CHAPTER 10

Screening for Violent Tendencies in Adolescents

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National crime arrest statistics reveal that adolescents and young adults in the United States are more likely to perpetrate and be victimized by interpersonal violence than individuals in other age groups. The causes of youth violence perpetration and victimization are multilevel, often have their origins earlier in life, and may overlap significantly with each other.[1] They have been identified as spanning a wide range of factors,[2] including individual factors[3] (high impulsiveness, anger management), family factors[4] (poor supervision, harsh discipline, a violent parent, a young mother, a broken family), peer and social factors[5] (peer delinquency, low socioeconomic status, urban residence, a high-crime neighborhood), community risk factors[6] (concentrated poverty, residential segregation, socially disorganized communities, high rates of violent crime), and situational factors[7] (actions leading to violent events [e.g., alcohol, the escalation of a trivial altercation, arguments]). Outcomes of youth violence include fatal and nonfatal assaults with a blunt instrument, cutting instrument, or firearm; sexual assault; dating/intimate partner violence; family violence; and cyberbullying.[8,9] The focus of this chapter is to provide a description of the range of types of youth violence; a public health perspective of youth violence prevention; risk and preventive factors for preventing youth violence; primary, secondary, and tertiary interventions; a developmental-ecological model; and implications for healthcare providers.

ADOLESCENCE

The onset of puberty is marked by a sequence of changes to the physical, psychosexual, cognitive, and social growth and development of children and hails the onset of adolescence. Adolescent development is frequently broken down into three levels: early adolescence (ages 12−14 years), mid-adolescence (ages 15−16 years), and late adolescence (ages 17−21 years). Marshall and Tanner[10,11] describe adolescence as five stages of normal pubertal maturation (e.g., the Tanner stages) consisting of predictable changes in secondary sexual characteristics that all girls and boys go through. In contrast, Erickson[12] identified adolescence by the set of major developmental tasks that teens face: (1) personal identity formation, (2) becoming independent, (3) achieving a sense of competency, (4) establishing social status, (5) experiencing intimacy, and (6) determining sexual identity. Bronfrenbrenner[13] describes child and adolescent development as being shaped by the context of roles, norms, and rules of four types of nested ecological systems: the microsystem (family, classroom), mesosystem (interaction of two microsystems), exosystem (external environment), and macrosystem (sociocultural context).

The spike in violence perpetration during adolescence largely parallels the concurrent developmental changes experienced by teens. Developmental growth includes significant increases in height, weight, and internal organ size, as well as changes in skeletal and muscular systems.[14] Although brain size remains relatively unchanged, the prefrontal cortex—an area of the brain that handles executive functions such as planning, reasoning, anticipating consequences, sustaining attention, and making decisions—continues to develop.[15,16] This intense developmental period is marked by rapid changes in the physical, physiologic, sexual, cognitive, socioemotional, and moral development that accompany puberty.

During early adolescence, psychosocial development is characterized by two key developmental tasks: identity formation and the quest for independence. During this period, youths develop the capacity for abstract thought processes; however, the transition to higher levels of cognitive function varies considerably across individuals.[17−19] Young adolescents typically progress from concrete logical operations to acquiring the ability to develop and test hypotheses, analyze

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and synthesize data, grapple with complex concepts, and think reflectively.[20] During these years, young adolescents seek their own sense of individuality and uniqueness.[21] They may experience an increased awareness of their ethnic identity as well. As young adolescents search for an adult identity and adult acceptance, they strive to maintain peer approval.[14]

Adolescence is the period in which young people are at greatest risk for violence perpetration and victimization. As young adolescents expand their affiliations to include peers, feelings of conflict may arise due to competing allegiances.[22] The search for identity and self-discovery may intensify feelings of vulnerability, as they become attuned to the differences between self and others.[23] Their emotional variability makes young adolescents at risk of making decisions with negative consequences[24] and believing that their experiences, feelings, and problems are unique.[23]

As adolescents develop their sense of personal identity and autonomy during their teenage years, they begin to formulate their own principles of right and wrong. It is not uncommon for teens to see themselves one way when they are with parents and teachers and another way when they are with their peers. Although adults remain essential to their continuing development as caregivers, role models, educators, and mentors, during adolescence the frame of reference of teens expands from family to peers and other adults with whom they increasingly have more contact. The successful transition of teens to adult roles (e.g., work, relationships, parenting) usually reduces involvement in violence and other behaviors that increase the risk for poor health and social outcomes.

Most young people are embedded in four types of communities: family, school, peers, and extracurricular groups (which include faith communities, clubs, and sports leagues, etc.). During adolescence, these communities, composed of parents, siblings, significant others, relatives, peers, coaches, teachers, mentors, and their friends and peers, are the most important people in their lives, yet often fulfill different needs. Although parents tend to provide emotional and instrumental support, other caring adults, such as a teacher, coach, and often counselor, become significant providers of social support to teens, helping them cope with the many issues and choices they face during this transitional period in their lives as they mature and move on toward adulthood. In the absence of support from parents and other caring adults, teens are likely to turn to peers for information, emotional support, and guidance. However, reliance on peer networks can be unhealthy when they reinforce behaviors that are, in themselves, harmful. Although peer support is an essential factor in an adolescent's social network, if peers support harmful behaviors, an adolescent may be more likely to engage in harmful behaviors such as violence.

YOUTH VIOLENCE

Youth violence is a complex, social, criminal justice and public health issue that requires both a systems approach and a life course perspective to unravel it.[25,26] Interpersonal violence among youths include a number of different categories including homicide, fighting, family violence, dating violence, sexual violence, gang violence, bullying, and cyberbullying. Some risk factors for violence victimization and perpetration are the same, whereas others are unique. For example, childhood physical or sexual victimization is a risk factor for future intimate partner violence perpetration and victimization but not for gang violence or cyberbullying.

Chronic violence exposure is one of the most potent risk factors for an increased propensity to commit subsequent acts of violence. Violence exposure or victimization of school-aged children and adolescents is associated with impaired school functioning and increased anxiety, depression, stress, and hopelessness. Some children, particularly preadolescents and adolescents, develop a diminished perception of risk that can lead to dangerous acting-out behaviors. Particularly worrisome is the fact that many children immersed in violent environments develop a heightened tendency to perceive social interactions as threatening and to view violence and aggression as acceptable ways to resolve conflict.

