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Mitigating the Effects of Gun Violence on Children and Youth

James Garbarino, Catherine P. Bradshaw, and Joseph A. Vorrasi

SUMMARY

Countless children and youth are exposed to gun violence each year—at home, at school, in their communities, or through the media. Gun violence can leave lasting emotional scars on these children. This article reviews research regarding the psychological effects of gun violence on children and youth, and offers suggestions for how parents, school administrators, and mental health workers can mitigate these negative effects.

- ▶ Children exposed to gun violence may experience negative short- and long-term psychological effects, including anger, withdrawal, posttraumatic stress, and desensitization to violence. All of these outcomes can feed into a continuing cycle of violence.
- ▶ Certain children may be at higher risk for negative outcomes if they are exposed to gun violence. Groups at risk include children injured in gun violence, those who witness violent acts at close proximity, those exposed to high levels of violence in their communities or schools, and those exposed to violent media.

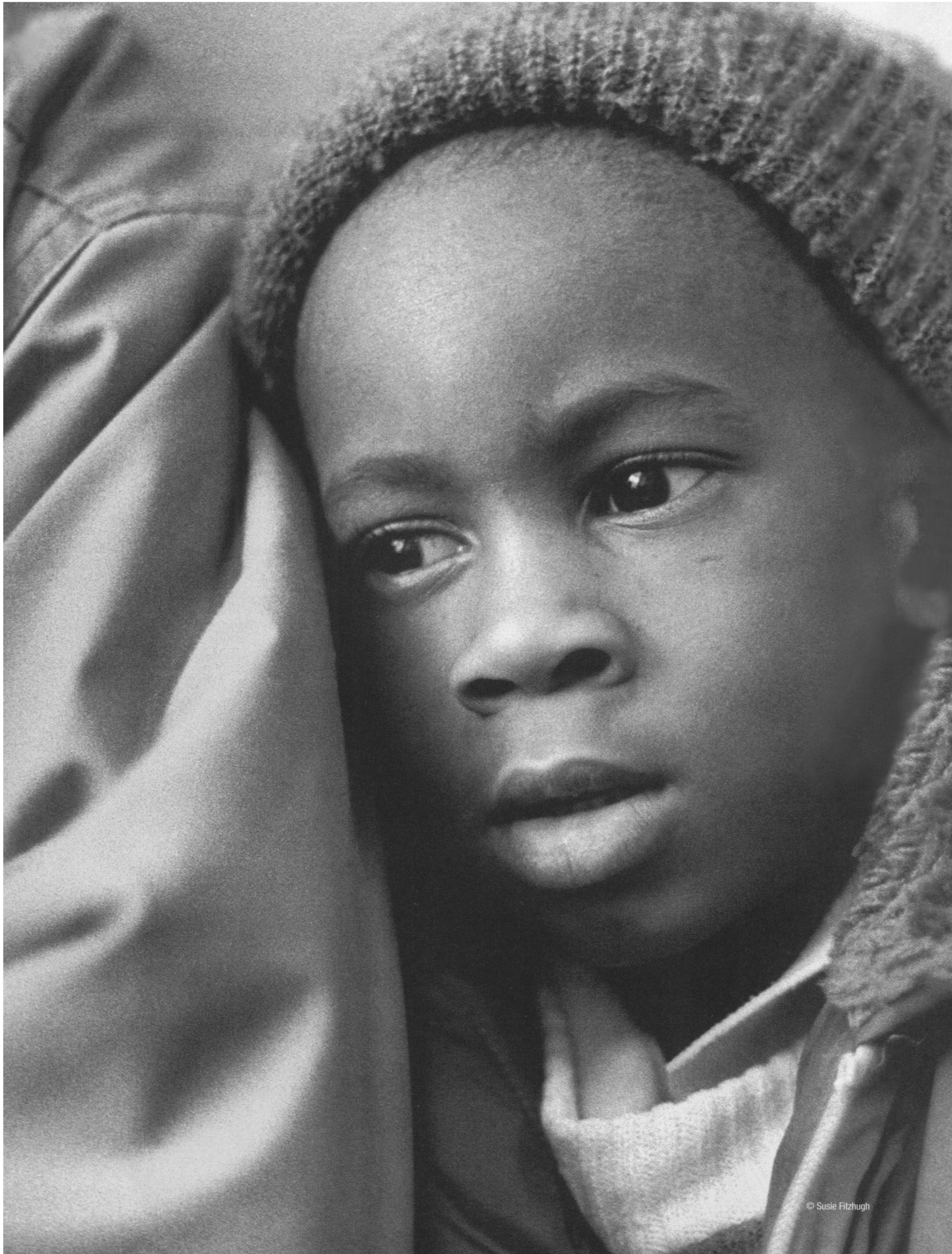
- ▶ Parents, school administrators, and mental health workers all can play key roles in protecting children from gun violence and helping them overcome the effects of gun-related trauma.

