CHAPTER 2

Prevalence of Aggression, Antisocial Behaviors, and Suicide

Over the past 50 years, rates of maladaptive aggression and antisocial behaviors have increased in frequency and severity among children and adolescents in the United States. Although most youth are not seriously aggressive or antisocial, the rates of these behaviors are nevertheless alarming. The consequences of youth violence and related activities presently pose a major public health problem for society. The identification, containment, referral, assessment, and treatment of aggressive young people are challenges for many community institutions, including schools, juvenile justice authorities, and clinical mental health resources. After a peak in the late 1980s and early 1990s, rates of aggression and antisocial behaviors among young people are falling as the new century begins, but they remain at historically high levels.

This chapter discusses the prevalence of excessive, inappropriate aggressive behaviors in children and adolescents. Because some degree of aggression is generally very common and part of normal development, especially in young children, normal developmental aspects of aggression are first discussed. A discussion of the prevalence of maladaptive aggression, antisocial behaviors, and suicide follows. This discussion first draws on community epidemiological data describing the prevalence of conduct disorder (CD), and then presents information from youth public opinion surveys ascertaining self-reported fears and concerns about aggression and violence. Juvenile justice statistics on rates of both victimization and offenses are next considered. Teenage suicide rates are then examined, since suicide can be viewed as the ultimate act of aggression against the self and since violent behavior increases the risk of suicide (Conner et al., 2001). Finally, how rates of juvenile aggression and suicide have affected referrals to clinical child and adolescent mental health treatment is discussed.

In Chapter 1, an attempt has been made to highlight the importance of careful definitions of aggression and to distinguish between adaptive and maladaptive aggression. This chapter defines the topic more broadly. Since little research using homogeneous definitions of aggression has been completed, by necessity this chapter mixes "aggression" with "violence," "delinquency," "crime," and "disruptive problem behavior."

ADAPTIVE AGGRESSION IN NORMAL CHILDHOOD DEVELOPMENT

Aggression is a normal and highly frequent behavior in young developing children. Healthy aspects of aggression facilitate competence in social assertiveness, competition in games, and success in meeting daily challenges. Infants can recognize facial configurations associated with the expression of anger in adults at 3 months of age (Izard et al., 1995). Almost all children display aggressive behavior to some degree during development. Across most cultures, boys are consistently found to be more aggressive than girls. The frequency of aggressive behavior in infants and young children has been examined by researchers studying social conflict. Observational studies (Holmberg, 1977) indicate that approximately 50% of the social interchanges between children 12–18 months of age in a nursery school setting can be viewed as disruptive or conflictual. By age 2½ years, the proportion of conflicted social interchanges decreases to 20%. Almost all of the disruptive behavior in these children is directed toward peers, with very little directed toward adult caregivers. Early interpersonal conflicts serve as a training ground for infants to develop and learn effective social strategies for assertiveness, ownership of objects, and resolution of social conflict. These are important lessons for children to learn if they are to participate effectively in the greater social milieu as they grow older (Hay & Ross, 1982). As such, this type of aggression fits the definition of adaptive aggression.

The forms that aggressive behavior takes also change across development. There is a tendency for physical forms of aggression such as hitting to decrease, and verbally mediated forms of aggression to increase, between 2 and 4 years of age (Goodenough, 1931). In addition, the social purpose or goal of aggression seems to change with age. Children younger than 6 years engage in much aggressive behavior for the purpose of obtaining objects, territory, or privileges from others. This is called "instrumental" aggression (Rule, 1974). Slightly older children, aged 6–7 years, increasingly engage in person-oriented aggression ("hostile" aggression) designed as retaliation toward another child for presumed intentional frustration in a goal-directed activity, an insult, or other threats to one's self-esteem (Hartup, 1974). Over the preschool and early elementary school years, there appears to be a decrease in instrumental aggression and an increase in person-directed, hostile, retaliatory aggression (Parke & Slaby, 1983). At the same time, there is an overall de-

crease in the frequency and intensity of both kinds of aggression; verbally mediated interpersonal skills increase as children channel aggressive impulses and drives into more socially acceptable activities, such as sports, social, and academic achievement.

The precipitants or triggers of aggression also appear to change with development. Anger outbursts in infancy are usually elicited by physical discomfort or the need for attention, whereas "habit training" in toileting, hygiene, and feeding commonly causes outbursts in toddlers (Goodenough, 1931). Conflicts among peers over the possession of objects are also common from 18 to 65 months of age (Dawe, 1934; Hartup, 1974). As children grow older, insults and negative social comparisons (e.g., ridicule, tattling, criticism) become increasingly likely to elicit verbally mediated retaliatory aggression, but relatively unlikely to elicit physical attack (Parke & Slaby, 1983). As development proceeds into adolescence and young adulthood, overt aggression, defined as open confrontation with the environment (e.g., temper tantrums, physical fighting) tends to decline; covert or hidden aggression (e.g., breaking the rules, not telling the truth, cheating, stealing) becomes more common (Loeber, 1990). In adolescence, with the onset of sexual maturity, conflicts to establish or maintain social dominance may be important, especially for males.