The Surgeon General's report on youth violence identified two onset trajectories for violence.[27] The first, begins before puberty and is often characterized by sequences of escalating behaviors that lead from early aggression to defiant and antisocial behavior to actual violence. Youths on this trajectory "generally commit more crimes, and more serious crimes, for a longer time." Their violence sometimes continues into adulthood. The second, more common trajectory begins around ages 13 and 14 years and peaks between 16 and 18 years. If youths have not initiated violence by age 20 years, it is highly unlikely they will ever become serious violent offenders.

Current research indicates that the presence of a single risk factor in an individual infrequently, by itself, causes antisocial or violent behavior. Rather, it is now generally believed that multiple factors combine to contribute to and shape behavior over the course of

adolescent development. Studies suggest it is the confluence of certain "risk" factors and behaviors that contribute to violent behavior, and the existence of certain "protective" factors that create resiliency. Understanding the complex nature of youth violence and the role of risk and protective factors can lead to improved screening, treatment, and referrals or engagement in community change by physicians and other members of the healthcare team.

Types of Youth Violence

Criminal violence

Homicide is the second leading cause of death among persons aged 15–24 years in the United States. The Justice Department reports that the Violent Crime Index offenses arrests for youths aged 10–17 years has steadily declined since 2006, reaching a new low in 2012.[28] In April 2000, the Department of Justice Office of Juvenile Justice and Delinquency Prevention[29] released the results from the Study Group on Serious and Violent Juvenile Offenders, a 2-year initiative that brought together experts to analyze and synthesize current research on the predictors of juvenile criminal violence.[30] This report adds to an extensive body of research that documents the numerous individual, familial, social, and situational factors that place children and youths at elevated risk for violent perpetration.[31] The Study Group Report highlighted the following risk factors for juvenile violence perpetration:

- *Individual factors*: Emotional disorders (such as depression, social withdrawal, nervousness, and anxiety); hyperactivity, concentration problems, and risk-taking; aggressiveness; early initiation of violent behavior; involvement in other forms of antisocial behavior (such as smoking, early sexual behavior, and stealing); beliefs and attitudes favorable to deviant or antisocial behavior; and academic failure, truancy, and dropping out of school.
- *Family factors*: Parental criminality, child maltreatment, poor family management and parenting practices, parental attitudes favorable to substance use and violence, low levels of parental involvement, parent–child separation, delinquent siblings, poor family bonding, and family conflicts.
- *Peer factors*: Delinquent siblings, delinquent peers, and gang membership.
- *Social/neighborhood factors*: Poverty, community disorganization, availability of drugs and firearms, exposure to violence and racial prejudice, neighborhood adults involved in crime, delinquent peers, and gang membership.

Bullying

School is a key context for the social development of adolescents. In general, the social relations that take place in the school are satisfactory and enriching. Students learn to interact and, by overcoming small conflicts, they forge friendships, some of which will last for many years. However, occasionally some students are involved in dynamics of abuse and maltreatment (bullying) by their peers, which can have a negative impact on their lives.

Bullying refers to a kind of violence among students characterized by intentional attacks, which may take various forms (physical or verbal assaults, theft, destruction, isolation) on a victim by one or more aggressors. These attacks are not isolated but instead continue over time, facilitated by the victim's inferiority and/or isolation, as compared with the aggressors.[32]

Adolescents who bully others tend to exhibit other defiant and delinquent behaviors, have poor school performance, are more likely to drop out of school, and are more likely to bring weapons to school.[33–36] The probability of a student being a bully increases until about age 14 years, when it decreases. Systematic reviews and meta-analyses of longitudinal studies show that being a bully at school is a significant predictor of aggression[37] across the life course. Therefore the prevention and treatment of bullying at school is important not only to optimize students' psychosocial development and learning but also, at the social level, to prevent subsequent criminal behavior.

Risk factors for bullying include impulsivity, hyperactivity, aggressiveness, sensation-seeking, and antisocial behavior. Competitive attitudes, such as a desire for social success[38]; sexist attitudes toward women[39]; and negative attitudes toward homosexuals[40] are also positively associated with being a bully. Helplessness, insecurity, feeling low, moodiness, nervousness, and insomnia, which are internalizing problems, also correlate positively with being a victim and negatively with being a bully.[41] Bullies are more likely to present problems such as hyperactivity and externalizing problems. Empathy, meanwhile, correlates negatively with being a bully.

Exposure to family violence and susceptibility to peer social pressure are also risk factors for being a bully. Being friends of bullies,[42] of delinquents,[43] or with people with antisocial behavior,[44] as well as belonging to gangs,[45] increases one's probability of bullying. The probability of being a bully is higher in students whose teachers have low expectations about their performance in school. Satisfaction with the school and school connectedness are protective factors

against being a bully.[46–48] Early identification of children at risk of being bullies in adolescence may serve as a basis for the design of preventive measures and effective treatment.

Dating violence

Adolescent dating violence is defined as any physically, sexually, or psychologically violent behavior, including stalking, directed toward a current or former dating partner in adolescence.[49] Approximately 9% of high-school students report being hit, slapped, or physically hurt on purpose by their boyfriend or girlfriend in the past year.[50] Teen dating violence rates appear to be even higher among certain populations, such as youths who have a history of exposure to violence.

Peers and the contexts in which peers interact can contribute to their risk for and protection against dating violence. Youths who are victims or perpetrators of peer violence tend to be the same youths at risk for experiencing violence within romantic relationships. Links between youths who bully and youths who perpetrate teen dating violence suggest an overlap in teens who victimize peers and those who victimize dating partners.

Peer risk factors tend to be more strongly associated with dating violence perpetration and victimization in adolescence than with family risk factors. Once teens experience violence in one relationship, they are at significant risk for experiencing violence in another relationship. A few teens seek help from formal sources such as schools, social services, or legal professionals. Instead, male and female teens were most likely to turn to friends for help. Programs and policies aimed at preventing teen dating violence or promoting healthy teen relationships more broadly are likely to be most effective if they take into consideration the potential ways in which peers and peer contexts shape teens' experiences within close relationships.