The authors recommend a number of strategies that adults can adopt to help children cope with gun violence, such as increasing parental monitoring, targeting services to youth at risk of violent activity, and developing therapeutic interventions to help traumatized young people.

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Guns are deeply embedded in American society. Indeed, many people around the world perceive the gun as one of America's primary cultural icons—from Al Capone's machine gun to GI Joe's rifle, or more recently, the shotguns and assault rifles of young gang members and adolescent school shooters. An estimated 43% of American households contain some type of gun.¹ Despite the prevalence of guns in the United States, an ongoing and intense cultural struggle continues regarding their proper place in society, particularly in the lives of children and youth. Most states have laws limiting minors' access to guns. Yet surveys reveal that many youth, perhaps most, believe they could obtain a gun if they wanted to, and research suggests that as many as one in five inner-city teenagers reports carrying a gun at some point in a typical month.² (See the article by Blumstein in this journal issue.)

Gun violence is an important aspect of the larger problem of aggression among children and youth, mainly because it dramatically increases the seriousness of any specific aggressive act. Unlike other weapons, a momentary aggressive impulse can become lethal with a gun. For example, with fists, blunt objects, and even knives, the process of killing someone typically takes longer than it does with a gun and provides abundant sensory feedback (such as bleeding, screaming, and imploring) that can inhibit aggressive impulses.^{3,4}

Assessing the psychological effects of gun violence on children and youth is complex and difficult for several reasons. First, a young person's "choice" to use a gun is not randomly distributed among the population of aggressors. Research reveals that using a gun indicates a higher level of violent intent than does using fists to fight.² Second, the consequences are often very different depending on the role the young person plays in an incident of gun violence—perpetrator, victim, or bystander. Third, relatively little research has focused specifically on the effects of youth exposure to gun violence or on interventions to help youth cope with their exposure.

At the same time, the available research shows that youth can suffer severe and lasting emotional distress from exposure to gun violence, and may become more likely to perpetrate violence themselves. Parents, schools, and communities are adopting numerous strategies to

protect young people from exposure to gun violence and to mitigate any harmful effects. This article draws on theory and research to document some of the outcomes associated with exposure to gun violence among children and youth, and to identify strategies for preventing or treating harmful effects of exposure.