Table 2.1 shows these general trends in the developmental aspects of normative aggression. Although hardly scientific, specific, or precise, these broad trends in development can help us begin to recognize which children may be at risk for developing more maladaptive forms of aggression. For example, the preschool child who largely directs aggression toward adults in an out-of-home environment such as a nursery school does not fit what is presently known about the normative aspects of aggression. The school-age child who frequently and repetitively initiates physical attacks on others, rather than beginning to modulate overt aggressive behavior with words, may also be deviating from a normative developmental trajectory. The elementary school child who continues to use physical aggression to obtain possessions from others is another example. These children may be at risk for the development of maladaptive aggression as they grow older. Knowledge about the normative de-

TABLE 2.1. Childhood Age Trends in the Developmental Aspects of Normative Aggression

	Age	
Aspect of aggression	Younger	Older
% time spent in social conflict	High	Low
Form of aggression	Physical	Verbal
Type of aggression	Overt confrontation	Covert and hidden
Goal of aggression	Instrumental (obtaining possessions)	Hostile (self-esteem maintenance)
Triggers	Environmental demands	Social threats

velopmental aspects of childhood aggression can help parents, teachers, and health care providers identify children who might benefit from further evaluation of their aggression at a young age, when treatment for maladaptive behavior may be more effective than later in development (Loeber & Hay, 1997).

PREVALENCE OF MALADAPTIVE AGGRESSION IN COMMUNITY SAMPLES

Conduct Disorder

Since the psychiatric diagnosis of CD contains criteria for many varied acts of maladaptive aggression, prevalence surveys of CD can give a rough estimate of the prevalence of maladaptive aggression among youth living in the community in different countries. As noted in Chapter 1, CD is a disturbance of behavior lasting at least 6 months in which basic rights of others and/or major age-appropriate norms and rules of society are repeatedly violated (American Psychiatric Association [APA], 1994). Overt physical aggression, such as fighting and fighting with weapons, occurs commonly in this condition. Covert, hidden forms of aggression, such as stealing, fire setting, lying, and vandalism, are also frequent among youth meeting diagnostic criteria for this diagnosis. Seven of the 15 criteria used to make the diagnosis of CD in its current form (APA, 1994) code for various aspects of physical aggression. Standardization of the diagnostic criteria for CD has enabled epidemiological studies to determine the prevalence of this diagnosis in different societies.

A summary of these community-based studies is presented in Table 2.2. As can be seen, prevalence rates vary by sampling time frame and range from 0.9% to 20%, with the higher prevalence rates generally reflecting longer sampling times. These rates suggest that maladaptive aggression as ascertained by a diagnosis of CD is not rare among the youth of many different countries. In general, this disorder is less prevalent in prepubertal children than in adolescents. Boys have higher prevalence rates than girls in the prepubertal age range; however, the rate of CD rises for female adolescents and can approach the prevalence for males in the adolescent age range (Kashani et al., 1987). The peak ages for CD-like behavior in boys are 10–13 years. For girls, such behavior peaks at age 16 (Bauermeister, Canino, & Bird, 1994). These findings suggest sex-related differences in the prevalence rates of aggressive behavior that vary as a function of age. Thus, both age and gender are important factors to consider in documenting community prevalence rates for children and adolescents with CD.

Youth Attitudes, Fears, and Concerns about Violence

Public opinion surveys suggest that for many adolescents, issues of aggression, violence, and safety in their schools and neighborhoods are matters of daily concern. A survey of teenagers' attitudes completed in 1996 included a ques-

TABLE 2.2. Estimated Prevalence of CD in Cross-Sectional Studies from the General Population

Study	Age (yr)	Time frame (mo)	Dx. criteria	Prevalence (%)
Ontario, Canada[a]				
Overall	4–16	Past 6	DSM-III	5.5
Preadolescent				
Girls	4–11			1.8
Boys	4–11			6.5
Adolescent				
Girls	12–16			4.1
Boys	12–16			10.4
Puerto Rico[b]	4–16	Past 6	DSM-III	1.5
Pittsburgh, PA[c]	7–11	Past 12	DSM-III	2.6
Dunedin, New Zealand[d]	11	Past 12	DSM-III	3.4
New York, NY[e]	9–18	Past 6	DSM-III-R	
Preadolescent				
Girls	9–12			0.0
Boys	9–12			8.0
Adolescent				
Girls	13–18			3.0
Boys	13–18			9.0
Columbia, MO[f]				
Overall	14–16	Current	DSM-III	8.7
Girls	14–16			8.0
Boys	14–16			9.3
Mannheim, Germany[g]				
Overall	8	Past 6	ICD-9	0.9
Girls	8			0.0
Boys	8			1.9
Zuid-Holland, the Netherlands[h]	4–16	Past 12–96	DSM-III-R	20.0
MECA[i] (United States)				
Overall	9–17	Past 6	DSM-III-R	5.8
Girls				1.5
Boys				4.3
MECA[j] (United States)				
Overall	9–17	Past 6	DSM-III-R	8.0

