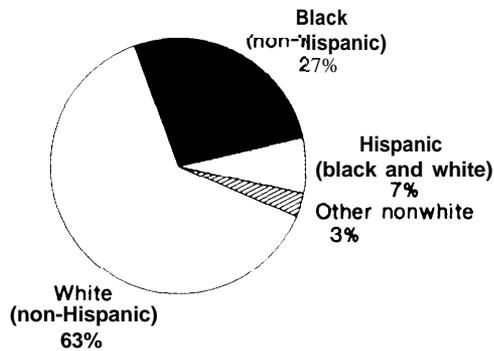
SOURCE: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention, "Children in Custody: Public Juvenile Facilities, 1987," *Juvenile Justice Bulletin*, October 1987.

tional, in an institutional or open environment—is likely to be from 14 to 17 years of age, male, from a minority group, and held for committing a delinquent offense that would have been a crime if committed by an adult, most likely a serious property offense (418). A juvenile held in a *private juvenile justice facility—short- or long-term, detention or correctional, in an institutional or open environment*—is likely to be from 14 to 17 years of age, male, white, and held for committing a status offense or for reasons unrelated to delinquency (428).

The attributes of juveniles in *long-term* public juvenile facilities are somewhat different. An adolescent offender in a *long-term public juvenile justice facility* is likely to be from 15 to 17 years of

age, male, white, and held for committing a serious property offense (417). The majority of adolescents under age 18 placed in long-term public juvenile facilities for serious property offenses are white, but the majority of adolescents held for serious violent offenses are black (417). Very few, indeed only 2 percent of those under age 18, are held in long-term public juvenile facilities for status offenses. In addition, the adolescent in a long-term public facility is likely to either have a seventh or eighth grade education or have completed only some high school, to have lived only with his mother while growing up, to have had a family member incarcerated at some time, to have previously been on probation, and to have been committed to a correctional institution at least once in the past (417).

Figure 13-14-Distribution of Juveniles in Private Juvenile Justice Facilities on Census Day in 1987, by Racial and Ethnic Group^{a,b}



^aThe total population in private juvenile justice facilities on census day in 1987 was 38,143. A little more than half of the juveniles in private juvenile justice facilities are in custody for delinquent offenses (see text).

^bAccording to the Office of Juvenile Justice and Delinquency Prevention, the great majority (82 percent) of admissions to private juvenile justice facilities in 1987 were to facilities with open rather than institutional environments; 59 percent of admissions to private facilities were to long-term facilities and 40 percent were to short-term facilities. Racial and ethnic breakdowns by type of private facility are not available.

SOURCE: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention, *Children in Custody, 1987: A Comparison of Public and Private Juvenile Custody Facilities*, prepublication draft, Washington, DC, 1989.

The Effectiveness of the Juvenile Justice System

The aims of the juvenile justice system—though the systems in each State vary—are to provide for the protection and safety of the public and to provide for the protection of the best interest of each minor under the jurisdiction of the court.

In the case of juvenile offenders, there are two contending ideologies that underlie efforts to advance these aims—treatment¹⁰² and punishment. In theory, the juvenile justice system is based on the notions that juveniles are more capable of reform and less responsible for their actions than adults. Consequently, the concept of retribution and punishment might be expected to be less pronounced in the juvenile justice system than it is in the adult criminal justice system.

In practice, it would appear that services based on both treatment and punishment are used to varying degrees in most State juvenile justice systems, but little information is available on the specific services provided, particularly in institutional juvenile facili-

ties. The disparity in ideologies and the need to balance them has led to disagreement on exactly what should be measured to evaluate the effectiveness of the system in general and the effectiveness of specific treatment interventions, as well as about the most appropriate measurement techniques.

In the discussion that follows, OTA has considered three measures in evaluating the effectiveness of the juvenile justice system as a whole:

- . effects on adolescents while they are in the juvenile justice system;
- . effects on the public while adolescent offenders are in custody;
- . effects on the public and adolescent offenders after adolescent offenders leave the system.

As noted earlier, the focus of this discussion is the juvenile courts and juvenile detention and correction facilities.

Effects on Adolescents While They Are in the Juvenile Justice System

To what extent are the best interests of adolescents protected during the period they are in the juvenile justice system? This question can be answered by considering two measures:

- sensitivity to adolescents' developmental status and
- protection of legal rights.

The extent to which the juvenile justice system—in particular, juvenile courts and juvenile detention and correctional facilities—exhibits sensitivity to the developmental status of adolescents during the processing of cases varies. The juvenile court can be said to be effective in protecting the best interests of adolescents who have not reached the age of majority in that its central premise is that juveniles should be treated differently from adults. The juvenile court's jurisprudence assumes that juveniles possess somewhat less responsibility for their actions than adults (467) and thus often handles cases involving juveniles on an informal basis (388,415). Nonetheless, the juvenile justice system today is more formal and punitive in its treatment of adolescent offenders than it was 20 years ago. From the early 1970s to 1987, the proportion of adolescents referred to court after being taken into custody

¹⁰²The terms treatment and rehabilitation are often used synonymously in the criminology literature. From some perspectives, of course, punishment is also rehabilitative.

by the police increased from about 50 percent to 62 percent, the use of diversion and probation declined, and the proportion of juveniles arrested and referred to adult courts rose from 1 percent to 5 percent (250,409). Furthermore, juvenile confinement rates (i.e., the number of juveniles in custody per 100,000 juveniles) increased by 43 percent between 1977 and 1987 (see table 13-14).

The processing of cases in the juvenile justice system does not operate with a consistent understanding of adolescent development. In general, younger adolescents (usually below age 13) are less likely to be detained or placed out of their homes than their older counterparts (387). Status offenders are an exception. Younger status offenders are slightly more likely to be held or placed out of their homes than older status offenders, which may reflect the court's child protection philosophy. The age at which the death penalty can apply to a juvenile, however, remains controversial.¹⁰³

State juvenile justice systems vary in the extent to which they manage adolescents on the basis of age or maturity. In as many as 20 States, juveniles awaiting adjudication continue to be held in adult jails despite a Federal mandate in the Juvenile Justice and Delinquency Prevention Act of 1974 that juveniles be held in separate facilities (392).¹⁰⁴ Once their cases have been adjudicated, juveniles can be housed separately from adults (e.g., Illinois) or mixed with adult offenders (e.g., Texas), and juveniles who are being tried as adults can be placed in a juvenile facility (e.g., Illinois) or in an adult jail (e.g., California). Adolescents held in adult facilities are often physically and sexually abused by inmates and staff (254), and suicide rates among adolescents in jails are higher than for adolescents held in juvenile facilities (360). Thus, it is important for

adolescents to be held in juvenile rather than adult facilities.

Whether the juvenile justice system is effective in protecting the legal rights of adolescents awaiting adjudication is problematic (130). Some adolescents lack access to appropriate counsel,¹⁰⁵ closed hearings may not be protective,¹⁰⁶ and the quality of some juvenile court judges has been questioned (see 246).

Whether the juvenile justice system protects adolescents who have been adjudicated delinquent and institutionalized in juvenile facilities is also problematic. Despite years of litigation pertaining to the issue, adolescent offenders' right to treatment, i.e., benefits, assistance, and therapeutic programs, remains unsettled (254).¹⁰⁷ Thus, it is not surprising that, as discussed in detail later, the juvenile justice system has not been effective in providing necessary health services to adolescent offenders with preexisting problems or in preventing the development of additional health conditions. It is also questionable whether educational services provided to adolescents in juvenile facilities are adequate (254).

Effects on the Public While Adolescent Offenders Are in Custody

A critical measure of the effectiveness of the juvenile justice system from the public's standpoint is the extent to which the public is protected for the period that adolescent offenders are in custody in juvenile detention and correctional facilities. There are no data on the incapacitative effect of the juvenile justice system on society at large, but clearly, those adolescents who are institutionalized are not able to commit offenses against the noninstitutionalized public.