Cyberbullying

Cyberbullying has been defined as "willful and repeated harm inflicted" toward another.[9,51,52] What makes cyberbullying distinct is the use of electronic communication technology as the means through which youths threaten, harass, embarrass, or socially exclude others. Cyberbullying can encompass the use of an electronic medium to sexually harass,[53] including distributing unsolicited text or photos of a sexual nature or requesting sexual acts either online or offline.[54] Research has found that cybervictimization predicts worse outcomes than traditional victimization for symptoms of depression, anxiety, self-esteem issues, absenteeism, and physical health[55] and has a stronger relationship with suicidal ideation. Cyberbullying is not just a short-term problem for adolescents but can cause long-term adverse physical and emotional health outcomes.

About 15.5% of high-school students and 24% of middle-school students were cyberbullied in 2015.[56] The percentages of individuals who have experienced cyberbullying at some point in their lifetimes have nearly doubled (18%–34%) from 2007 to 2016.[57] Boys are more likely to be cyberbully perpetrators and girls are more likely to be cyberbully targets.[58]

Students who are perpetrators of cyberbullying are more likely than others to report perpetration of violence toward peers and to use computers for more hours a day. Students who are cyberbullied report feeling sad, anxious, afraid, and unable to concentrate on school[59,60] and may report social difficulties, drug and alcohol use, and eating disorders.[61,62] Victimized youths are more likely to skip school,[62] to have detentions or suspensions, or to take a weapon to school.[63] Youths who cyberbully are likely to engage in rule-breaking and to have problems with aggression.[62] Cyberbullying often occurs in the context of social relationships, which challenges the commonly held assumption that it is anonymous[9,53,64] and is consistent with understanding bullying as a relationship issue.[65] Children who use the Internet in private places at their home (e.g., bedroom) are at higher risk to be victimized than children who used computers in a public space in their home.

Fighting

Child-on-child violence historically has been regarded as more different in nature than other types of violence, not from empirical evidence, but from moral and philosophic presumptions about young offenders.[66] Compared with peer assaults on older youths, however, very young child victims are actually more likely to be injured and more likely to be hit with an object that could cause injury.[66] Sibling violence is much more likely to occur as a chronic condition than peer violence. Nearly half of the children under the age of 10 years who were hit by a sibling in the previous year experienced five or more such episodes during that year. Younger children are even more likely than older children to experience this chronic sibling violence. For young children, the association between peer violence and trauma symptoms is just as strong as the association for older children.

Sibling violence becomes progressively more atypical with age. Mid-late adolescents who have not yet ceased being physically aggressive with siblings may be at heightened risk for engagement in other forms of physical aggression, such as fighting with

nonfamily peers. In this manner, physical fights with siblings could be a marker of risk for physical fighting with peers. Caregiver aggression, substance use, and school failure are routinely cited as risk factors for fighting. Youths who are bullied by siblings are significantly more likely to be bullied at school. Children's violent behavior against their parents reflects failure in the learning of social and emotional skills, which becomes more difficult in contexts of marital violence or child abuse. Juveniles who have charges of parent abuse present more psychologic disorders including higher rates of psychiatric hospitalization and psychotropic medication use than juvenile offenders charged with other crimes. Juveniles who assault their parents often exhibit violence in other environments, such as school, demonstrating antisocial and criminal behaviors. The profile of adolescents who batter their parents has been found to include depressive symptoms, lower self-esteem, and low empathy. In general, parent abuse offenders show more behavior and emotional problems than non–parent abuse offenders or nonoffender adolescents, including higher levels of school maladjustment (school indiscipline, aversion to instruction) and social maladjustment (social aggression). Behavioral symptoms are better predictors of parent abuse than emotional symptoms.

Sexual violence

The US Centers for Disease Control and Prevention defines *sexual violence* as any attempted or completed sexual act, sexual contact, or noncontact sexual abuse with someone who does not consent or is unable to consent or refuse.[67] Risk factors common to both youth violence, in general, and sexual violence, in particular, include individual level—delinquency/antisocial behavior, general aggression, substance use, and attitudes supportive of violence. Family-level risk factors include child maltreatment/exposure to parental violence and parent–child relationship quality. Common peer-level risk factors include association with delinquent/violent peers and peer norms supportive of violence. Unique risk factors for sexual violence perpetration include belief in rape myths, victim-blaming attitudes, hostility toward women, exposure to sexually explicit media, deviant sexual fantasies, and perceived peer support for forced sex. Other potential risk factors for sexual violence include school disconnectedness, social disorganization/lack of social controls, and availability of drugs/alcohol in community.[68]

Gang violence

Gang violence accounts for a substantial proportion of homicides among youths in some US cities. From 2002 to 2006, gangs were responsible for approximately 20% of homicides in the 88 largest US cities.[69] Youths may become involved with gangs to gain a sense of control and power over their social situation and to have a sense of camaraderie with others, especially if they lack strong connections with parents, other family members, and peers.[70] Gang-involved youths often become further isolated from more positive social members of society and social, religious, and educational institutions, such as schools, faith-based institutions, and social services.[71] Gang involvement also is a known predictor of violence that contributed to violence risk above and beyond that which comes from being involved with delinquent peers.

During adolescence, several developmentally normative trends emerge that overlap with gang-related behaviors, such as increasing influence of peers,[72] risk-taking activities,[73] antisocial behavior,[74] and co-offending.[75,76] Thus identifying risk factors for gang affiliation is particularly challenging, given that many typically non-gang-affiliated youths may engage in behaviors similar to their gang-affiliated peers.

Gang homicides are unique violent events that require prevention strategies aimed specifically at gang processes.[77] Preventing gang joining and increasing youths' capacity to resolve conflict nonviolently might reduce gang homicides.[78] Rigorous evaluation of gang violence prevention programs is limited; however, many promising programs exist.[79] Secondary and tertiary prevention programs that intervene when youths have been identified at risk or have been injured by gang violence might interrupt the retaliatory nature of gang violence and promote youths leaving gangs.[80] Promising tertiary prevention programs for gang-involved youths include evidence-based programs that provide family therapy or multisystemic therapy (MST) to increase the capacity of youths to resolve conflict.