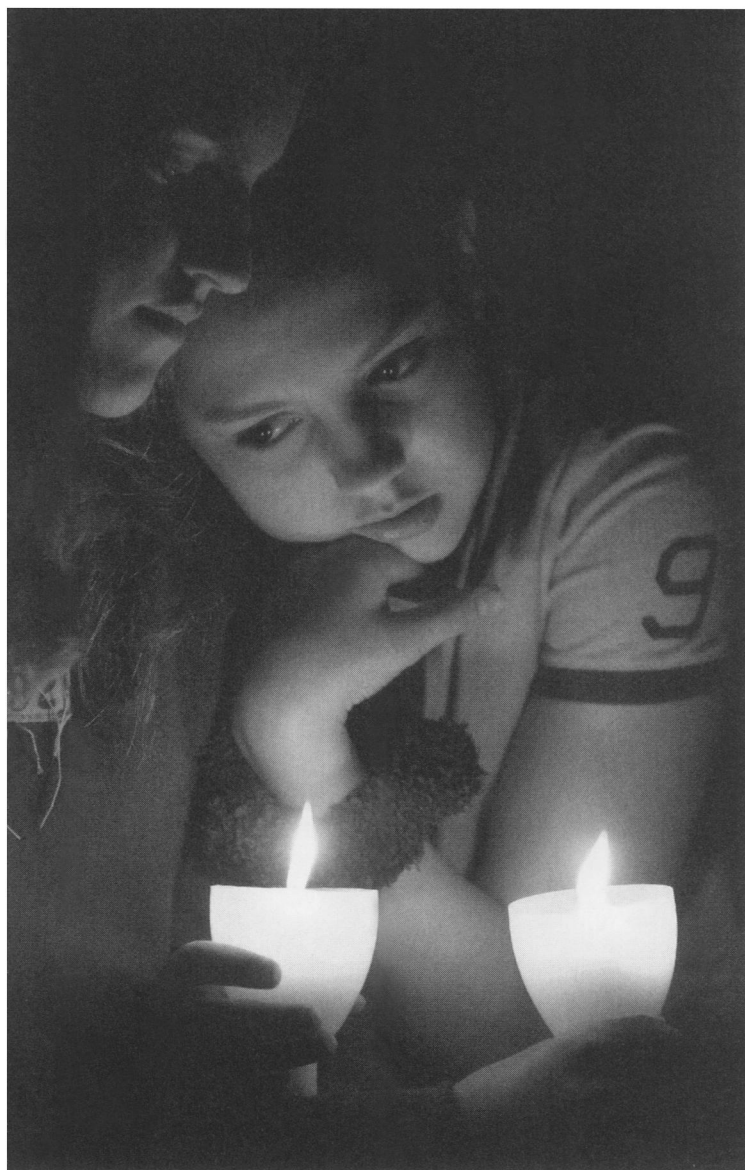
This article begins by describing how the trauma of gun violence can affect young people both emotionally and physically. It explores key risk factors for gun-related psychological trauma, including exposure to community violence, violence in schools, and violent content in the media. The article concludes by discussing strategies that parents, schools, and mental health workers can use to protect children from the harmful effects of gun violence and treat children affected by gun-related trauma.

Effects of Gun Violence on Children and Youth

Exposure to gun violence can traumatize children and youth not just physically, but emotionally as well. Studies have documented that young people exposed to gun violence experience lasting emotional scars. Some children may develop posttraumatic stress disorder (PTSD), which can affect brain development. The psychological trauma of gun violence may lead some children to arm themselves "for protection," or desensitize them so that they feel less hesitation about engaging in violent acts.

Psychological Impacts Associated with Exposure to Gun Violence

Young people who are exposed to gun violence may experience negative psychological impacts in both the short and long term. For example, a recent study of rural third- through eighth-graders indicated that children exposed to gun violence reported significantly higher levels of anger, withdrawal, and posttraumatic stress.⁵ The problem is exacerbated when youth get caught in a cycle of violence: Those who witnessed at least one incidence of gun violence reported significantly greater exposure to other types of violence, higher levels of aggression, and less parental monitoring than their peers.⁵ Exposure to gun violence also can desensitize youth to the effects of violence and increase the likelihood that they will use violence as a means of resolving problems or expressing emotions.



Sleep Distortion and Withdrawal

Research shows that exposure to violence can cause intrusive thoughts about the traumatic event and sleep disturbances.⁶ Therefore, it is not surprising that children and youth exposed to gun violence commonly experience difficulty concentrating in the classroom, declines in academic performance, and lower educational and career aspirations.^{7,8} Other outcomes associated with exposure to violent trauma include increased delinquency, risky sexual behaviors, and substance abuse.^{7,8}

Exposure to gun violence can cause children and youth to withdraw from the very people who may be best equipped to help them—friends and family. Researchers at the University of California Los Angeles (UCLA) Trauma Psychiatry Program conduct interventions with young people who have sustained or witnessed violent injury. Their research suggests that exposure to gun violence affects the

quality of youth friendships. For example, wounded adolescents are particularly focused on the physical scars resulting from their injuries because the scars are daily reminders of the trauma.⁸ These injuries can disrupt social relationships, because they often prompt questions from peers or even strangers about the event—questions that only perpetuate the distress. Victims or those exposed to violence often become estranged from friends who were with them during the trauma,⁸ because seeing people who were involved in the incident can remind them of it.