¹⁰³In *Wilkins v. Missouri* (57 U.S. Law Weekly 4973) (1989), the U.S. Supreme Court refused to set a higher minimum age for executions than 15, which was established in an earlier ruling, despite briefs filed by the American Bar Association, the National Council on Crime and Delinquency, the Children's Defense Fund, among others, urging that age 18 should be the constitutional minimum age.

¹⁰⁴State policies regarding holding juveniles in adult jails are highly diverse, in part because States vary as to the upper age for juvenile court jurisdiction (see table 13-12).

¹⁰⁵Most adolescents handled by juvenile courts come from low-income families (245,387,457), and they rely heavily on public defenders and assigned counsels for legal representation. In appointing public defenders and assigned counsels to adolescents, however, the training and performance of these individuals is not always considered (246). Furthermore, many adolescents and their families have been reported to waive their right to any counsel without full comprehension of the consequences of that decision (176,360).

¹⁰⁶Juvenile courts hold closed hearings for cases involving adolescents in part to shield adolescents from negative publicity in high profile cases. They have not been particularly successful in doing this and some experts think the hidden nature of juvenile court operations contributes to perceptions that the court is overly lenient. Where open hearings have been tried, there have been few negative consequences for juveniles (360).

¹⁰⁷According to Lambert and others, minimum treatment includes "the right to freedom from harm while in state custody and requires that youth be provided adequate food, shelter, and clothing; academic, vocational and physical education; medical care, social services, and psychiatric services; supervision by trained staff; recreation, and the opportunity for phone calls and visits" (254).

Concerns about the need to protect the public from serious violent offenders are probably greater than concerns about protection from other juvenile offenders. It is important to recognize, however, that most serious violent juvenile offenders do not remain in the juvenile justice system but instead are more likely to be transferred to adult court for trial and sentencing (415). From the early 1970s to 1987, the proportion of juveniles arrested and referred to adult courts rose from 1 percent to 5 percent (250).

Effects on the Public and Adolescent Offenders After Offenders Leave the Juvenile Justice System

The juvenile justice system as a whole would be considered effective for both the public and adolescent offenders if the adolescents leaving the system were socially well adjusted. Some theorists have argued that formal adjudication and the threat of further punishment suppress further delinquent behavior (296); other theorists have claimed that official processing may actually increase delinquency (444). Neither of these positions has received conclusive empirical support.

Indeed, an evaluation based on the measure of adolescent offenders' social adjustment following release from juvenile detention and correctional facilities is currently not possible, because few State juvenile justice systems routinely collect any data on confined adolescents after they leave the system. The only data collected currently—and only by some systems—are data on how many adolescent offenders receive high school equivalency certificates based on the general educational development (GED) test, how many hours of community service are performed, or how much restitution is paid to victims.

The most common indication that adolescents who had been in the juvenile justice system are socially adjusted is lower subsequent delinquency or criminality as measured by recidivism—that is, the falling back into delinquent or criminal behavior after punishment. Recidivism has face validity as a measure of subsequent delinquency or criminality, but it is important to note that there is no standard measure of recidivism. Many measures are used including rearrest, readjudication, and reincarceration,

each of which is a distinctly different outcome (338). Furthermore, assessing the extent to which recidivism reflects changes in individuals' behaviors or in system responses is difficult, if not impossible (246). Data are limited on all measures because most State juvenile justice systems do not routinely collect any type of recidivism information. Those that do collect such information use measures of recidivism that are not comparable among jurisdictions.

One of the few empirical studies that collected data on multiple measures of recidivism had inconclusive results regarding the effectiveness of juvenile justice systems in decreasing subsequent delinquency and criminality of adolescents in juvenile institutions (251). That study collected followup data on rearrests, reconviction, and reincarcerations of individuals who had formerly been in the juvenile justice systems in Massachusetts, Pennsylvania, Utah, Florida, Texas, Illinois, Wisconsin, and California.

Overall, the followup data indicated that a large proportion of the individuals who had formerly been in juvenile justice systems in the aforementioned States were subsequently arrested. A somewhat smaller proportion of them were convicted within 12 months, and at least half of them were reincarcerated within 36 months (251).¹⁰⁸ These data suggest that the effectiveness of the juvenile justice system in deterring subsequent delinquency and criminality is questionable.

Several hypotheses have been advanced to explain why many offenders who have been confined to juvenile institutions appear to improve in terms of serious delinquency or criminality. One is that court interventions may have deterrent or rehabilitative effects (249,296). Another is that the improvements may be simply statistical artifacts and maturation effects (274). Self-report data show that the duration of serious and violent offense careers among adolescents, whether or not the adolescents have been arrested or confined, is very short (96). At present, there is insufficient empirical evidence to choose among these competing hypotheses.

¹⁰⁸ Twelve-month followups of rearrests found that rates of rearrest ranged from roughly 50 percent in Massachusetts and Pennsylvania to over 70 percent in California and Utah (251). Rates of reconviction ranged from 43 percent to 53 percent, and a 36-month followup of reincarceration rates showed wide variation from 25 percent to over 60 percent (251).

The Effectiveness of Specific Treatment Interventions for Delinquent Adolescents

Interventions for treatment of delinquent adolescents are of two general types:

- interventions provided in institutional environments, which tend to greatly restrict residents' freedom of movement and access to the community (e.g., training schools and ranches), and
- interventions provided in community environments or in juvenile facilities with open environments (e.g., shelters, halfway houses, and group homes) (415).

Available evidence on the effectiveness of specific institutionally based and community-based treatment interventions for delinquent adolescents is reviewed below.

Evaluations of the effectiveness of specific treatment interventions for delinquent adolescents exhibit several problems. One problem is that although most evaluations rely on recidivism as a measure of the effectiveness of specific interventions, different evaluations define recidivism in different ways; numerous evaluations merely report "success" rates without defining the term success.

Another problem is that the effects of a specific treatment intervention on a delinquent adolescent are often difficult to distinguish from the effects of other aspects of the adolescent's involvement in the juvenile justice system, particularly if an adolescent has been brought to the point of adjudication.

Still another difficulty in evaluations of the effectiveness of specific treatment interventions for delinquent adolescents is that most evaluations appear to assume, often incorrectly, that juvenile offenders are a single, homogeneous category (16, 308,346) and that programs that go by the same general name (e.g., group homes) provide the same type of service (74,264).¹⁰⁹ The effectiveness of treatment for delinquent adolescents is believed by many criminologists to be the result of an interaction between offender characteristics and treatment types (295). Evaluations of treatment interventions for delinquent adolescents would be easier to conduct, and interpretations clearer, therefore, if treatment designs matched or tracked the specific type of

treatment with the particular characteristics of the individual adolescent offender or family.

Institutionally Based Treatment Interventions

Treatment interventions provided for delinquent adolescents in institutional environments, such as training schools and ranches, may be used for adolescent offenders who have been officially adjudicated by a court. Unfortunately, the weight of the evidence does not lend much support to the idea that an effective technology of treatment for delinquent adolescents in institutions has been developed.

There is some indication that institutionally based treatment interventions that primarily emphasize comprehensive control and supervision and are grounded in an ideology of punishment are ineffective at reducing recidivism particularly for very difficult adolescents (173,174).

Many States also have proposals or programs for "boot camps"—also known as shock incarceration programs—to make the time spent in an institution an unpleasant, but potentially discipline-inducing, experience. These programs are primarily for young nonviolent offenders serving time on their first felony conviction (427a). Evidence for the effectiveness of such programs is anecdotal, and a clear assessment of their relative value is not possible at this time. There is some evidence, however, that boot camp recidivism rates are approximately the same as these of comparison groups who serve a longer period of time in a traditional training school or who serve *time* on probation (423a).