PUBLIC HEALTH PERSPECTIVE OF YOUTH VIOLENCE

Historically, youth violence has been thought of as a criminal justice or sociologic problem.[81] However, these traditional approaches do not adequately capture the complexity of the biopsychosocial context and experiences of youths, particularly, young men of color. *Healthy People 2010* spells out a comprehensive set of health objectives for the nation, devoting an entire chapter to injury and violence prevention; some of the initiative's youth-related objectives explicitly address physical fighting and weapon-carrying by adolescents.

In the recent years, youth violence has been identified as a public health issue as evidenced by a wide array of statistics. Homicide is the second leading cause of death among young people between the ages of 10 and 24 years. In 2014, 4300 young people aged 10–24 years were victims of homicide—an average of 12 each day. The Youth Risk Behavior Survey reported that in 2017, 15.7% of youths in the 9th through 12th grades reported carrying a weapon (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey), down from 26.1% in 1991, and 3.8% reported carrying a weapon on school property, down from 11.8% in 1993. About 6% of youths reported they had been threatened or injured with a weapon on school property during the past 12 months, down from 7.3% in 1993, and 8.5% reported having been in a physical fight on school property, down from 16.2% in 1993.[56]

A public health perspective of youth violence prevention is concerned with the well-being of the entire youth population.[27] It goes beyond attention to individual well-being and seeks to address the prevalence of indicators of health in defined populations. Primary prevention aims to prevent disease or injury before it ever occurs. This is done by preventing exposures to hazards that cause disease or injury, altering unhealthy or unsafe behaviors that can lead to disease or injury, and increasing resistance to disease or injury should exposure occur.

Secondary prevention, in contrast, aims to reduce the impact of a disease or injury that has already occurred. This is done by detecting and treating disease or injury as soon as possible to halt or slow its progress, encouraging personal strategies to prevent reinjury or recurrence, and implementing programs to return people to their original health and function to prevent long-term problems. Tertiary prevention, on the other hand, aims to soften the impact of an ongoing illness or injury that has lasting effects. This is done by helping people manage long-term, often-complex health problems and injuries (e.g., chronic diseases, permanent impairments) in order to improve as much as possible their ability to function, their quality of life, and their life expectancy.

The public health perspective seeks to prevent youth violence through combined primary, secondary, and tertiary prevention strategies that aim to decrease risk factors and/or increase protective factors associated with the agent (e.g., vector), host (e.g., victim), and environment (e.g., physical and social).[82] It is important to consider the independent, interactive, and cumulative effects of risk and protective factors to both develop an understanding of the nature of the problem and conceptualize interventions.

Violence prevention experts have identified a number of risk and protective factors that are associated with youth violent perpetration.[83–85] The following is an overview of some of the specific factors that have been linked to youth violence. Given that individuals operate within the context of their surroundings, the section moves from specific factors that relate directly to individual behavior to broader community and environmental factors.

Risk Factors

Risk factors are defined as scientifically established factors or determinants for which there is strong objective evidence of a causal relationship to a problem.[1,86] These factors can influence the level of risk an individual experiences or can moderate the relationship between the risk and the outcome or behavior.[87] Individual characteristics that have been commonly identified as risk factors for youth violence[74,88,89] include biological and psychologic characteristics identifiable in children at very young ages, which may increase their vulnerability to negative social and environmental influences over the course of development.

A number of studies have found a correlation between youth violent behavior perpetration and hyperactivity, concentration problems, adverse childhood exposures, and risk-taking.[90–92] Aggressive behavior during childhood (from ages 6 to 13 years) appears to consistently predict later violence among men; however, research results for aggressive women are less consistent.[93,94] Early onset of violence and delinquency is also associated with later acts of more serious and chronic violence, as is involvement in other forms of antisocial behavior, such as substance use, stealing, and destruction of property.[95,96] Other research indicates that there is strong evidence for the co-occurrence of mental health disorders, such as depression and posttraumatic stress disorder (PTSD), among children or youths with antisocial or delinquent behavior problems.[97–99]

Poor academic achievement and school failure are other individual-level factors that contribute to risk for youth violence.[84,85] Some research indicates that the relationship between school achievement is stronger for women than for men. Young people who are consistently absent from school during early adolescence (ages 12–14 years) appear to be more likely to engage in violence as adolescents and adults. Leaving school early has also been found to correlate with increased risk for interpersonal violence.

Family factors

Family factors are related to a youth's position within the family, support system, culture, and functioning that affect behavior.[100–102] Research demonstrates that family dynamics and parental or caregiver involvement are significantly correlated with an individual's propensity to engage in violent behavior. A lack of parental interaction and involvement increases the risk for violence, particularly among men.[103] Failure to set clear expectations, inadequate youth supervision and monitoring, and severe or inconsistent family discipline practices can also contribute to delinquency and violent behavior.[104] Exposure to high levels of marital and family discord or conflict also appears to increase risk, as does antisocial or delinquent behavior by siblings and peers.[105–108] Child abuse and neglect are additional family-level risk factors for violence perpetration. Research evidence suggests that children or youths who have been physically abused or neglected are more likely than others to commit violent crimes later in life.[109,110]

The ways in which children are socialized in their families are strongly tied to positive and negative developmental outcomes.[27,111,112] Children who are raised in families where violence and other forms of antisocial behavior are modeled consistently by siblings or parents are more likely to engage in violence themselves.[112] Exposure to antisocial norms and values held by family members and individuals outside the home may also have a negative effect on children's behavior by presenting violence as acceptable and normalizing the occurrence of violence.[113] Furthermore, poor family management that involves parents' failure to set clear rules for children's behavior, parents' failure to monitor children's social interactions and behavior in developmentally appropriate ways, and parents' use of inconsistent or severe and abusive discipline also increases risk for violence. Alcohol abuse by significant family members, especially by male family members, is a significant predictor of violent behavior.[114] Family management factors have been found to be more influential over youth violence than neighborhood context.[115]

For most adolescents, family support is the most important element in their lives.[116,117] Family-level protective factors include clear boundaries for behavior that enforce structure and rules within the household and reasonable disciplinary actions when rules are violated.[118,119] Family members, especially parents or primary caregivers, can play a significant role in helping protect youths from violence by emphasizing the importance of education and offering support and affection.[120,121] Frequent, in-depth conversations and communication between parents and children help build resilience, as does the existence of a nonkin support network that offers access to a variety of adult viewpoints and experiences. Inadequate support and guidance from parents increases the probability of poor academic performance, inadequate interpersonal skills, and engagement in risk-taking behaviors,[104] all of which have the potential to increase violent behavior.