Wounded and violence-exposed youth may experience other disruptions in their relationships with important peers and family members. Some young people experience survivor guilt after witnessing the violent victimization or death of a peer. Studies at UCLA indicate that many survivors and bystanders agonize during the event about whether to flee from the danger in self-preservation or to stay to aid their victimized friend. Memories of this dilemma can be extremely distressing. Furthermore, bystanders' actions can affect their subsequent relationship with the victim, because many victims report feeling angry when bystanders and friends do not intervene.⁸

Posttraumatic Stress Disorder

In some cases, exposure to gun violence can lead to PTSD.^{3–5,8,9} PTSD in children is typically associated with hypervigilance (an overly alert state), an exaggerated startle response, anxiety, and recurring thoughts and dreams associated with the traumatic event.¹⁰ Traumatized children may attempt to avoid people, places, or objects that remind them of the trauma. “Psychic numbing” also can occur, causing children to detach emotionally from others and show decreased interest in activities they once enjoyed.¹⁰ Some trauma witnesses have difficulty expressing their emotions, lose their temper easily, or exhibit outbursts of anger.

Based on studies of how children's brains adapt to trauma, researchers at Baylor Medical College have concluded that a distinctive pattern of brain activity develops in response to exposure to threatening stimuli.¹¹ The greater the intensity and frequency of stimulation—and thus the distinctive brain activity—the more likely that the brain will form “an indelible

Living in communities where violence is common can negatively affect children's development, even if they are not directly exposed to violent activity.

internal representation” of the trauma. Recurrent exposure to the trauma strengthens this response and lowers the child’s ability to deal with any type of trauma. The child’s brain becomes highly sensitive to threat and trauma-related cues, which in turn can affect his or her emotional and psychological well-being.¹¹ Several studies have documented that children with a history of trauma develop a persistent, low-level fear, and respond to threats either with dissociation (separating certain ideas or emotions from the rest of their mental activity to avoid stress or anxiety) or with an unusually heightened state of arousal.^{11,12} This pattern of brain activity may also affect children’s general information processing.¹³ For example, children who have experienced trauma may misinterpret ambiguous stimuli as threatening.

Children do not have to witness gun violence directly to develop symptoms of traumatic stress. After hearing about incidences of gun violence or learning about them on television, children may feel that their safety is threatened.¹⁴ Teens may respond to this threat by adopting what they perceive as “protective behaviors,” such as joining a gang or arming themselves with guns or knives.¹⁵ Many youth associate great power with carrying or having access to a gun.

Conversely, some youth may perceive the media attention to youth gun violence as attractive and commit “copycat” shootings or try to “outdo” publicized school shootings.¹⁶ For example, some of the recent school shooters (including Eric Harris and Dylan Klebold, the shooters at Columbine High School in Littleton, Colorado) reported that they planned a “better” school ambush by learning from the “mistakes” of other publicized school shooters.³ (See Box 1.)

Risk Heightened by Exposure to Violence in the Community, at School, and in the Media

The degree of exposure, the relationship with the victim, and the presence of other risk factors (such as preexisting mental health problems) influence the severity of the

lasting effects of gun violence.^{17,18} Children and youth with several risk factors, in combination with few protective factors, seem to suffer most from exposure to gun violence. The psychological effects of gun violence are especially serious for children and youth who are physically injured.⁸ They are left with traumatic memories and feelings of insecurity, as well as physical injuries or scars that remain as permanent reminders of the trauma.

Children exposed to gun violence in their own homes also are at great risk for developing symptoms of PTSD, especially if the victim is a family member. Exposure to gun violence in shared spaces, such as neighborhoods or schools, also increases the risk of physical injury and trauma for bystanders who witness the event.¹⁹ Witnesses of such violence are reminded of the trauma every time they pass the street corner or enter the building where the shooting occurred.¹⁷

Although children are especially at risk for psychological trauma if they are directly exposed to or victimized by violence, other factors, such as exposure to violence in the community, in schools, or in the media, also can put children at risk.