[a] Offord et al. (1992).
[b] Bird et al. (1988).
[c] Costello et al. (1988).
[d] Anderson et al. (1987).
[e] Cohen et al. (1987).
[f] Kashani et al. (1987).
[g] Esser et al. (1990).
[h] Velhurst et al. (1993).
[i] Lahey et al. (1996, 1998). MECA, Methods for the Epidemiology of Child and Adolescent Mental Disorders.
[j] Shaffer, Fisher, et al. (1996).

tion about the most important problem facing the United States today and in the future; responses revealed that the issue most frequently endorsed by adolescents was "violence and crime." Adolescents also endorsed "violence and crime" as the third most important issue today facing America's youth (after "drugs" and "peer pressure") (Maguire & Pastore, 1997, p. 115). The percentage of high school seniors who reported worrying "sometimes or often" about violence and crime rose from 79.4% in 1986 to 90.1% in 1996, before falling slightly to 84.4% in 1998 (Maguire & Pastore, 1999, p. 148). Many adolescents also report safety concerns in their activities of everyday life. In 1995, 42% of teenagers reported feeling "only sometimes" or "never" safe in the area around school, and 28% reported safety concerns while inside their school building. Although 61% of teenagers reported never feeling unsafe in any situation, 28% reported avoiding at least one public place because of safety concerns (Young Women's Christian Association [YWCA], 1996). Public opinion surveys assessing youth attitudes therefore indicate that many teenagers have fears and concerns about violence and aggression.

JUVENILE JUSTICE STUDIES AND STATISTICS

Among other sources of information on prevalence rates of maladaptive aggression for children and adolescents living in the community are criminal justice statistics, particularly annual crime indices. The federal government keeps statistics on certain offenses called "index offenses." These offenses consist of the following eight felonies: willful homicide, forcible rape, robbery, burglary, aggravated assault, larceny over $50, motor vehicle theft, and arson. The Federal Bureau of Investigation combines statistics on these eight felonies into its annual "crime index." (Note that this index does not include drug-related offenses.) These offenses are much more serious crimes than the general idea of delinquency denotes.

Since the annual crime index includes statistics on the ages of crime victims and offenders, statistics on juvenile crime may be ascertained. Rates of youth victimization; youth offending for delinquency; youth offending for violent crime, such as murder, non-negligent manslaughter, and aggravated assault; and arrest rates in individuals under age 18 can be identified. These statistics have been kept for many years, and rates of change over time can be studied. Since only those offenses or events that come to the attention of authorities or result in the arrest of a perpetrator are counted in these statistics, they probably represent underestimations of the true offense and victimization prevalence rates for youth. This may be more true for less serious delinquent offenses and less true for more serious criminal offenses.

Self-Report Delinquency Methodology

The problem of underdetection of youth crime and delinquency as a result of relying on official arrest statistics has led to alternative methods of detecting

child and adolescent offenses. One such method is "self-report delinquency methodology" (Loeber, Green, Lahey, & Stouthamer-Loeber, 1991). Instead of relying on official statistics, investigators ask youngsters, their parents, and their teachers directly about the youth's problem behaviors. Self-report studies usually aim to record nonpersonal crimes, victimless acts of delinquency, and covert acts of aggression, which official crime statistics often underestimate. The procedure followed in such research is to give respondents a standard list of specified delinquent activities. These can be presented as interview questions or as a self-report questionnaire. Often the information gathered from multiple informants (youngsters, parents, and teachers) is combined into a best-estimate evaluation (Hart, Lahey, Loeber, & Hanson, 1994). Evidence of validity for such an approach to estimating rates of antisocial behaviors among teenagers has emerged (Hart et al., 1994; Junger-Tas, 1992).

Self-report delinquency methodology is largely used with psychiatrically referred children and adolescents. Thus it cannot directly provide population-wide estimates of antisocial behavior prevalence rates. However, these methods represent a systematic approach to ascertaining the frequency of such events that are not covered by official crime indices. Findings on the nature of adolescent crime from self-report studies indicate that self-report data generally portray less serious offending overall, with the majority of undetected offending by young people being theft-related. Self-report studies suggest higher levels of delinquency among the juvenile population than would be anticipated on the basis of official statistics. These studies also suggest higher rates of delinquency among women than official statistics suggest (Rutter, Giller, & Hagell, 1998).

The remainder of this section discusses juvenile justice statistics about the prevalence of aggressive and violent acts involving youngsters that have come to the attention of authorities in the community. Again, it is important to keep in mind that use of official statistics probably underestimates the true population prevalence of adolescent antisocial behaviors.

Youth Victim Statistics: Nonfatal Personal Violence

Important information about the prevalence of maladaptive aggression comes from statistics on violent victimization of youth. Crimes of violence against one's person (other than murder or non-negligent manslaughter, which are considered later) include aggravated and simple assault, robbery, sexual assault, and attempted/threatened violence. Overall, between 10% and 11% of adolescents reported some crime of violence against them in 1997 (Bureau of Justice Statistics, 2000). Although the majority of youth have never been victims of such crimes, an appreciable number of teenagers have reported being assaulted, robbed, or threatened with violence. Figure 2.1 graphically depicts these victimization rates for 1997.