Peer factors

There is also an abundant literature demonstrating a positive association between risk-taking behavior of adolescents and that of their peers.[122] One of the strongest predictors of serious violence in adolescence across studies is involvement with delinquent (antisocial) peers.[123] Adolescents appear to be particularly susceptible to peer influence during middle adolescence.[124] Their position within their peer networks provides different opportunities for peer interaction, resulting in varying exposure to delinquent behaviors, communication of delinquent norms, access to information on delinquency opportunities, and opportunities for participation in delinquent behaviors. In addition, teens who struggle with establishing healthy peer relationships frequently have difficulties with romantic relationships, which may increase risk for subsequent dating violence or intimate partner violence.[123]

Although prior research establishes that adolescents are likely to behave in a manner consistent with their friends, it has yet to incorporate the social network structures into empirical models.[125] Geographic information system is increasingly being used to map data, including crime hot spots and locations of friends through social media. Hot spot analysis depicts the crime location, time, and frequency, often at the address level and thus provides opportunities for predicting crime based on location and availability of individuals and similar crime locations. Social network analysis provides an alternative approach for considering social control and differential association, the two dominant theories for studying delinquent behavior. Although the differential association theory focuses on the effects of peer networks and the focus of the social control theory is on adolescents' attachment to friends, neither theory has considered characteristics of the networks themselves.[126] A network perspective of delinquency[122,126–130] and youth violence provides new research opportunities for understanding youth violence.

Community factors

Although individual, peer, and family dysfunction have been commonly associated with youth

violence,[74,88,131,132] research increasingly points to the role of community-level factors as enabling conditions for youth crime and violence.[133] Being exposed to crime and drug selling in a neighborhood, as a consequence of social disorganization, may also increase risk for later violence. Having ready access to drugs may reflect increased opportunities in a neighborhood for deviance and lax norms against antisocial behavior. Exposure to poverty at both the neighborhood and family levels is likely to co-occur with neighborhood disorganization (crime, graffiti, social disorder, disregard for police), also elevating risk for violence.

Community factors include characteristics of the physical environment, available economic and recreational opportunities, existing social supports, and other issues that have an impact on the successful functioning of the residents. Social isolation, lack of social support, unemployment, vacant housing, population loss, percentage of black residents, and percentage of female-headed households are all neighborhood-level characteristics that have been found to be related to the rate of youth violence.[134] Increased concentration of poverty in urban areas has been accompanied by higher levels of violence, stress, and other types of social problems resulting in poorer health outcomes and increasing health disparities for low-income and racial ethnic minority adults and children.[135]

Social factors that have been found to contribute to the risk for youth violence perpetration include weak social bonds,[136] community deterioration or disorganization, lack of social capital,[3] and low levels of neighborhood and organizational collective efficacy.[137–139] The social disorganization theory[140] emphasizes the importance of neighborhood-level factors in understanding youth crime and violence.[133] Social disorganization is defined as the presence of high crime rates, gang activity, poor housing, and general deterioration in a given community. Disorganized communities tend to lack the social capital, resources, and opportunities needed by young people, such as adult mentors, quality schools, safe places, and employment training opportunities and jobs, limiting youths' access to positive and productive developmental experiences. Common characteristics of socially disorganized communities include concentrated poverty, physical deterioration of neighborhoods, residential instability, lack of social control, lack of social capital and collective efficacy, community disconnectedness, and racial/ethnic heterogeneity.[140–142]

Disorganized communities also may have a lack of appropriate institutions and services for young people, such as quality schools and recreational facilities, limiting youths' access to positive and productive developmental experiences. Neighborhoods in which there is a dearth of social capital, supports, and opportunities for youths combined with geographic and economic isolation have been found to be associated with higher rates of youth violence and crime. According to Wilson,[143] youths from disorganized neighborhoods often have lower levels of personal competence, academic success, self-efficacy, social skills, and self-discipline and are not adequately prepared to enter the labor market even when jobs are available. Concentration of poverty and neighborhood disorganization also have been linked to young people having a feeling of hopelessness about ever having legitimate opportunities for success. This lack of hope and opportunities for youths may lead them to accept crime, drug use, and violence as a means of coping with these hardships.[143]

Hirschi[136] found that youths' engagement in delinquent behavior, including violence, occurs when their "social bond" with the society is weak. He described "social bond" as being composed of four elements: (1) attachment, (2) commitment, (3) involvement, and (4) beliefs. Hirschi suggests that a youth who has a strong attachment to family, friends, and traditional community institutions (e.g., school, church, community organization) is more likely to avoid deviant behavior for fear of disappointing valued attachments (e.g., commitment). Hirschi also hypothesized that persons who strongly share social values and norms are less likely to deviate from them, whereas those who question or challenge the norms have a greater propensity to behave in a deviant manner.

Weak social networks, such as those found in neighborhoods with low levels of social capital and collective efficacy and a high concentration of poverty, reduce a community's ability to protect youths from risk-taking behaviors and exposures, supervise their behavior, and provide positive and meaningful opportunities and experiences.[140] In contrast, a strong community infrastructure has been identified as protective against youth violence. This is supported by studies that show that crime is related to certain patterns of neighborhood ties and social interactions and is largely mediated by informal social control and social cohesion.[144,145]

Social capital, a term usually applied to communities, encompasses multiple factors of civic engagement, including citizenship, neighborliness, trust and shared values, community involvement, volunteering, social networks, and civic participation.[146–148] Social capital describes the pattern and intensity of networks among people and the shared values that arise from those networks. There is evidence that youths who live in

communities with high levels of social capital are less likely to engage in crime, have better health, and have higher educational achievement. Neighborhood organizations, congregations, and other voluntary groups can create "social capital."[149–151]

The combined and often interrelated social and economic effects of these and other demographic trends such as residential segregation, "white flight," deindustrialization, structural changes in labor demand, and redlining of services have led to increasing concentration rates of poverty in inner-city, predominantly minority, neighborhoods.[143,144,152] Availability of drugs and firearms, community deterioration or disorganization, and lack of access to quality educational and recreational opportunities also have been identified as community-level factors that decrease social capital and increase risk for interpersonal violence among youths.