Exposure to Community Violence

Living in communities where violence is common can negatively affect children’s development, even if they are not directly exposed to violent activity.²⁰ The effects of high levels of violence within a community are similar to those associated with direct exposure and can include nervousness, sleep problems, intrusive thoughts, anxiety, stress, loneliness, depression, grief, and antisocial behavior.²¹ Violence-exposed children also may show a decline in cognitive performance and school achievement. Repeated trauma can lead to anger, despair, and severe psychic numbing, resulting in major changes in personality and behavior.¹⁷

Furthermore, youth living in violent communities may experience “pathological adaptations” such as hopelessness, fatalistic thoughts, desensitization to violence, and truncated moral development.²² These youth often participate in high-risk behaviors such as alcohol or

drug abuse, promiscuous sex, or association with dangerous people.¹⁹

Age and social and cognitive development are key determinants of how children respond to community violence.²³ For example, the effects of community gun violence can be particularly severe if exposure occurs during critical periods of neurological growth and development, such as early childhood and early adolescence.¹² Children who are exposed to traumatic events before age 11 are three times more likely to develop PTSD than children over age 12.²⁴ However, adolescents who witness a single episode of violence, such as a school shooting, may experience greater stress than younger witnesses because they feel guilty about surviving and about not being able to help other victims. These feelings of guilt, coupled with anger and the

desire for revenge, can make this type of violence exposure particularly difficult for teens.²⁵

Violence is all too common in urban areas, but living in a rural area does not prevent children from being exposed to gun violence. A study of more than 2,000 young people in rural Ohio indicated that 25% had experienced gun violence at least once. One study of elementary and high school students in rural Louisiana found that 80% of the students had a gun in their home.²⁶ Only a few of these students (7% of girls and 20% of boys) had received any gun safety training, indicating that the risk for gun violence may be significant for nonurban youth, many of whom have access to shotguns or handguns. These findings may not be surprising, as gun ownership of all types is more common in rural than in urban areas.⁵

Box 1

Adolescent Boys and Violence

Males are the most frequent perpetrators and victims of school shootings.^a The fact that seemingly “normal” boys from what appear to be stable families, good schools, and safe communities are using guns and other weapons to commit heinous school shootings disturbs many children and adults. A national survey of American 13- to 17-year-olds conducted in 1999 found that 52% of teenagers thought that an attack such as the one at Columbine High School could happen in their school.^b In a similar national poll conducted with adults, nearly a year after the shooting at Columbine, 70% of those polled believed that such a shooting could happen at a school in their community.^c

When considering how to prevent school shootings, parents, school administrators, and mental health workers need to understand the complex attitudes that many adolescent boys have toward violence. Interviews with adolescent boys across the United States suggest that many boys are afraid not only of becoming

victims of school shootings, but also of being falsely accused of having the potential to commit such violence.^a Additionally, the interviews reveal that boys may fear their own aggressive and angry emotions and become hesitant to disclose their feelings to others.

Much of the confusion and mixed emotions these boys feel may stem from society's views of masculinity and how boys are supposed to act and resolve their problems. As one Harvard University psychologist has written, “As long as nobody is seriously hurt and no lethal weapons are employed—especially within the framework of sports and games—aggression and violence are widely accepted and even encouraged in boys.”^d Society's acceptance of certain forms of aggression and not others is confusing for boys, the psychologist points out, and playing violent video games and listening to music that glorifies violence may provide emotional outlets for them.

^a Pollack, W. *Real boys' voices*. New York: Random House, 2000.

^b Goldberg, C., and Connelly, M. Poll finds decline in teen-age fear and violence. *New York Times*, October 20, 1999, at A1.

^c CNN. *Are U.S. schools safe?* (2000). Downloaded from <http://www.cnn.com/SPECIALS/1998/schools/index.html> on March 7, 2002.

^d See note a, p. 200.

As with direct exposure to violence, exposure to media violence may spur some children and youth to commit violent acts.

Exposure to Violence in Schools

Statistically speaking, children are safer at school than anywhere else.^{27,28} They are less likely to be attacked, injured, or killed in school or on school property than elsewhere in the community or at home. However, although victimization rates at school are lower than elsewhere, schools are not safe havens. Violence in schools or other shared spaces can be particularly stressful for young people.