Whether institutionally based treatment interventions that, for the most part, reject the concept of punishment and are oriented to treatment of adolescent offenders through psychological change are effective at reducing recidivism is not known. Although the question has been studied, the results to date have been inconclusive. Three rigorous reviews of such interventions had three different findings: a finding of little evidence of effectiveness (253); a finding of an overall positive effect (152); and a finding that "appropriate" correctional treatments are more effective than criminal sanctions, inappropriate treatment, or unspecified treatment and that they cut recidivism rates in half on the

¹⁰⁹There have been several promising attempts to differentiate types of delinquents (1,307,324,327) and dimensions of programs, but only a few studies (221) have made any systematic attempt to relate types of delinquents to treatments in terms of effectiveness, and these studies have been methodologically flawed.

average (14).¹¹⁰ Despite the sophistication and comprehensiveness of these analyses, it seems that interpretations of the available data appear to rest as much on the depth and style of analysis as on the actual data (295).

There is some evidence that particular rehabilitative treatment strategies provided to adolescent offenders in institutions are more effective than others. Overall, studies have found that behavioral approaches such as point systems, token economies,¹¹¹ behavioral contracting (14,152,222), cognitive problem-solving and skill development (367), and family therapy interventions (32) are more effective in reducing recidivism than are peer group counseling (169) or individual therapy (152,173).

That evaluations of treatment interventions for delinquents provided in institutional settings have not shown particularly impressive results is perhaps not surprising. Making any treatment intervention for delinquent adolescents work in an institutional environment presents a set of formidable challenges (339). For various reasons, motivating incarcerated adolescents and staff to participate actively in an intervention is extremely difficult. One reason is that the adolescent offenders who are placed in institutional environments are often young people for whom much else has not worked. Moreover, some institutional environments have an overwhelming ethos of social control that can easily compromise even the most sound approach to behavioral change.

Community-Based Treatment Interventions

Treatment interventions provided for delinquent adolescents in community environments or in juvenile facilities with open environments (e.g., shelters, halfway houses, group homes) may be used for adolescent offenders of various types.

Innovative community-based treatment interventions range from *diversion programs*, which seek to limit delinquent adolescents' involvement with the juvenile justice system beyond their initial contact with the police, to variations on standard community

probation, which may entail minimal supervision, to *residential placements*, which may differ only slightly in terms of atmosphere and community access from institutional placements (74). Adolescents who participate in diversion programs are usually delinquents whose offenses are not severe (i.e., official or self-reported status offenders or minor offenders). Most participants in the other types of community-based treatment programs described below are official serious and chronic offenders whose cases have been adjudicated.

Diversion Programs for Delinquent Adolescents¹¹²—Diversion programs seek to reduce the number of juveniles processed by the juvenile justice system by limiting the number passed into courts and custodial facilities and limiting the number at each stage of processing by diverting juveniles to other social control institutions (e.g., the family, schools, child service agencies) or community-based services.

The evidence on the effectiveness of diversion programs in preventing continued adolescent involvement in the juvenile justice system is mixed. Several evaluations of diversion programs nationwide have indicated that such programs have had little effect on subsequent arrest rates of adolescents in the programs (242,368). A carefully done comparative study of four different diversion programs also showed no difference between diverted and processed youth on either self-reported or official delinquency after a year (91). In addition, adolescents who previously would have been warned and released were diverted into community programs, paradoxically expanding rather than reducing the number of juveniles handled by the system (21,47,321).

However, some diversion programs have been reported to be successful (e.g., 31,46). One series of carefully designed and implemented studies (82,83,84) consistently showed the effectiveness of an 18-week intervention by paraprofessionals using behavioral contracting and advocacy strategies in reducing rearrest rates for up to 2 years following program

¹¹⁰ 'Appropriate' community-based treatments were identified by the authors of the study as 1) treatments in which the more intensive service option was delivered to higher risk cases; 2) all behavioral treatments except those involving delivery of services to lower risk cases; and 3) nonbehavioral treatments that clearly stated that criminogenic need (i.e., dynamic risk factors that are predictive of criminal involvement) was targeted and that structured intervention was used (14).

¹¹¹ Token economies reward offenders for competence with points redeemable for money and desirable goods.

¹¹² Diversion programs specifically those that are targeted at adolescents who have not been officially classified as offenders, are sometimes considered secondary prevention programs. Indeed, most diversion is done by police and only a small proportion of police contacts with adolescents ever result in an arrest and further processing (270). Although such adolescents do not satisfy the legal definition of delinquency, they do satisfy the behavioral definition and are therefore included in this section on specific treatment interventions.

involvement (82). However, the 18-week intervention did not reduce self-reported delinquent behavior (83). Another study found significant decreases in recidivism rates among adolescents in diversion programs in Colorado (334).

Another well-designed study found positive effects of an intervention that integrated identified antisocial adolescents (who were referred by schools and the juvenile court before they progressed into the juvenile justice system) into activities with nondisturbed peers (132). This soundly designed study found reduced self-reported and official delinquency in targeted youths who participated in groups with higher numbers of nonreferred youths run by experienced group leaders.¹¹³ Although the sample was small, the soundness of the design and concurrent evidence of positive modeling effects from other investigations (e.g., 355) suggest replicating the intervention.

Restitution Programs—Restitution programs can decrease an offender's likelihood of readjudication (357,359). Restitution programs require adjudicated offenders either to pay their victims directly to compensate for the victim's loss or to perform a specified amount of public service. Sometimes, restitution programs also involve direct mediation between the offender and victim (212,357). Despite the promise of such programs, overall questions remain about the conditions necessary for restitution programs to work.

Group Homes—Of the residential placement options in community treatment, one of the most popular is the group home. One model of a group home is the Teaching Family Model—a model in which a trained couple live with about six chronic delinquents and administer a systematic behavioral system of points and privileges to guide the adolescent's behavior. The adolescents typically attend local public schools (327). This model appears to reduce adolescents' behavior problems during treatment, but these effects disappear after adolescents leave the group home (49,241,327).

Wilderness Camping Programs¹¹⁴—Wilderness camping programs have not been sufficiently evaluated (295) to justify claims of their effectiveness (173). A few studies have shown positive effects (238,456), but, in general, the programs have failed to show lasting reductions in recidivism rates or to document the relevance of these programs for the subsequent adjustment of participants in their communities. They appear to have potential benefit for some participants, but the nature, extent, and conditions under which positive outcomes occur is unknown.

Intensive Probation Programs—Intensive probation programs in lieu of institutional placement are becoming more widespread (17,18). The most recent evaluation of these efforts (34) compared the outcomes of serious and chronic adolescent offenders assigned to intensive probations with those of a similar institutionalized control group. After 2 years, the recidivism rates, as measured by arrests and self-reported delinquency, were similar, although the control group's charges were more serious. The intensive supervision programs, however, are reported to cost less than one-third as much as the average State commitment (34). In 1986, for example, the intensive supervision programs were reported to cost an average of \$26 per day for each participant as compared with commitment costs of an average of \$88.54 (34).

Family Therapy and Family Communication Skills Training—Family therapy and family communication skills training has been used as a treatment for families of delinquent adolescents. Several studies have shown that, in the short term, family systems approaches cut recidivism rates by half in comparison with more traditional forms of psychotherapy (client-centered relationship therapy, psychodynamic therapy) and no treatment comparison groups (2,166) and have a greater impact on child and family functioning than other types of therapy (198,236,314).

Preliminary results from an evaluation of a multisystemic psychotherapeutic 15 approach to treat-

¹¹³ Feldman has noted the importance of an experienced and well-trained adult leader in programs that involve adolescents (132).