Other research indicates that exposure to violence in the media, particularly prolonged exposure of children, may contribute to aggressive behavior and desensitization to violence.[153–155] Researchers have found that the prevalence of drugs and firearms in a community predicts a greater likelihood of violent behavior.[156–158] The media also may contribute to the perception of violence as a normative behavior, reinforcing and sensationalizing violence as an appropriate and justifiable problem-solving strategy.[159]

Protective Factors

Protective factors are factors that potentially decrease the likelihood of engaging in a risky behavior.

Individual-level protective factors

Bearinger et al.[160] found that most protective factors against youth violence perpetration were positive affect, peer prosocial behavior norms against violence, and parental prosocial behavior norms against violence. Individual-level traits and characteristics that have been identified as protective factors for the prevention of youth violence perpetration include a personal sense of purpose and belief in a positive future, a commitment to education and learning, and the ability to act independently and feel a sense of control over one's environment.[161,162] The ability to be adaptable and flexible and have empathy for and caring toward others is significant, as is the ability to solve problems, plan for the future, and be resourceful in seeking out sources of support.[83] Conflict resolution and critical thinking skills are additional factors that help protect youths from violence, delinquency, and antisocial behavior.[163] Other individual-level protective factors for youth violence perpetration include intolerant attitude toward deviance, high IQ, high grade point average (as an indicator of high academic achievement), high educational aspirations, positive social orientation, popularity acknowledged by peers, highly developed social skills/competencies, highly developed skills for realistic planning, and religiosity.

Family-level protective factors

A strong connection to parents and other caring adults has been found to be protective factors against a range of risky behaviors including youth violence, gang involvement, teen pregnancy, drug use, and drug dealing.[164–167] Other family-level protective factors include connectedness to family or adults outside the family, ability to discuss problems with parents, perceived parental expectations about school performance, and frequent shared activities with parents.

Peer-level protective factors

Protective peer factors include possession of affective relationships with those at school that are strong, close, and prosocially oriented; close relationships with nondeviant peers; membership in peer groups that do not condone antisocial behavior; involvement in prosocial activities; exposure to school climates that are characterized by intensive supervision, clear behavior rules, and consistent negative reinforcement of aggression; and engagement of parents and teachers[27,83,89,168–170]

School-, work-, and community-level protective factors

Greater school connectedness also has been associated in several studies with lower risk for violence perpetration and delinquency among youths.[94,171] Moderate to high levels of connectedness may represent a form of social bonding that serves a protective function for youths, whereas low levels of perceived school connectedness increases the risk for aggressive behavior.

Neighborhood collective efficacy is a community-level protective factor embedded in the social, political, and economic contexts that stratify neighborhoods.[137] Sampson and Laub[172] demonstrated a strong correlation between youth violence rates and level of community cohesion. In their research, they identified a cohort of neighborhoods with characteristics generally associated with high crime rates, such as poverty, unemployment, and single-parent households that actually had low rates of violence. Their findings suggest that a combined measure of informal social control, cohesion, and trust at the neighborhood level is a strong predictor of low rates of violence, a term they described as "neighborhood collective efficacy." According to Sampson et al.,[137] through collective efficacy, neighborhoods can create

meaningful opportunities for youths by strengthening social relationships to achieve shared expectations and levels of social capital, defined as the personal relationships that are accumulated when people interact with each other in families, workplaces, neighborhoods, churches, local associations, and a range of informal and formal meeting places.

IMPLICATIONS FOR HEALTHCARE PROVIDERS

Developmental-Ecological Model

Youth violence is influenced by the interaction of numerous, multilevel characteristics, and risk and protective factors, including a personal, family, peer, and school history, experiences, and relationships, as well as characteristics of the community and society within which they live and grow up. No one factor, in isolation, leads to the development of youth violence, and the presence of risks does not always mean a young person will perpetrate violence.[173] One way to understand the dynamics between risk and protective factors is to view them within a developmental-ecological framework.[100,174] This approach recognizes that each person functions within a complex network of individual, family, community, environmental, and situational factors that impact their capacity to avoid risk.[175]

A developmental-ecological model provides a frame for considering the complex relationships between risk and protective factors and a life course perspective on factors that increase risk for youth violence perpetration.[176] *The developmental perspective* identifies important tasks, challenges, and milestones at each stage of adolescent development and the opportunities and competencies needed to meet them. Basic developmental needs of adolescents include a sense of safety, guidance from a caring adult, a feeling of social belonging, activities that promote leadership and civic engagement, participation in decision making, and opportunities to establish romantic relationships, earn money, and prepare for future jobs and careers. Successful arrival at adulthood can be determined by a youth's success in fulfilling a series of rites of passage events, such as graduation from high school, entry into the labor market, enrolling in college, marriage and parenthood, etc. Interruptions or failure to complete any one of these developmental benchmarks in a timely manner can have lifelong consequences that increase their risk for violence victimization and/or perpetration. Children and youths who have the resources and opportunities available to successfully accomplish developmental milestones are more apt to avoid risk-taking behaviors and exposures, have a healthy, productive adolescence, and make an easier transition into adult roles.

The ecological approach recognizes that each person functions within a complex network of individual, family, peer, school, community, and environmental contexts that impact their capacity to grow, develop, and avoid risk.[177] Instead of focusing solely on the individual characteristics of a youth who is at risk for a negative health event, a developmental-ecological model considers the importance of environment as a critical element in promoting health outcomes. It suggests that youths who reside in socially disorganized communities in which there is a lack of social capital and neighborhood efficacy not only experience a lack of resources, supports, and opportunities for them to successfully negotiate a socially acceptable pathway to adulthood but also frequently experience the presence of unique barriers within their families, neighborhoods, and communities that present obstacles to their progression. The developmental-ecological model suggests that communities that are better organized and have greater levels of social capital and neighborhood efficacy are better equipped to provide a safe and caring environment that supports youth development.