Despite overall decreases in nonfatal violent youth victimization between 1992 and 1998, the victimization rate at schools (approximately 130 per 1,000 students) did not change.²⁷ In anonymous self-report surveys administered in 1995 to 12- through 18-year-old students across the United States, 9% of respondents—an estimated 2.1 million teens—reported that they avoided certain places in their school because of safety concerns.²⁹ This rate represents a significant increase, almost doubling from 5% in 1989. In addition, in 1999, some 5% of students reported feeling concern for their safety while at school or while traveling to school.²⁷

In some cases, the threat is real. Approximately 8% of students reported that they had been threatened or injured at school with a weapon (for example, a gun, knife, or club) during the last 12 months, a rate that remained stable from 1993 through 1997.²⁷ In 1996, 5% of 12th-graders from urban and nonurban schools reported that they had been injured with a weapon while at school or on school property during the last 12 months.²⁹

A 1994 survey of school board members from different U.S. districts indicated that even though students and staff are generally safe at school, a nationwide fear of school violence exists.³⁰ More than 80% of school board members reported that the fear of school violence negatively affected morale, effectiveness, and academic performance for students, teachers, and administrators in their districts. Three-quarters of American public school students live in districts with 5,000 or more students, and these larger districts have the highest level of concern about school violence. For example, 92% of board members from districts with 25,000 or more students

expressed great concern about violence in their schools, with concern highest among board members from the Southern and Pacific regions.

Contrary to public perception, the risks of serious violent victimization at school are roughly equal for students attending urban and nonurban schools. Nevertheless, urban students are more vulnerable than nonurban students to serious violent crime in the community.²⁷ Some research suggests that rural and suburban students' perceptions of safety at school are changing in response to nationally publicized school shootings.^{14,30} Some of these concerns may derive from the sense that contemporary school shooters target "innocent" victims, whereas many observers perceive youth violence in the community (such as gang violence) as partially caused by the victims' choices.³ However, no national data that address this issue are available, because studies focusing on the risks of violence for nonurban youth are not common.

Media Violence

According to the Center for Media Education, by the time children complete elementary school, they will witness more than 100,000 acts of violence on television, including 8,000 murders. These numbers double to 200,000 acts of violence and 16,000 murders by the time they complete high school.³¹ This bombardment of media violence in television, films, and video games seems to negatively affect some young viewers, priming them to act aggressively.³² As with direct exposure to violence, exposure to media violence may spur some children and youth to commit violent acts.

Violence in Films and Television

Television and movie violence can affect subsequent displays of aggression by modeling and glorifying violence, triggering aggressive impulses in some people, and decreasing feelings of empathy for victims.³² Content analyses of prime-time television indicate that perpetrators of gun violence typically are depicted as using guns to protect themselves, which gives the impression that guns are important for self-protection.³³ Furthermore, perpetrators are seldom held accountable for their actions. Death and physical injuries from gun vio-



lence are usually glossed over or totally overlooked.³⁴ Even the mass television coverage of school shootings can contribute to violent behavior, as with copycat shootings. Some highly impressionable youth may see the publicity surrounding a school shooting as exciting and an opportunity for infamy.^{3,35}

Video Games

Another form of popular media entertainment for youth is violent video games. The combination of technological advances and a growing demand for intensity and arousal has substantially altered video game content. The latest generation of games is much more violent and accurate in its depictions of violence than its predecessors were, with many lifelike images of blood, guts, and gore.⁴ Data indicate that children and adolescents prefer violent video games to all others.³⁶ Some scholars suggest that violent video games, because of their interactive and participatory nature,

are even worse for children and teenagers than violent television programs. Playing these video games allows young people to practice violence—often gun violence—in ways television does not.³⁷

Several studies have demonstrated that teenagers who play violent video games are more likely to engage in aggressive behavior and violence than are children who play nonviolent video games.^{37,38} Much less is known about the link between playing violent video games and later perpetrating gun violence. However, the experience of the military suggests that video games are an effective tool for training people to use firearms.

According to one professor of military science, “first-person shooter video games”—which involve firing a lifelike digital gun at human forms that pop up on the television screen—teach children how to kill the same way that flight simulators teach pilots to fly without leav-

Parental responses to gun violence are especially important because the way parents cope with traumatic events largely determines their children's response.

ing the ground.⁴ Indeed, the military has long used first-person shooter simulations to train soldiers to target their enemies. When American soldiers in World War II were trained to fire at bull's-eye targets, only 15% of the soldiers were able to shoot their rifles at individual enemy soldiers. Their training never broke the human inhibition to fire a gun at another human being. In response, the U.S. military moved toward training soldiers to fire at simulated human forms resembling those now seen in popular video games (such as, *Doom*, *Area 51*, and *Golden Eye 007*). By the end of the Vietnam War, the military human target hit rate jumped to 95%.⁴