¹¹⁴ Although a variety of organizations offer somewhat different outdoor experiences for adolescents, all of the approaches rely on the natural stresses and contingencies provided by the wilderness to encourage personal development and group cooperation.

¹¹⁵ The multisystemic approach to psychotherapy differs from more traditional approaches in that all elements of the identified client's ecological system (including schools, sports teams) are included in the treatment as needed. Treatment approaches are flexible rather than theoretically rigid and maybe delivered in settings other than the clinician's office (e.g., adolescents' homes and schools). In addition, the multisystemic approach emphasizes the utilization of theoretical findings in developmental psychology (197).

ing the families of delinquent adolescents show marked reductions in family dysfunction and official delinquency; further exploration of such intensive interventions seems warranted (197). Since most family interventions for delinquency have experienced nearly a 50-percent dropout rate (186), however, the targeted child's and family's characteristics, as well as methods for making adherence more attractive to families, are all factors that must be investigated further if these initial developments in family approaches are to be expanded. It is clear that dropout families tend to have older children (141), to be poorer and more stressed, to be headed by single parents (275,335), and to have fewer social supports (89,438). Patterson and his colleagues have also been less successful with older, chronic delinquents than with younger, aggressive children (275, 335).

Comparison of Community-Based and Institutionally Based Treatment for Delinquent Adolescents

A major debate in the juvenile justice field centers on the relative advantages of community and institutional treatment for juvenile offenders. Although a meta-analysis of community-based treatment programs for delinquent adolescents produced consistently positive effect sizes (170), available studies comparing the effectiveness of community-based and institutionally based treatment have produced conflicting results (1 13,271,296).

Probably the most relevant natural experiments were interventions first attempted by Massachusetts and later by Utah, Pennsylvania, and Vermont. These four States deinstitutionalized adolescent offenders and returned them to their communities or transferred them to small, community-based residential facilities.¹¹⁶ Evaluations found that the deinstitutionalization of adolescent offenders was not followed by an increase in the frequency or seriousness of juvenile crime in Massachusetts and Utah (245,248,382) or in the other States (382). Studies of the Massachusetts experiment found that the community circumstances to which the adolescents returned affected their adjustment to reinstitutionalization (75). Adolescents who returned to communities with alternative, nonresidential programs were half as likely to be rearrested as

adolescents who were merely placed on informal probation (75). Moreover, adolescents who returned to social networks that included delinquent peers were more likely to be re-arrested than adolescents who reported having a positive relationship with at least one law-abiding adult (74).

Two recent methodologically sophisticated studies that have produced some seemingly sounder results may clarify the situation with respect to the relative advantages of community-based and institutionally based treatment interventions for delinquent adolescents. One of the studies examined the outcome of 11 different dispositions ranging from outright release to a combination of more than 2 months detention with 2 years probation (460). This study found several counterintuitive interactions among length of treatment, type of treatment, and setting. Shorter periods (under 1 year) of supervision without treatment appeared more effective than extended supervision; both short-term (under 2 months) institutional treatment and longer term (over 2 years) community-based treatment were relatively effective in reducing recidivism. The other study examined community-based and institutional residential interventions and found that 'appropriate' community-based treatment (as defined in a previous footnote) produced stronger effects on recidivism than did institutionalization (14). In this study, all community interventions were nonresidential. Types of community treatment were not differentiated from each other in the main analyses, because preliminary analyses indicated that the different community settings had recidivism results that were statistically indistinguishable; as a group, they were found to be more effective than the institutional settings (14). The methodological sophistication (e.g., a clearer definition of treatment and control of other influences on recidivism) of these two studies increases confidence that community-based treatments for delinquent adolescents are more effective at reducing recidivism than are punishment or treatments in institutions, as long as the treatment is appropriate and extensive.

There are few rigorous analyses of the cost-effectiveness of various juvenile justice interventions. Some observers consider the question of the cost-effectiveness of the different approaches to be an open question (243,342,382). Other observers

¹¹⁶Massachusetts placed about 15 percent of youths committed to the Department of Youth Facilities in locked facilities; the remaining 85 percent were managed in small group homes, foster care placements, day treatment programs, and intensive supervision programs (245,248).

contend that substantial fiscal savings are realized through the extensive use of community-based programs in lieu of training schools (e.g., 245,248). Controlled studies that take into account the total cost for equivalent treatments, including startup costs, in community and institutional settings are needed to address this issue.

Health Care in Juvenile Justice Facilities

By almost any yardstick, the juvenile justice system in this country has not been effective in providing necessary health services to incarcerated adolescent offenders. Though most available information on health care in juvenile justice facilities is over 10 years old, the few more recent studies do not suggest major improvements in health care provided to incarcerated adolescents. The composite picture that emerges from a review of the research is one of continuing inattention and neglect of the health status of incarcerated adolescents. As discussed further below, adolescents entering detention and correctional facilities tend to have poorer health histories than their nonincarcerated counterparts and are frequently suffering from significant health problems at the time of admittance. Once admitted to a correctional facility, they face substantial health risks *within* the facility and may be unable to obtain appropriate medical treatment when they are ill or injured.

As reported by two independent series of investigations, incarcerated juvenile offenders tend to have medical histories that show higher rates of perinatal problems, previous hospitalization, trauma (including head trauma), parental abuse, and neurodevelopmental problems than are found among nondelinquent youth (260,261,305,370). Existing inventories of the health problems of incarcerated youth reveal that juvenile offenders have a broad range of preexisting health conditions before incarceration (9,461). That many of these preexisting conditions may not have been appropriately treated is suggested by at least one study, which found that 34 percent of adolescent offenders (as compared with approximately 8 percent among nonoffending adolescents) did not have a consistent source of health care (260).

The health problems of adolescents entering juvenile facilities and of adolescents after they are incarcerated are discussed further below. Also discussed is the quality of health care in juvenile custodial facilities, primarily institutional.



Photo credit: Office of Technology Assessment

The health care of adolescents in juvenile confinement is a serious cause for concern because adolescents in confinement have a greater than average number of health problems, because their health problems may increase during confinement, and because only 1 percent of eligible juvenile justice facilities have been accredited as meeting existing voluntary standards for providing health care.

Health Problems of Adolescents Entering Juvenile Justice Facilities

Nutritional problems and physical illnesses are quite common among adolescents entering juvenile justice facilities. Studies have identified high rates of iron deficiency (a marker of poor nutritional status), upper respiratory tract infections, psychosomatic problems indicative of stress (headaches, sleep disturbances, abdominal complaints, lethargy, and poor appetite), dental and skin problems, minor trauma, and congenital malformations, among other problems (7,193,347).

Many adolescents entering juvenile justice facilities have significant mental health problems—particularly depressive disorders, which are often accompanied by feelings of hopelessness and low self-esteem (217). Various studies have estimated that 15 to 23 percent of adolescents entering juvenile facilities have mental health problems (67,233,28 1). It is important to note, however, that the aggregate rates of mental health problems among juveniles

entering juvenile facilities are not different from those in the U.S. adolescent population.¹¹⁷

Adolescents entering juvenile facilities do tend to have a higher level of experience with drugs and alcohol than the general adolescent population, and nearly universal use of tobacco (60,193,228,266,422).

There is some evidence that female adolescents entering juvenile justice facilities are more sexually active than other female adolescents, possibly accounting for high rates of sexually transmitted diseases at the time of admission.¹¹⁸ Virtually all of the detained female adolescents in a 1981 study in New York City were sexually experienced by the time they were age 15, whereas only 25 percent of a national noninstitutionalized urban sample had a similar level of experience (194,464). In a 1985 study of female adolescents detained in King County, Washington, 81 percent of the females complained of vaginal discharge and only 8 percent had no genitourinary symptoms (39). Although none of these adolescents were diagnosed with syphilis, 48 percent had trichomoniasis, 20 percent had chlamydia infection, 18 percent had gonorrhea, and 4 percent had early signs of cervical cancer. In another study of adolescents detained in New York City during 1983-84, gonorrhea was diagnosed in 18 percent of the females and 3 percent of the males, while syphilis was detected in 2.5 percent of the females and 0.6 percent of the males (3).