Personal violence in schools has become a particular concern in recent years. Figure 2.2 illustrates rates of in-school violent victimization in grades 8

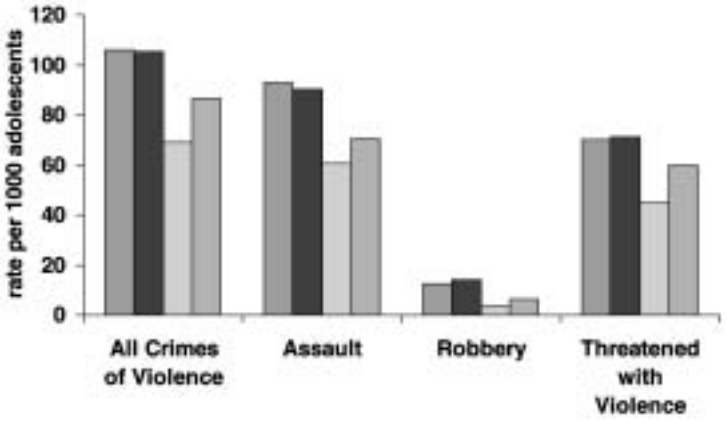

FIGURE 2.1. Estimated rates of violent personal victimization per 1,000 adolescents for the year 1997. Columns from left to right: males aged 12–15 years, males aged 16–19 years, females aged 12–15 years, and females aged 16–19 years. Data from Bureau of Justice Statistics (2000).

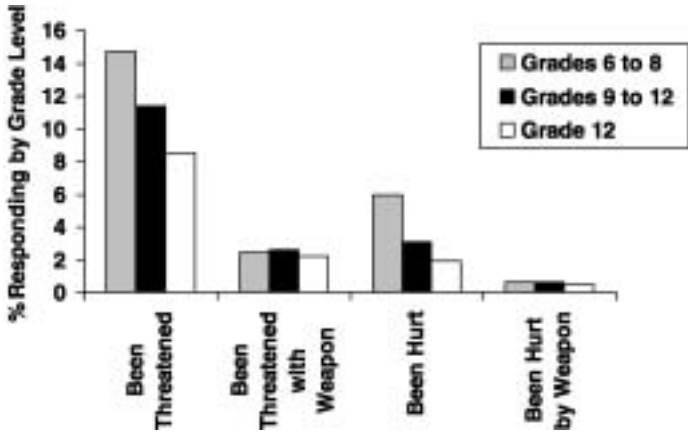

FIGURE 2.2. Students reporting violent victimization experiences at school by grade level for the 1997–1998 academic year. Data from Pride, Inc. (1999).

through 12 for the 1997–1998 academic year. These data suggest that younger teenagers and preadolescents in grades 6–8 are victimized in school more often than older high school students are (Pride, Inc., 1999). Although rates of school violence appear much lower than rates of violence in the community as a whole, students' reports of being injured by violence and of being exposed to other students with weapons while attending school are nonetheless disturbing. Rates of high school seniors reporting being threatened with a weapon at least once in school during the past 12 months have remained stable at about 9% to 11% in the years between 1984 and 1998 (Maguire & Pastore, 1999, p. 195). Although threats with weapons in high school may have remained constant over time, recent years have witnessed horrific school shootings in multiple locations across the United States, where students have murdered and wounded multiple classmates and teachers on school grounds. (Again, for further discussion of murder rates, see below.) This suggests the possibility of rare, episodic, and hard-to-predict, yet escalating, violence potential occurring at school. Although it is difficult to ascertain precise trends over time from these statistics, they do suggest that over the past 15 years violent aggression may directly harm about 10% of adolescents in the United States per year.

Youth Offender Statistics: Weapons Carrying and Fighting

Figure 2.3 reports statistics on the selected offenses of weapons carrying and physical fighting for high school students for 1997, taken from survey data (Maguire & Pastore, 1999, p. 229). From 16% to 20% of students in the 9th through 12th grades reported carrying a gun, knife, or club one or more times in the 30 days preceding the survey. Of these teenagers, from 5% to 8% re-

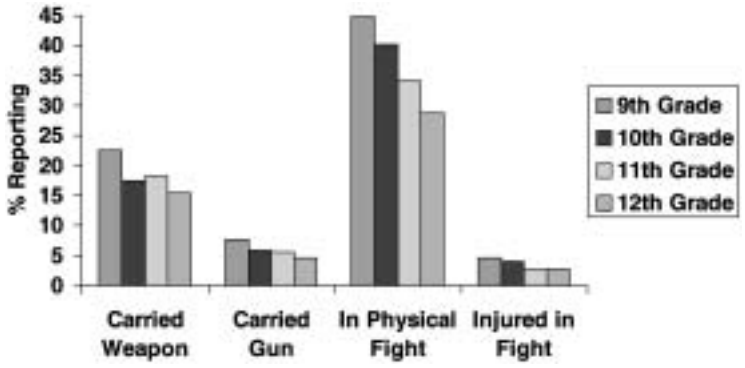

FIGURE 2.3. High school students reporting carrying weapons or fighting one or more times in the past 30 days, 1997. Data from Maguire and Pastore (1999, p. 229).

ported carrying a gun during this time period. From one-third to one-half reported physically fighting, but fewer than 5% reported injury in a fight. For all categories, males reported more activity than females. Similar to the violence rates reported above, these data suggest that younger teenagers (9th grade) engage more frequently in these selected acts, and that the frequency drops toward the end of high school. This is consistent with the peak ages for CD-like behavior being 10–13 years for males in community epidemiological surveys of antisocial activity in children and adolescents (Lahey et al., 1998).