The most effective youth violence prevention interventions are those that use a developmental-ecological framework, which take into account the dynamics and interrelationship of both risk and protective factors. The developmental-ecological approach captures the complexity of youth behavior as the dynamic interaction between a youth's physical, cognitive, social, and psychosexual levels of development and the environmental exposures and contexts that shape the behaviors and relationships a youth has with his or her family, peers, school, neighborhood, community, and the broader society.[4,178–180] Instead of focusing just on the individual who is at risk for, or who engages in, a particular behavior such as violence, this approach considers the individual's relationship to his or her stage of development and the environmental surroundings.

Primary Prevention

Primary youth violence prevention activities use universal strategies to educate and inform young people and adults and are typically carried out in the home or in a school, clinic, or community setting. Primary prevention interventions provide teens, peers, and/or their parents with information about youth development and the different levels and types of risk factors for youth violence, including individual, family, peer, school, and community levels. The most common primary youth violence prevention interventions seek to promote and enhance youths' knowledge skills,

attitudes, and beliefs.[181] They typically include individual education, classroom or group presentations, and the use of mass media and marketing efforts.

Primary youth violence prevention efforts also include those interventions that seek to change the physical and social environments of communities. One of the most powerful protective factors emerging from resiliency studies is the presence of caring, supportive relationships with adults, other than parents. Thus the commitment of resources to programs that support meaningful opportunities for adult/youth interaction will help more adults understand youths' perspectives and behaviors and can contribute to a culture of caring for youths, instead of one that ignores youths or, worse, labels them as deviant or antagonistic. Other community-level protective factors that can be harnessed to help build resiliency and reduce overall risk for violent behavior at the community level include development of effective coalitions[182] and support for public policies that support child- and youth-oriented programs. Efforts to coordinate or expand community assets might serve as health-promoting or protective factors against youth violence. These include activities to enhance the level of social organization, social capital, and neighborhood collective efficacy and the presence of and access to social networks.

Efforts to improve structural and social characteristics that buffer or moderate the effects of risk factors for youth violence include efforts to improve local institutions such as schools (increased school safety, school climate, and mentoring programs), healthcare and social service agencies (trauma-informed systems of care), police (community policing), and policy reforms designed to mitigate the effects of social determinants (low-income housing, increased mental health services, needle exchange programs). Such programs can help adults build a base of understanding and commitment to work with and engage young people.

Secondary Prevention

Secondary youth violence prevention programs seek to target youths who are at elevated risk for youth violence. The most salient predictors of violence perpetration are previous violence involvement and a history of violence victimization. The predictors include hard drug use, belief that hurting others' property while drunk was acceptable, and high-risk group self-identification.[183] Youths who have experienced physical abuse, experienced sexual abuse by family and/or other persons, witnessed abuse, and experienced household dysfunction caused by family alcohol and/or drug use are also at increased risk of adolescent violence perpetration.[91] Youths who report preteen alcohol use initiation also report involvement in significantly more types of violent behaviors, compared with nondrinkers.[184] Among adolescent inpatients, those who showed symptoms of impulsivity and PTSD were also at increased violence risk.[185]

Tertiary Prevention

Tertiary prevention interventions can be defined as those focused on youths who have already engaged in violent behavior. Tertiary interventions that have been demonstrated to be effective include delinquency treatment program for early-career juvenile offenders,[186] MST,[187] provision of opportunities for preventing youth gang involvement in children and young people,[78] parenting interventions,[188] and trauma-informed systems of care.[189–191] Other tertiary youth violence prevention interventions that have been identified include community development, increased police presence and penalties, community policing, community and economic development initiatives, expansion of youth development and employment opportunities, school dropout initiatives, and mentoring programs.

Youth Violence Screening

The complex nature of youth violence means that there is no single instrument or set of questions that will be appropriate as a universal screening tool. Healthcare providers considering incorporation of youth violence prevention strategies should consider the following developmental-ecological dimensions:

1. *Type of violence*: Homicide, fighting, family violence, dating violence, sexual violence, gang violence, bullying, and cyberbullying.
2. *Personal risk factors*: History of exposure to violence, attitudes and beliefs about the use of violence, gender stereotyping, etc.
3. *Purpose*: Primary, secondary, and tertiary prevention.
4. *Stage of youth development*: Early adolescence (ages 12–14 years), mid-adolescence (ages 15–16 years), and late adolescence (ages 17–21 years).
5. *Ecology of the youth's environment*: Family members, peers, school, community, society, and situational factors.

To screen for risk for youth violence perpetration, a combination of individual, family, peer, community, societal, and situational factors that contribute to the risk of a youth becoming a perpetrator of interpersonal violence must be considered. Although this undoubtedly will add to the clinical time needed to allocate to youths, interpersonal violence is the leading cause of death, disability, and injury in teens, particularly black and Latino boys, so the time spent may yield a high return.

Primary youth violence prevention screening tools typically focus on utilizing a positive youth developmental approach that targets the general population of youths, rather than targeting youths who are at risk of or currently engaged in youth violence. Dahlberg et al.[192] has compiled a compendium of primary prevention screening tools used to assess violence-related attitudes, behaviors, and influences among youths (see Table 10.1). These screening tools or individual questions can be used to identify youths at elevated risk for different types of youth violence perpetration.

Strand et al.[210] have identified secondary screening and assessment tools that seek to identify youths who have a history of exposure and/or symptoms arising from exposure to interpersonal violence. They include instruments that seek to assess prior exposure to violence:

TABLE 10.1
Measuring Violence-Related Attitudes, Behaviors, and Influences Among Youths: A Compendium of Assessment Tools