Health Problems Experienced by Adolescents During Incarceration

If adolescents admitted to juvenile justice facilities are already comparatively unhealthy at the time they are admitted, once inside an institutional correctional facility, they frequently are exposed to additional risks.

Suicide poses a significant risk for adolescents who are incarcerated in juvenile and adult institutions (289). In 1984, the estimated suicide rate for juveniles incarcerated in public correctional facilities was 22.6 deaths per 100,000 adolescents in the population at risk—a rate of suicide 2.5 times higher than the rate for adolescents in the general popula-

tion (9,292).¹¹⁹ In addition, 12 percent of juvenile correctional institutions reported at least one death by suicide within a 5-year period (15). Minors appear to be at especially high risk for suicide if they are detained in adult jails (9,354).

Confinement in juvenile correctional facilities may expose adolescents to institutional procedures that can have adverse health consequences (79). Lack of sufficient staff, for example, may encourage inappropriate use of psychotropic drugs or physical restraints to control behavior. Inadequate supervision may increase the hazard of suicide or assault. And isolation or disciplinary procedures may be abusive or excessively punitive in some facilities (9).

One major health problem for adolescents during incarceration in residential facilities appears to be trauma, although this problem has not been well-studied. A 1985 study found that about half of the residents of one coeducational training school required medical attention for traumatic injuries—one-third of which resulted from fighting or self-inflicted wounds (462). More than one-quarter (28 percent) of the injured adolescents in the 1985 study required attention at an off-campus facility, and one-fifth (21 percent) of injuries needed radiologic or laboratory studies; 4 percent of the injuries necessitated hospitalization (462).¹²⁰ In another study, 37 percent of the subjects described deliberately harming themselves (without suicidal intent) during the period of their incarceration (216).

Quality of Health Care in Juvenile Justice Facilities

Given the preexisting physical and mental health problems and the documented health risks confronting adolescents committed to juvenile facilities, an important question is: What is the quality of care provided in these institutions? Addressed below are the studies that have investigated this question, the standards that have been promulgated in an effort to enhance the quality of care, and selected financing barriers (i.e., in Medicaid) to expanding the provision of care in juvenile correctional facilities. Finally, issues regarding continuity of care when

¹¹⁷For a discussion of the prevalence of mental health problems among U.S. adolescents, see ch. 11, "Mental Health Problems: Prevention and Services," in this volume.

¹¹⁸For a discussion of the prevalence of sexually transmitted diseases among adolescents, see ch. 9, "AIDS and Other Sexually Transmitted Diseases: Prevention and Services," in this volume.

¹¹⁹For a discussion of adolescent suicide, see ch. 11, "Mental Health Problems: Prevention and Services," in this volume.

¹²⁰For a discussion of accidental injuries among adolescents, see ch. 5, "Accidental Injuries: Prevention and Services," in this volume.

adolescents are released from juvenile justice facilities are discussed.

Studies of Quality of Care in Juvenile Correctional Facilities-At least three separate studies have investigated aspects of the quality of care and concluded that many juvenile correctional facilities provide inadequate health and medical care for the adolescents in their charge.

One of the three studies explored how well medical specialists in one residential facility detected health problems of juveniles during evaluations at the time of admission (262). This study found that medical providers at the facility frequently failed to identify important health status information, including data relevant to their fields of expertise (e.g., pediatrics, neurology, and psychiatry)

The other two studies explored the availability of health services for juvenile offenders in custody. One, Anno's 1984 analysis of responses to questionnaires sent to 600 juvenile facilities, found that only two-thirds of the 215 responding facilities met the American Medical Association's standards for frequency of sick calls¹²¹ and the use of qualified health care personnel (15). Although almost three-quarters of institutions (72 percent) completed full health appraisals within a week of each adolescent's admission, 40 percent of the institutions did not routinely provide medical screening on admission, and more than half (58 percent) of the facilities used nonphysician staff to conduct screenings. Three-fourths (76 percent) of the facilities holding minors awaiting adjudication and one-fifth (18 percent) of the facilities holding minors who already had been adjudicated did not provide ongoing mental health services. Fewer than half (42 percent) of institutions provided dental services on a continuing basis.

The other study that explored the availability of health services for juvenile offenders was a state-wide survey of 25 institutional facilities in Georgia (219). This study found that the frequency of sick

calls at these facilities varied from 4 days a week to once every other week, although 1 day per week was the most common. Although other findings of this survey were not quantified, the study investigators did raise concerns about inappropriate use of hospital emergency rooms, nonstandardized screening, high staff turnover and low morale, confusion about the legal and medical rights of incarcerated adolescents, and inadequate medical care budgets.

Standards for Health Care-As noted above, two of the three studies that have investigated the quality of care provided in juvenile correctional facilities used existing sets of standards as a basis for comparison. The American Academy of Pediatrics wrote one of the first sets of standards for the health care of juveniles in juvenile facilities in 1973 (5). The American Medical Association developed a set of standards for health services in juvenile facilities in 1979 (8). In 1984, 20 national professional health care organizations developed a comprehensive set of standards for the provision of health care in juvenile correctional settings. These "Standards for Health Services in Juvenile Confinement Facilities" were drafted and released by the National Commission on Correctional Health Care.¹²² They specify that health services in juvenile correctional facilities should be equivalent to those available in the community (79).¹²³

Compliance with any of the existing standards for the health care of juveniles in juvenile confinement facilities is completely voluntary. As of 1990, only about 32 of the more than 3,000 juvenile facilities in the country were accredited by the National Commission on Correctional Health Care-and those 32 were predominantly in Los Angeles, California, and the State of Washington (64).

Thus, voluntary standards for the health care of juveniles in juvenile confinement facilities apparently have not been successful in fostering improvements in the quality of health care provided in juvenile facilities. Intervention by the judicial

¹²¹*Sick calls* are periodic opportunities provided by institutions for health status checks and for persons to declare illness or health problems and be relieved from the daily schedule in order to receive health assessments or treatment. The standard adopted by National Commission on Correctional Health Care for accreditation of juvenile custodial facilities requires sick calls to be conducted by a physician or nurse at the site of the institution's clinic (300). Under this standard, a facility of less than 50 juveniles must have its clinic open for sick call at least once per week. Facilities with 50 to 200 juveniles in residence must open their clinics at least three times during the week. For facilities with a resident juvenile population over 200, clinics must be open for sick call 5 days per week. OTA did not evaluate the validity of the National Commission on Correctional Health Care standards.

¹²²There are also other voluntary model standards for the health care of incarcerated juveniles (298).

¹²³Nonetheless, some question the adequacy of the standards. They do not, for example, prohibit the health care Professional 'rem cooperating in * inappropriate use of medical procedures for punitive and control purposes (79).

branch is another approach to forcing improvements. The issue of whether incarcerated juveniles have a constitutional right to treatment, however, is unsettled. On the one hand, the U.S. Supreme Court has never decided whether incarcerated adolescents have a constitutionally based right to treatment, and some Federal courts have ruled that incarcerated children do not enjoy the right to treatment (79,254). On the **other** hand, many Federal **courts** have held **that** denial of adequate medical and mental health care violates the Eighth and Fourteenth Amendments **to the** U.S. Constitution (79). Accordingly, Federal courts have required **some juvenile correctional facilities** to provide routine and emergency medical and mental health care (79). One might expect alleged deficiencies in health care within juvenile correctional facilities **to be a common** subject of litigation. Yet legal challenges **to the** quality of care in juvenile justice facilities are fairly rare occurrences.¹²⁴

Medicaid Barriers—Many factors contribute to the problems surrounding health care delivery in juvenile correctional institutions. Fiscal pressures faced by juvenile **correctional** facilities have been reported **to be** among them (9). In this respect, **current** Federal restrictions **on** Medicaid reimbursement are significant, especially since few **incarcerated** adolescents can be expected **to** have private health insurance.