Youth Victim Statistics: Murder and Non-Negligent Manslaughter

The most catastrophic form of maladaptive aggression in society is taking the life of another. Victimization rates for murder and non-negligent manslaughter rise with age during the developing years. When 21-year trends are compared, children less than 13 years of age have a risk of death by violence of about 2 per 100,000 children. Rates of violent death increase greater than twofold in the early adolescent years (ages 14–17), and they rise again almost threefold for young adults aged 18–24 years (Figure 2.4) (Maguire & Pastore, 1999, p. 294). The data reveal that rates of murder and non-negligent manslaughter victimization have remained constant for youth under age 13 over the past two decades. Examining temporal trends over the past 21 years, Figure 2.4 illustrates a precipitous rise in death rates for teenagers and young adults beginning in the late 1980s and early 1990s. This spike in victimization rates began to decline in the last half of the 1990s, but remains elevated compared to rates in the 1970s.

It is also important to appreciate that although the murder and non-negli-

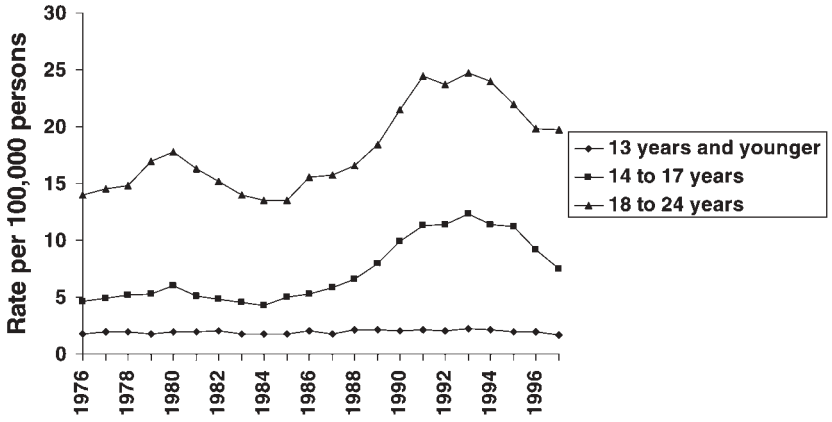

FIGURE 2.4. Developmental and temporal trends in rates of youth murder and non-negligent manslaughter victimization, by child and adolescent age group. Data from Maguire and Pastore (1999, p. 294).

gent manslaughter victimization rates for children 13 years and younger are small, they are not zero (Figure 2.4). Children are being murdered in the United States. However, victimization rates rise steeply with adolescence and have increased over the last two decades in adolescents and young adults, while remaining stable in younger children.

Youth Offender Statistics: Murder and Non-Negligent Manslaughter

Youth offender rates for murder and non-negligent manslaughter are illustrated in Figure 2.5. Although isolated cases occur and are widely reported in the mass media, children aged 13 years or younger rarely commit murder in the United States. Rates for this age group have remained constant throughout the past 21 years. By early to middle adolescence, murder and manslaughter rates rise 10-fold for youths aged 14–17 years in the population. By late adolescence and early adulthood, the rates more than double yet again (Maguire & Pastore, 1999, p. 296). In terms of temporal trends, the late 1980s and 1990s witnessed a rise in murder rates among adolescents and young adults in the United States. This trend has since reversed itself, but rates remain much higher than they were two decades ago.

The rise in juvenile murder and non-negligent manslaughter offender rates appears to be largely accounted for by a rise in black male teenage and young adult violence (Figure 2.6); rates of these offenses among white male adolescents and young adults have risen much more slowly (Maguire & Pastore, 1999, p. 295). Rates for black females have declined over the same time period and rates for white females have remained low and fairly constant (Figure 2.7) (Maguire & Pastore, 1999, p. 295).

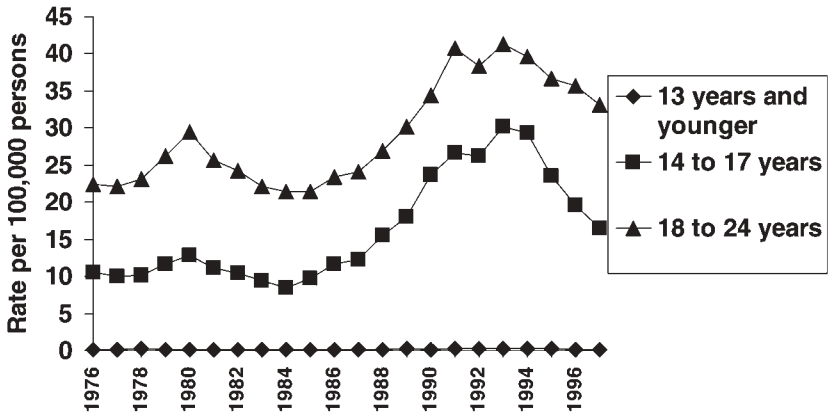

FIGURE 2.5. Developmental and temporal trends in rates of youth committing murder and non-negligent manslaughter, by child and adolescent age group. Data from Maguire and Pastore (1999, p. 296).