Aggression/Delinquency
Normative Beliefs About Aggression; 20 items (Huesmann, Guerra, Miller, and Zelli, 1992)[192]
Beliefs Supporting Aggression; 6 items (Bandura, 1973)[193]
Beliefs About Hitting; 4 items (Orpinas, 1993)[192]
Attitude Toward Violence; 6 items (Adapted by Bosworth and Espelage, 1995)[192]
Beliefs About Aggression and Alternatives; 12 items (Adapted from Farrell, 2001)[194]
Attitude Toward Conflict; 8 items (Lam, 1989)[195]
KMPM Questionnaire; 11 items (Adapted by Aber, Brown, Jones, and Samples, 1995)[196]
Attitude Toward Interpersonal Peer Violence; 14 items (Slaby, 1989)[192]
Beliefs about Conflict—NYC Youth Violence Survey; 9 items (Division of Adolescent and School Health, CDC, 1993)[192]
Attitude Toward Delinquency—Pittsburgh Youth Study; 11 items (Loeber, Farrington, Stouthamer-Loeber, and Van Kammen, 1998)[30]
Delinquent Beliefs—Rochester Youth Development Study; 8 items (Thornberry, Lizotte, Krohn, Farnworth, and Jang, 1994)[197]
Norms for Aggression and Alternatives; 36 items (Adapted from Jackson, 1966 and Sasaki, 1979)[192]
Couple Violence
Acceptance of Couple Violence; 11 items (Foshee, Fothergill, and Stuart, 1992)[198]
Education and School
Attitudes Toward School—Denver Youth Survey; 5 items (Institute of Behavioral Science, 1990)[199]
Commitment to School—Seattle Social Development Project; 6 items (Glaser, Van Horn, Arthur, Hawkins, and Catalano, 2005)[200]
Commitment to School—Rochester Youth Development Study; 10 items (Thornberry, Lizotte, Krohn, Farnworth, and Jang, 1991)[201]
Prosocial Involvement, Opportunities and Rewards—Seattle Social Development Project; 9 items (Arthur, Hawkins, Pollard, Catalano, and Baglioni, 2002)[202]
Classroom Climate Scale; 18 items (Adapted from Vessels, 1998)[203]
Employment
Attitudes Toward Employment—Work Opinion Questionnaire; 8 items. (Johnson, Messe, and Crano, 1984)[204]
Gangs
Attitudes Toward Gangs; 9 items (Nadel, Spellmann, Alvarez-Canino, Lausell-Bryant, and Landsberg, 1996)[205]
Gender Roles
Gender Stereotyping; 7 items (Gunter and Wober, 1982)[206]
Attitudes Toward Women; 12 items (Galambos, Petersen, Richards, and Gitelson, 1985)[207]
Guns
Attitudes Toward Guns and Violence; 23 items (Applewood Centers, Inc., 1996)[208]
Television
TV Attitudes; 6 items (Huesmann, Eron, Klein, Brice, and Fischer, 1983)[209]
Community Violence
The Children's Exposure to Community Violence Survey[195]

Second Edition, Attitude and Belief Assessments.[192] https://www.cdc.gov/violenceprevention/pdf/yv-technicalpackage.pdf.

Anatomical Doll Questionnaire (ADQ), Checklist of Sexual Abuse and Related Stressors (C-SARS),[211] and Child Sexual Behavior Inventory (CSBI-I))[211] and Child Trauma Questionnaire (CTQ).[211] A screening tool that assesses for trauma histories that include events beyond maltreatment and family violence is the Traumatic Events Screening Inventory (TESI).[211] Other tools used to assess the impact of exposure to violence are the Childhood PTSD Interview,[212] the Children's PTSD Inventory,[213] When Bad Things Happen Scale (WBTH),[214] and the PTSD Reaction Index.[215] Instruments designed to measure the impact of stressful and traumatic events on children and adolescents, usually in terms of symptom development, include the Adolescent Dissociative Experience Scale (A-DES)[216] and the Child Dissociative Checklist (CDC),[217] the Pediatric Emotional Distress Scale,[211] and the Trauma Symptom Checklist for Children (TSCC).[211]

Tertiary prevention for primary care providers usually falls within the domain of referrals. A primary care provider may be asked to help identify and/or refer a youth who has already been identified as a perpetrator of violence to a program that can help him or her address the underlying issues. In a systematic review of youth violence interventions, Limbos et al.[181] found that youth violence prevention interventions that were tertiary in nature were more likely to report a reduction in violence outcomes than primary or secondary interventions. Tertiary interventions that have been found to have a significant impact in reducing youth violence include

- Tertiary Turning Point: Rethinking Violence (TPRV)[26]
- MST[187]
- Project Back on Track (after-school diversion program)[186]
- Nonrandomized controlled trial multimodal treatment approach with two orientations[218]
- Multifamily counseling program[219]
- Mendota Juvenile Treatment Center program[220]
- Retrospective comparative cohort Family Conflict Resolution program[221]
- Mental health services following adolescents' inpatient hospitalization[222]
- Low- and high-process group interventions for aggressive adolescents[223]
- MST versus individual therapy[224]

Role of Primary Care Providers

The HEADSS (Home, Education and Employment, Activities, Drugs, Sexuality, Suicide/Depression, and Safety) assessment[225] is a good prevention screening framework for primary care providers and it addresses developmentally appropriate tasks of adolescence that most teens will encounter. Although it offers no differentiation of those youths who may be at risk for violence victimization or perpetration, it provides a good framework for incorporating questions about risk for youth violence perpetration. For instance, under *Home*, questions about relationships with parents and/or siblings can be explored. Under *Education and Employment*, peer relationships can probe for signs of bullying, dating violence, sexual violence, cyberbullying, and gang violence. For *Activities*, a provider can find out if there are other adults who can provide emotional and/or social support and mentoring. *Drugs and Sexuality* provide healthcare provider with an opportunity to identify situational factors, such as partying or drug selling/purchasing behaviors, which may increase the risk for youth violence perpetration. Under *Suicide/Depression*, emotional and psychosocial traits, including anger management and coping skills, can be explored more in depth.

CONCLUSIONS

Interpersonal violence is the leading cause of death and injury in adolescents. Youths exposed to multiple risks factors and/or who have few protective factors are notably more likely than others to engage in interpersonal violence. The odds of violence in youths exposed to more than five risk factors compared with the odds of violence in youths exposed to fewer than two risk factors at each age were 7 times greater than those at age 10 years, 10 times greater than those at age 14 years, and nearly 11 times greater than those at age 16 years.

Although the overall accuracy in predicting youths who will go on to commit violent acts is limited, there is growing evidence that it is possible to identify youths who possess certain attitudes or behaviors or who are in environments or situations that increase their risk for being a perpetrator of youth violence. Identification of youths who possess certain risk and/or protective factors may increase or decrease the likelihood of youths who are at risk for various types of violence perpetration.[226] Understanding these risk and protective factors may help primary care providers identify various opportunities to incorporate screening questions to identify youths at risk for youth violence perpetration and to identify community resources for referring youths who possess these traits.

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