Existing Federal regulations do **not** permit Medicaid **to** pay for medical and health-related services provided in publicly funded juvenile **correctional** institutions (42 CFR 435.1009). Health care in **juvenile** correctional institutions is supported exclusively by State and county governments, frequently **as a line** item expense in an institution's total operating budget (217). Within **a** particular institution, therefore, health and medical needs compete with other organizational needs. Medical care personnel may be forced **to** ration evaluation and treatment **resources**. Paying for the **costs of a simple** hospitalization, especially if any operative procedure is involved, may seriously compromise an institution's budgetary capability **to** provide for the health and medical needs of **other youth**.

Continuity of Care—If the quality of care within many **juvenile** correctional facilities **is** often inade-

quate, adolescents, upon leaving the institutions, **seem to face yet another** problem. In **a juvenile** correctional facility, **continuity of care optimally** includes discharge planning by medical staff to **assure** uninterrupted provision of health care for the adolescent. Service fragmentation prevents full implementation and coordination of care during an adolescent's transition **from an** institution back **to the community** (9). Upon release **from a** correctional institution back **to the community**, for example, **a juvenile** may become eligible for the Medicaid reimbursement denied during incarceration. The switch **from one source** of funding for health care **to another source at the time** of an adolescent release **into the community** may complicate the coordination of **service** delivery. Many incarcerated adolescents are moved among different **community placements** and have no regular source of health care. Thus, their health care after discharge may be left **to the vagaries of circumstance**.

Summary: Services and Interventions for Adolescents in the Juvenile Justice System

As **a country**, the **United States** spends billions of dollars annually **on its juvenile** justice system. An important question **to** consider, therefore, is whether the funds **that are** allocated are obtaining the desired results of protecting the public safety and providing for the protection of the best interests of each adolescent in the juvenile justice system for delinquent offenses.

One **measure** of the **juvenile** justice system's effectiveness is whether it *serves* adolescents' **best** interests *while they are in the* system. OTA's analysis suggests **that services** and interventions for adolescents in the juvenile justice system are frequently **not** provided with an understanding of the developmental **status** of **adolescents** and **a** recognition of the legal rights of adolescents (e.g., **access to legal counsel**).

Another measure of the effectiveness of the **juvenile** justice system **is how well it serves the** public safety and adolescents' best interests after they leave the **juvenile** justice system. The **juvenile justice** system would probably be considered **effective** if adolescent offenders **were** deterred from subsequent delinquency and criminality after con-

¹²⁴Only 4 percent of the 215 juvenile facilities responding to Anno's 1984 survey mentioned above reported having had a lawsuit regarding the adequacy of health care filed against them in the preceding 5 years (15).

tact with the system. Because of a lack of data on, and unstandardized means to measure, adolescent offenders' social adjustment following their release from juvenile facilities, however, the effectiveness of the juvenile justice system *as a system* in deterring subsequent delinquency and criminality cannot be accurately evaluated.

Some data are available on the effectiveness of *specific* interventions for treating adolescent delinquents and reducing recidivism, although measurement problems, such as unstandardized measures of recidivism, limit definitive conclusions. Interventions for treating delinquent adolescents tend to be either community-based or institutionally based.

Institutionally based treatment interventions for delinquent adolescents are those provided in institutional environments such as training schools. There is some limited evidence that behavioral approaches to treatment in institutions—for example, the use of point systems, token economies, and behavioral contracting (14, 152,222), cognitive problem-solving and skill development (367), and family therapy interventions (32)—are more effective in reducing recidivism than nondirective peer group counseling (169) or traditional individual therapy interventions (152,173).

Community-based treatment interventions for delinquent adolescents include diversion programs that attempt to keep delinquent adolescents out of residential placements. The effectiveness of diversion programs may be overstated because of the inclusion of first-time offenders in the programs (343). Nonetheless, some programs with clearly defined and well-implemented interventions that incorporate behavioral and family-based change strategies have produced clear reductions in subsequent arrest rates (82), though not in self-reported delinquency behavior (83).

Another community-based treatment intervention that a well-designed study found to be effective in reducing delinquency was an intervention that involved integrating adolescents identified as antisocial with nondisturbed peers (132). Replication of the processes that may have produced these positive effects certainly seems warranted.

Other evidence of the effectiveness of community-based treatment interventions for delinquent adolescents comes from evaluations of family therapies (2,144, 166, 198,314). Two caveats are that several of

the evaluations of these strategies failed to assess long-term impact on delinquency, and that these strategies are often plagued by high dropout rates (186),

Family group homes appear to reduce behavior problems during treatment, but these effects disappear after adolescents leave their group home (49,241). Wilderness programs in general have failed to show lasting effects (238,456), or document the relevance of these programs for the juveniles and their subsequent adjustment in their own communities. Similarly, restitution programs appear successful for some juvenile offenders in some circumstances (357), but questions remain about the conditions necessary for restitution to work. Lastly, a recent evaluation of programs found that recidivism rates of adolescents assigned to intensive probation programs were similar to those of institutionalized adolescent offenders (34).

The general lessons noted earlier in the summary related to the effectiveness of delinquency prevention programs pertain to treatment interventions as well. Overall, longer or more intensive community-based treatment interventions and/or treatment interventions that improve family functioning, incorporate some form of behavioral intervention, and modify delinquents' social networks seem the most promising, provided that they are appropriate to the juveniles' needs and strengths. Although institutionally based treatment may be necessary for some juvenile offenders, community-based treatment seems to be appropriate for many more youth than institutional treatment.

An example of how the best interests of adolescents are not well served in the juvenile justice system are the shortcomings in the provision of health care services to adolescents in custodial facilities. Existing studies suggest that health care services in juvenile correctional facilities are inadequate. The availability of health care is very important for adolescents in juvenile custodial facilities because many adolescents enter juvenile facilities with significant physical and mental health problems, and confinement in juvenile institutions increases the range of health problems they acquire. Health care standards for accreditation of custodial facilities do exist, but the standards are voluntary and only a very small percentage of custodial facilities are accredited. Another factor that appears to have a major impact on the lack of adequate care

for adolescents in custodial juvenile facilities is the **fiscal** limitations in such institutions, for example, restrictions on Medicaid payment.

Major Federal Policies and Programs Pertaining to Adolescent Delinquency

Although **juvenile** justice is primarily a State and local issue, there has also been considerable involvement in juvenile justice issues by the legislative, executive, and the judicial branches of the Federal Government.

Legislative and Executive Branch Policies

From the early 1960s until 1974, the Federal Government's legislative and executive focus was on delinquency prevention and early intervention. In the early 1960s, a Presidential Committee on Youth Crime funded large-scale delinquency prevention programs in major urban areas, and later in the 1960s, a Presidential Commission on Law Enforcement and Administration of Justice recommended an emphasis on prevention diversion and deinstitutionalization. In 1968, Congress enacted legislation that called for grants to States and localities to improve juvenile justice and delinquency prevention programs to be administered by the U.S. Department of Health, Education, and Welfare [now the U.S. Department of Health and Human Services and the U.S. Department of **Education**]. **That same year (1968)**, Congress also passed the Omnibus Crime Control and Safe Streets Acts that involved the U.S. Department of Justice in **juvenile** justice for the first time.