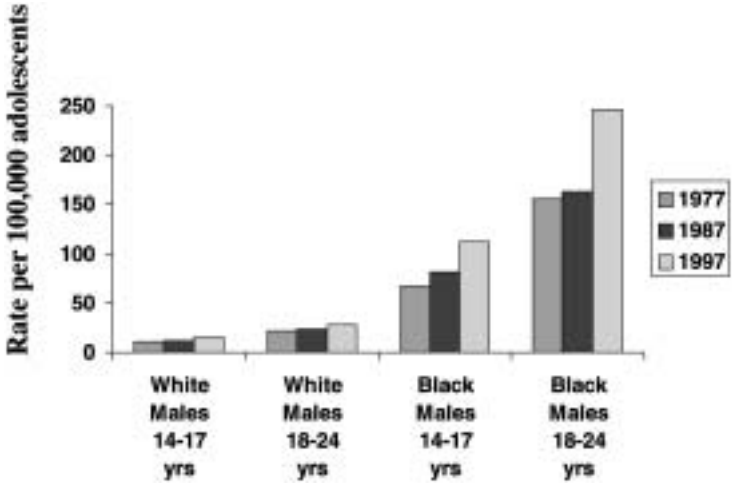

FIGURE 2.6. Rates of murder and non-negligent manslaughter offenses for 14- to 17-year-old and 18- to 24-year-old males by race. Data from Maguire and Pastore (1999, p. 295).

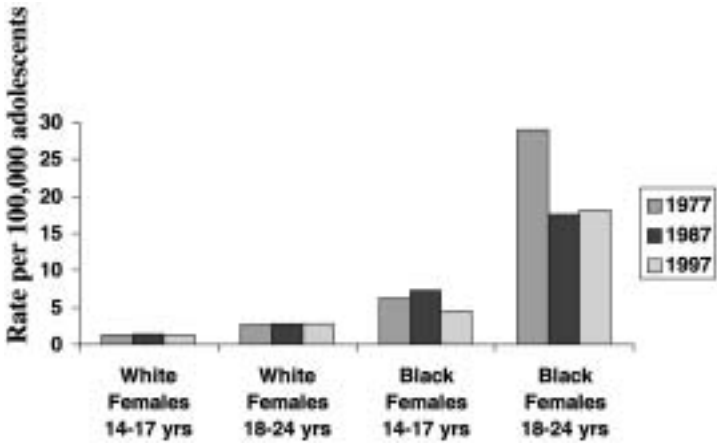

FIGURE 2.7. Rates of murder and non-negligent manslaughter offenses for 14- to 17-year-old and 18- to 24-year old females by race. Data from Maguire and Pastore (1999, p. 295).

The seriousness of adolescent violence is also reflected in a 150% rise in arrest rates for teenagers less than 18 years of age for murder/non-negligent manslaughter over the decade spanning 1985 to 1994 (Federal Bureau of Investigation, 1994). During this same period, teenage arrests for violent crime in general increased 75%. Toward the end of the 1990s, arrest rates have fallen from these high levels, yet remain elevated compared to arrest rates of four to five decades ago.

Summary of the Juvenile Justice Data

In summary, the juvenile justice statistics ascertaining offense and victimization rates for violence-related behaviors all support the conclusion that such behaviors are far too common in the daily lives of many preadolescents and teenagers. Some of these behaviors directly result in death and injury. Although other behaviors may not lead to physical injuries, they are strongly associated with risk for injury, exposure to intimidation and threats, and perceptions of fear and vulnerability (Brener, Simon, Krug, & Lowry, 1999). These behaviors are also extremely costly to society. To give just one example, across all child, adolescent, and adult age groups in the United States for the year 1997, gunshots caused 31,636 fatal injuries and 100,000 nonfatal injuries (Cook, Lawrence, Ludwig, & Miller, 1999). The estimated cost of medically treating such injuries was estimated at $2.3 billion in 1994 dollars (Cook et al., 1999).

Toward the end of the 1990s, rates of violence-related behaviors among high school students began to fall. From 1991 to 1997, the incidence of adolescents' carrying weapons decreased 31%, and the incidence of physical fighting declined 16% (Brener et al., 1999). From 1993 to 1997, the percentage of students who carried a gun in the preceding 30 days fell 25% (Brener et al., 1999). Although these data show that some progress is being made in reducing the threat of violent maladaptive aggression to youth in America, rates of homicide, nonfatal but violent victimization, and perpetration of violence among the young remain at historically high levels.