The 1974 Juvenile Justice and Delinquency Prevention Act (Public Law 93-415) represented a major step in enlarging the Federal Government's role in juvenile justice. After nearly 5 years of exhaustive investigations, the Subcommittee on Juvenile Delinquency of the U.S. Senate Judiciary Committee concluded that the existing juvenile justice system was failing miserably in several ways (401).¹²⁵ Congress responded by enacting the Juvenile Justice and Delinquency Prevention Act. That act established an Office of Juvenile Justice and Delinquency Prevention (OJJDP) in the U.S. De-

partment of Justice¹²⁶ and a **program** of Federal **grants to the States administered** by OJJDP to provide **technical assistance to help them come into compliance with the act's provisions**. The 1974 act required States to remove status offenders and nonoffenders (e.g., abused and neglected youth) from secure confinement and to separate adult and juvenile offenders as a condition of receiving Federal tiding. It also mandated new data collection and research efforts, including the dissemination of the findings of research and all data related to juvenile delinquency.

By 1978, the budget of OJJDP had increased to over \$100 million per year from \$14.5 million in 1975 (153). **At that time**, OJJDP played a major role in helping jurisdictions implement a 1980 amendment to a Juvenile Justice and Delinquency Prevention Act which required the complete removal of juveniles from jails and police lockups.

From 1981 to 1989, the focus of the Federal juvenile justice program on prevention, diversion, and assisting groups that litigated the rights of adolescent offenders shifted to concern over violent offenders, pornography, missing children, and school safety (333). Throughout this period, the Office of Management and Budget also proposed the elimination of funding for OJJDP.

For 8 consecutive years, Congress restored an appropriation for OJJDP over the objections of the U.S. Department of Justice and the Office of Management and Budget. Nonetheless, the total allocation to OJJDP decreased during this period and in 1989 was \$66,692,000 (430). In 1990, although the President's budget recommended a large cut in funding for OJJDP, Congress appropriated \$72,482,000. **Virtually all of this amount is devoted to projects related to adolescents.**¹²⁷

In the last decade or so, the focus of **most** Federal **initiatives within OJJDP** has shifted from a delinquency prevention model to a criminal justice model emphasizing: 1) vigorous prosecution of serious juvenile offenders, 2) a new focus on the plight of missing children, 3) mandatory and harsher sentencing laws, 4) programs to reduce school violence, and 5) national crusades against drugs and pornography

¹²⁵Among other issues, the subcommittee hearings focused on the continuing problems of children held in jails, status offenders housed together with violent offenders, the lack of trained personnel, and inadequate prevention resources.

¹²⁶Ch. 19, "The Role of Federal Agencies in Adolescent Health," in Vol. III, describes OJJDP's current major activities.

¹²⁷For further discussion, see ch. 19, "The Role of Federal Agencies in Adolescent Health," in Vol. III.

(246,332). The wisdom of this approach has been questioned by many in the criminology field (246). OJJDP's priorities for fiscal year 1990 are serious juvenile delinquency, illegal drug use, youth groups (gangs), and missing and exploited children (430).

OJJDP's priorities appear to reflect a belief that the problems related to the prevention of delinquency are too large and intertwined with other social service elements for OJJDP to manage in light of its relatively small budget. OJJDP has suggested that other Federal agencies who have experience with adolescents could apply their efforts to delinquency prevention efforts before problems become juvenile justice issues.

Within the U.S. Department of Health and Human Services, several agencies are developing programs concerning adolescent involvement in delinquent activities. Among these agencies are the Centers for Disease Control in the Public Health Service and the Administration for Children, Youth, and Families in the Office of Human Development Services. The Injury Control Division of the Centers for Disease Control has mounted studies of violence, for example, that include adolescent violence. In fiscal year 1989, however, the Injury Control Division spent only \$1.3 million on projects related to violence (355a).

Judicial Branch Policies

In the last 25 years, the U.S. Supreme Court has handed down a series of decisions related to juvenile court rules. One of these was the landmark decision *In re Gault* [387 U.S.1 (1967)]. In this decision, the Supreme Court specified a detailed set of rights that must be accorded juveniles. The Gault decision focused on notification of charges, protection against self-incrimination, the right to confront witnesses, and the right to have a written transcript of the proceedings. A more recent Supreme Court decision, *Schall v. Martin* [467 U.S. 243 (1984)], upheld the constitutionality of preventive detention of juveniles for their own protection and for the purpose of preventing pretrial crimes.

Whether juveniles in correctional facilities have a constitutional right to health care treatment is not resolved. As of the end of 1990, the U.S. Supreme Court has not ruled on that issue. Some lower Federal courts, however, have ruled on issues related to health care and treatment. Examples of rulings by lower Federal courts, include the following:

- An incarcerated child has the right to receive adequate treatment, including medical and mental health care, as well as the right to be free from brutal and oppressive conditions [*Inmates of Boys' Training School v. Affleck*, 346 F. Supp, 1354 (D. R.J. 1972); *Morales v. Turman*, 364 F. Supp. 166 (E.D. Tex. 1973); *Nelson v. Heyne*, 355 F. Supp. 451 (N.D. Ind. 1972), *aff'd*, 491 F. 2d 352 (7th Cir. 1974), *cert. denied*, 417 U.S. 976 (1974); *Gary H. v. Hegstrom*, No. 77-1039-BU (D. Or. Dec. 17, 1984); *Swansey v. Elrod*, 386 F. Supp. 1138 (N.D. Ill. 1975)].
- Juveniles must have sufficient medical staff and nursing staff to provide effective preventive and curative care for the health of all juveniles [*Morales v. Turman*, 388 F. Supp. 53 105 (E.D. Tex. 1974)].
- Juveniles should be free from the administration of psychotropic medication in an indiscriminate, unsupervised, unnecessary, or excessive manner [*Morales v. Turman*, 388 F. Supp. 53105 (E.D. Tex. 1974)].
- An individual's constitutional right to treatment includes the right to individualized treatment for drug and alcohol dependency (79). (*Gary H. v. Hegstrom*, No. 77-1039-BU (D. Or. Dec. 17, 1984)].

Conclusions and Policy Implications

Consideration of adolescent delinquency in this country raises numerous issues important to public policy: How serious a problem is adolescent delinquency? Is it getting worse, or better? What causes adolescents to commit delinquent acts? Can delinquency be prevented? When delinquency occurs, what should the societal response be—punishment or treatment? As this chapter demonstrates, despite the longstanding national concern about delinquency among U.S. adolescents, the answers to these questions have not been resolved. The methodological limitations of available studies are partially responsible for the lack of definitive knowledge on delinquency, as are controversies regarding the definition and measurement of delinquency. Because of the ideological differences among observers, certain issues pertaining to adolescent delinquency are unlikely ever to be resolved definitively. Nonetheless, available information provides some direction for public policy decisions,

The number of U.S. adolescents who commit delinquent acts is one measure of adolescent delinquency. Available evidence indicates that most individuals in the United States admit committing some delinquent act during their adolescence. The precise number of adolescents who commit specific types of offenses is difficult to determine. According to National Youth Survey data from 1976, about 21 percent of adolescents commit at least one serious delinquent act (i.e., aggravated assault, forcible rape, and robbery) during adolescence, and about 5 percent report committing multiple serious offenses. On the positive side is evidence that most adolescents' engagement in delinquency—even serious delinquency—is of short duration. Evidence from the National Youth Survey is dated, however, and was obtained from adolescents who lived in an environment rather different from the current one.

The number of delinquent acts committed by U.S. adolescents in the aggregate is another measure of delinquency. Here again, however, the precise number is difficult to determine. One reason is that there are a number of different measures of delinquency; another reason is that the measures differ widely in their findings. Data indicative of the state of the problem are that in a single recent year (1987), there were 1.7 million arrests, approximately 1.4 million referrals to juvenile courts, and 700,000 admissions to custodial facilities among 10- to 17-year-olds.¹²⁸ In the aggregate, arrest rates for delinquent acts have declined in this country since the mid- 1970s. However, arrest rates for aggravated assaults by U.S. adolescents have increased since the mid- 1970s and arrest rates for murders by U.S. adolescents have risen in the past 4 years, suggesting that violence by adolescents is increasing.