PREVALENCE OF YOUTH SUICIDE

Rates of suicide (maladaptive aggression turned toward the self) have also been documented for youth and contribute further to our understanding of overall maladaptive aggression in this population. Since suicide rates are largely determined from coroner death certificate data completed at autopsy, these official rates may represent an underestimation of the true rate of adolescent suicide. The adolescent suicide rate has quadrupled since 1950 (from 2.5 to 11.2 per 100,000) and currently represents 12% of the mortality of this age group (Birmaher et al., 1996; Brent, Perper, & Allman, 1987; Lewinsohn,

Klein, & Seeley, 1993). Developmental trends in youth suicide rates since 1980 are presented in Figure 2.8. The rate of suicide in late adolescence (15–19 years of age) is more than eight times the rate of suicide in early adolescence (10–14 years of age) (Maguire & Pastore, 1999, p. 299). For both age groups, suicide rates peaked in the mid- to late 1980s. Although suicide rates seem to have begun decreasing in the mid-1990s for 15- to 19-year-old teenagers, they remain at historically high levels. Lower rates (but still elevated over levels found in the 1970s) have remained generally steady for the younger group of preteenagers and early adolescents over this same time period, with no sign of falling.

Gender trends in the suicide rate since 1950 for male and female late adolescents (ages 15–19 years) are illustrated in Figure 2.9. There has been a precipitous rise in late adolescent male mortality from suicide, beginning in the 1950s and continuing every decade until 1990. Rates for males have since slowly declined, but remain at historically high levels (Maguire & Pastore, 1999, p. 300). Although the rate of death by suicide for late adolescent females is much lower, it has also crept upward over the past 40 years, and shows no sign of falling (Maguire & Pastore, 1999, p. 300).

As noted above, official suicide rates may underrepresent the actual prevalence of suicide for youth. For example, fatal accidents involving a single motor vehicle may represent suicides, but may not be reported as such. In addition, the official rates are only for death by suicide (completed suicide) and do not reflect the prevalence of attempted suicide or suicidal ideation, both of which occur commonly in the adolescent age range. In 1995, 8.7% of high school seniors surveyed reported attempting suicide, and an additional 17.7% had made a suicide plan in the 12 months prior to being surveyed (Centers for Disease Control and Prevention, 1996b).

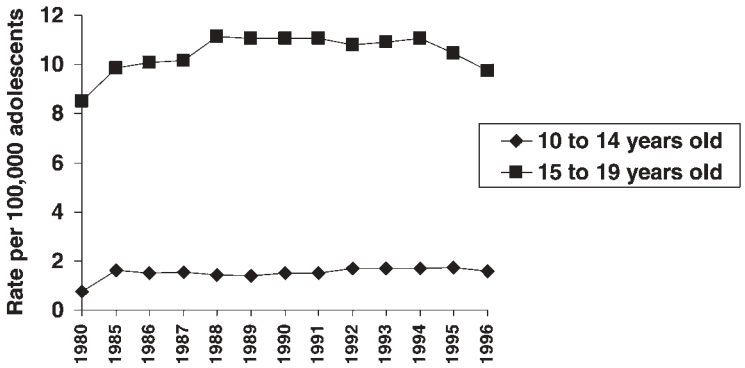

FIGURE 2.8. Developmental and temporal trends in rates of adolescent suicide. Data from Maguire and Pastore (1999, p. 299).

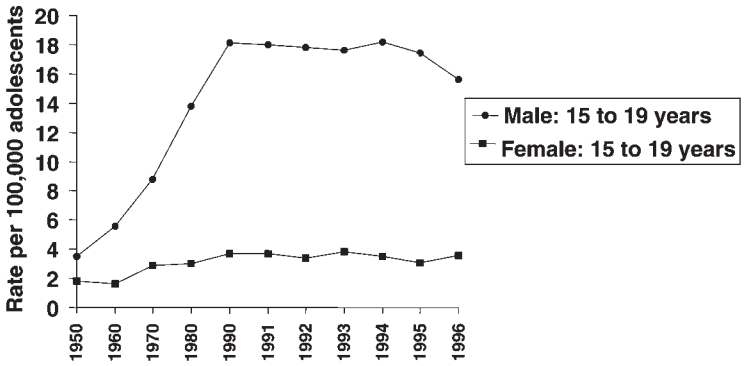

FIGURE 2.9. Developmental trends since 1950 in suicide rates for 15- to 19-year-old adolescents, by gender. Data from Maguire and Pastore (1999, p. 300).

PREVALENCE OF MALADAPTIVE AGGRESSION IN PSYCHIATRICALLY REFERRED SAMPLES

Rising community rates of serious youth aggression are reflected in rising rates of referrals of children and adolescents with aggressive, antisocial, or suicidal behaviors to mental health treatment settings. As such, the evaluation, management, and treatment of aggression are rapidly becoming the major clinical challenges facing pediatric mental health professionals.

There currently exist no national representative surveys of pediatric mental health treatment settings that give us information on rates of aggression in clinically referred youth. Rates must be inferred from research studies across individual settings. As such, this information is more fragmented and incomplete than the data on CD in the community and the juvenile justice statistics cited above. However, enough data are available to suggest that the prevalence of aggression in child and adolescent mental health treatment settings is quite high.