Some limited self-report data confirm the rise in aggravated assaults, but more comprehensive data are needed to confirm or to contradict the trend in violence by adolescents. A periodic longitudinal survey of adolescents with questions about problem behaviors could yield information on adolescents involved in delinquent behavior and the number of delinquent acts committed by adolescents.

What causes adolescents to commit serious delinquent offenses? It is clear that not one but many risk factors contribute to an adolescent committing serious offenses. On the whole, however, the risk factors for delinquency are not completely understood.

Certain demographic characteristics—being in the age group 15 to 17, being male, being black, and having access to an urban area—are more associated with serious delinquency than others. The relationship of race to delinquency is unclear. When one examines self-reports of serious offenses, racial disparities are much smaller than those typically reported in arrest statistics. Furthermore, about half of black adolescents live in poor or near-poor families, many of them in urban areas typified by high rates of crime and limited educational or employment opportunities;¹²⁹ and adolescents of low income and adolescents who live in urban areas are more likely to commit serious delinquent acts than other adolescents.

Early socially disapproved behaviors, low IQ (particularly poor verbal ability), associating with delinquent peers, and family factors that include parental rejection and lack of parental supervision have been identified as factors increasing the risk of serious adolescent delinquency, and the importance of the association between them and adolescent delinquency has been definitively established. The vast literature on risk and protective factors provides strong clues on the factors in the social environment that can be modified, with the strong probability that much of delinquency can be prevented.

Although much is known about several factors associated with delinquency, there are several reasons why definitive information is not available about risk factors. First, most of the research that has been conducted to date has focused on individual constitutional factors and parental behaviors. Even among these factors, the importance of the relationship between many suspected risk factors, (e.g., biological factors) and delinquency is not known. Furthermore, most of the research on family factors has focused on parental behaviors in white families. There has been little investigation of parental

¹²⁸It is important to note that these data represent arrests, referrals, and admissions, not individuals. Some individuals involved in the juvenile justice system may have more than one arrest, referral, and admission. Further, as noted earlier, some admissions to juvenile facilities are for reasons unrelated to delinquency.

¹²⁹Risk factors confronted by many poor adolescents and adolescents in racial and ethnic minority groups are discussed in ch. 18, "Issues in the Delivery of Services to Selected Groups of Adolescents," in Vol. III.

behaviors in black and other minority families, and the relationship of family factors and the risk of adolescent delinquency in such families is uncertain.

Second, although it is clear that official rates of delinquency vary with the socioeconomic conditions of a community, few studies have investigated the processes by which the socioeconomic environment of the community affects the delinquency of individual adolescents. The economic and social environment of the community and perceived economic and social differences (for example, the perception that opportunity in mainstream society is blocked leading to devaluation of mainstream views) are likely to be associated with adolescent delinquency.

Third, although the same factors identified as risk factors characterize many adolescents who do not commit serious delinquent acts, the reasons why many children and adolescents are apparently ‘‘protected’’ from the adverse effects of certain risk factors have not been fully investigated.

Last, and perhaps most important, the interactions, including the temporal order, among all risk factors are not certain. More comprehensive models that include individual, familial, and community factors, including economic and social factors, are needed to explain and predict delinquency.

Despite incomplete knowledge about the causation of adolescent delinquency, some programs designed to prevent delinquency, while not widely duplicated or tested, have shown promising results in relatively rigorous studies. Overall, successful approaches to prevention can be characterized as those that have the following characteristics:

- they are appropriately supportive of children and adolescents and their families¹³⁰;
- they are intensive (i.e., they involve the commitment of considerable time, personnel, and effort); and
- they are broad-based (i.e., they intervene in a number of the systems—including family, school, and peer—in which the child and adolescent is involved, and use multiple services (e.g. educational, health, and social) as appropriate for the individual child and adolescent).

The most promising primary prevention efforts appear to be conducted early in life for high-risk children. These include the Perry Preschool Program and a broad-based prevention intervention that included parent-skill training. Promising secondary prevention approaches, conducted during adolescence after antisocial behavior has become apparent, include the intensive psychotherapeutic and vocational placement and remedial educational intervention evaluated by Shore and his colleagues and the integration of identified antisocial adolescents into activities with nondisturbed peers. These models deserve additional implementation accompanied by rigorous evaluation. Rigorous evaluations of future preventive interventions based on the knowledge about risk and preventive factors, and additional basic research on the causes of delinquency, are essential to advance knowledge in this field.

Also in need of attention as preventive factors are limits on access to guns and educational interventions intended to help adolescents avoid becoming victims.

The role of guns in adolescent delinquency has not been well researched, but it is clear that the use of guns can exacerbate the outcome of violent delinquent offenses by adolescents, as well as criminal acts by adults. The use of guns by adolescents to commit homicide and the use of guns by people of all ages to murder adolescents have increased in this country since 1976. Additional action may be needed to decrease U.S. adolescents’ access to guns, given that existing Federal legislation already prohibits the sale of rifles and shotguns to individuals under the age of 18 and handguns to those under age 21. Limiting access *to guns* by adults also warrants consideration. The nature of these actions requires further investigation.

Victimization of adolescents is a problem that has received little attention, but adolescents, especially black adolescents, are more likely than Americans in other age groups to be victims of crimes, especially offenses committed by other adolescents. More precise data on adolescent victims is needed, along with approaches to preventing victimization that are broader than approaches that focus on perpetrators (e.g., educating adolescents to avoid victimization).

U.S. adolescents who commit offenses and are placed in juvenile facilities—perhaps 700,000 per

130 See ch. 3, ‘‘Parents and Families’ Influence on Adolescent Health,’’ in this volume for a discussion of models of appropriate parenting.

year-may at first glance seem least deserving of society's attention. In fact, societal views of the relative merits of rehabilitative treatment and punishment change over time. Currently, many Federal and State governments appear to be taking a more punitive approach. The debate is difficult to resolve in the absence of definitive comparative evaluations, but existing evidence indicates that less punitive approaches (e.g., the use of open rather than closed facilities, community-based rather than institutionally based treatment efforts, rehabilitative treatment efforts rather than routine incarceration) are at least as effective as more punitive approaches for many adolescent offenders. Specific rehabilitative treatment interventions that show promise are similar to the most effective preventive approaches in being appropriately supportive of the adolescent and his or her family, intensive, and using multiple services and settings.

Three points about the U.S. juvenile justice system are very clear. First, black adolescents are more likely to be treated harshly by the juvenile justice system—i.e., more likely to be arrested, confined, and housed in secure correctional facilities—than are white, non-Hispanic adolescents. Hispanic adolescents are similarly more likely to be incarcerated than white non-Hispanic adolescents. The imbalance of minorities in the juvenile justice system is currently being examined by a number of national organizations at the request of the Federal Government, so any further governmental action on this issue should probably await the findings of these studies. Second, health care in juvenile justice facilities does not appear to meet the needs of adolescents in custody. Additional in-depth analyses of the causes and consequences of inadequate health care are needed before specific changes in policy are made; in the interim, the Federal Government could act now to make Medicaid available to incarcerated adolescents. Finally, the legislatively mandated role of OJJDP (the Office of Juvenile Justice and Delinquency Prevention) in delinquency prevention is precarious. The executive branch has requested elimination or a substantial decrease in appropriations for the office for many years and has reoriented the office's policy with regard to juvenile justice away from basic research and delinquency prevention to serious and violent offenders and other issues. Perhaps it is time for a reexamination, perhaps by an objective, expert group, of the role of OJJDP vis-a-vis that of other Federal agencies

involved in the prevention and treatment of delinquency.

Chapter 13 References

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