Table 2.3 presents data on the prevalence of aggressive behaviors/CD in children and adolescents admitted to inpatient, outpatient, and residential mental health treatment settings reported in the scientific literature over the past two decades. (In these studies "aggression" is usually defined as physical assault, threats of harm toward another, or explosive anger outbursts that result in property destruction.) It can be seen that aggressive behavior is frequent in these settings, occurring in between 25% and 90% of patients treated, depending on the site in which the research is completed and the gender of the sample population. These prevalence rates are from 10 to 100 times higher than rates of CD and aggression occurring in community-based samples of nonreferred children and adolescents. Prevalence rates for aggressive

TABLE 2.3. Prevalence of Aggressive Behaviors/CD in Cross-Sectional Studies from Psychiatrically Referred Populations

Study	Age	Sample size	Time frame (mo)	Prevalence (%)
Pfeffer et al. (1983a)				
Overall	6–12	103 I/O[a]	Past 6	67
Girls		19		26
Boys		84		62
Pfeffer et al. (1987)				
Overall	6–12	101 O	Past 6	46
Overall	6–12	102 I	Past 6	59
Delga et al. (1989)				
Overall	15	75 I	Lifetime	33
Girls		33		39
Boys		42		69
Garrison et al. (1990)	5–15	99 I	Past 12	76
Gabel and Shindledecker (1991)				
Overall	4–18	348 I	Past 12	38
Girls		123		20
Boys		225		48
Fritsch et al. (1992)	10–18	145 I	Lifetime	50
Connor, Ozbayrak, Kusiak, et al. (1997)	5–19	83	Lifetime	90
Lahey et al. (1998)				
Overall	4–17	440 I/O/R[b]	Past 12	29
Girls				25
Boys				29

[a] I/O, inpatients/outpatients.
[b] R, residential treatment patients.

behavior in psychiatrically referred youth are high for both boys and girls. In some studies, rates of female aggression are equal to the rates for male aggression (Lahey et al., 1998). These data support the idea that the identification, assessment, containment, and treatment of maladaptive aggression and associated disruptive behaviors are important tasks facing child and adolescent mental health clinicians in both ambulatory and institutional treatment settings.

Similarly, suicidal behaviors are very common in child and adolescent psychiatric treatment settings. Table 2.4 presents some data reported in five studies over the past two decades. (In these reports, "suicidal behaviors" include suicidal ideas, suicidal threats, and suicide attempts—but not death by completed suicide, which largely occurs outside treatment settings.) The rates of these behaviors vary between 17% and 61% of patients in these studies,

TABLE 2.4. Prevalence of Suicidal Behaviors in Cross-Sectional Studies from Psychiatrically Referred Populations

Study	Age	Sample size	Time frame (mo)	Prevalence (%)
Pfeffer et al. (1983b)				
Overall	6–12	102 I/O	Past 6	58
Girls				42
Boys				61
Delga et al. (1989)				
Overall	15	75 I	Lifetime	17
Girls		33		33
Boys		42		45
Gabel and Shindledecker (1991)	4–18	348 I	Past 12	49
Fritsch et al. (1992)	10–18	145 I	Lifetime	43
Connor, Ozbayrak, Kusiak, et al. (1997)	5–19	83 R	Lifetime	35

Note. Abbreviations as in Table 2.3.

and suggest that aggression turned inward is another problem commonly faced by professionals treating referred youth in clinical settings.

CHAPTER SUMMARY

This chapter first reviews the normal developmental course of aggressive behavior in infants and toddlers, and then presents prevalence data on attitudinal concerns about and rates of maladaptive aggressive behavior among children and adolescents. Data from studies of CD in the community, youth attitude surveys, juvenile justice statistics, and clinical mental health studies are reviewed. Developmentally, conflictual behavior between toddlers and preschool children is a common and normal part of early social life. Physical aggression over the possession of objects and territory decreases as children mature. Verbal aggression strategies begin to replace physical fighting with entry into elementary school. However, for a not insignificant number of children and adolescents, maladaptive aggression continues as they mature. Prevalence rates for maladaptive aggression are reviewed from a number of perspectives. The prevalence of CD varies between 1.5% and 20% (depending on the time frame of the study) of nonreferred 4- to 18-year-olds as assessed in different communities in Europe and North America. In the United States, rates of delinquency and aggravated assault are rising for adolescents aged 14 and older, as assessed over the past 30 years. Youth murder and manslaughter offender and victimization rates peaked in the 1990s. These rates are slowly falling as the 21st century begins, yet remain at historically high levels. Suicide

rates have risen dramatically for both female and male adolescents in the years since World War II. All these rising societal rates of outwardly and inwardly directed aggression are also reflected in the high prevalence rates found for aggressive and suicidal behavior in psychiatrically referred children and adolescents. The current rates of maladaptive aggression in children and adolescents, with resultant injury and death, constitute a serious public health issue for the United States (Brener et al., 1999). Presently, the identification, assessment, containment, referral, and clinical treatment of aggressive children and adolescents are among the greatest challenges today facing professionals working in juvenile justice, educational, psychiatric, and mental health treatment settings.