A vivid example of the training provided by first-person shooter video games is the 1998 school shooting in Paducah, Kentucky. Fourteen-year-old Michael Carneal, who had only one day's practice with a stolen pistol, fired eight shots at a high school prayer group. He hit eight people, five in the head or upper torso. The families of the victims have filed a \$130 million lawsuit against video game manufacturers whose first-person shooter games allegedly taught the boy to kill with the precision and efficiency of a well-trained soldier.⁴

Protecting Children from the Harmful Effects of Gun Violence

Parents, school administrators, and mental health workers all have roles to play in protecting children and youth from exposure to gun violence and in helping them overcome the effects of gun-related trauma. Parents can closely monitor their children's behavior, environment, and media use. Schools can identify and target services toward students who may be at risk for perpetrating gun violence, but they must be careful not to create a climate of fear. Finally, mental health workers can develop and implement intervention programs that help youth cope with gun violence.

Parents' Role in Protecting Children

Parental responses to gun violence are especially important because the way parents cope with traumatic events largely determines their children's response. In fact, one

of the best predictors of children's reactions to a potentially traumatic experience is their parents' reaction or level of functioning.³⁹ During the height of the German bombing of England in World War II, for example, children in London measured the danger that threatened them chiefly by gauging their parents' reactions.⁴⁰ When parents break down or panic in response to gun violence, children suffer,⁴¹ because emotionally disabled or immobilized parents seldom offer their children what they need to cope successfully with traumatic experiences.⁴² These parents tend to engage in denial and to misinterpret the child's signals and needs, making them emotionally unavailable to their children.

Parents face some daunting challenges in protecting their children from gun violence, not least of which are social expectations that they bear responsibility for their children's actions. They can address these challenges by closely monitoring their children's behavior, environment, and exposure to violent media.

Monitoring the Child

Acknowledging that no family is immune to the threat of gun violence is an important starting point for parents. Until the mid-1990s, many parents believed that youth gun violence plagued only inner-city neighborhoods, schools, and communities.⁵ But the wave of school shootings that occurred in the late 1990s made many parents realize that no community is free from the threat of youth violence. Although school shootings are rare and account for only a small portion of all youth gun violence (see the article by Fingerhut and Christoffel in this journal issue), the grisly televised images of wounded children, students barricaded in classrooms or closets, and innocent children being killed by their classmates brought youth gun violence to the forefront of the American consciousness.³

Parents can acknowledge the danger of gun violence by being alert to signs that their own children might be prone to violent behavior. Communities commonly respond to youth gun violence by blaming other adults—often school officials or the perpetrators' parents, who "should have known" that children were

going to commit violent acts.⁴³ Although no empirical studies have specifically addressed this issue, anecdotal evidence indicates that youth may provide some clues that they are plotting armed attacks.

For example, one of the most controversial issues arising from the 1999 massacre at Columbine High School in Littleton, Colorado, was whether the parents of shooters Eric Harris and Dylan Klebold should be held accountable for their children's actions. Members of the Littleton community and the public questioned how the boys' families missed so many red flags, such as the boys' admiration for Adolf Hitler, obsession with violent video games, and stockpiling an arsenal of semi-automatic guns, grenades, and the materials to construct some 30 bombs. When the police searched Harris' bedroom, they found a shotgun, ammunition, a bomb, and a timeline of what was to happen on the day of the massacre—materials the parents could have discovered before that fateful morning.

However, parents may find it difficult to detect a child's impending transition from "troubled teen" to "killer" for many reasons.³ Teenagers hide many things from their parents,⁴⁴ and they act differently around their parents than they do around their peers.⁴⁵ Moreover, peers and adults in the school or community often do not share disturbing information about teens with their parents. Finally, it seems disloyal to most parents to "think the worst" of their children.³

Monitoring the Environment

Parents who are concerned that their children may become victims or perpetrators of gun violence can alter their parenting behavior to compensate for dangers in the children's social environments.⁴⁶ One parenting practice that has been researched extensively is parental monitoring, which involves tracking and attending to the child's activities and whereabouts.⁴⁷ Research reveals that well-monitored children and youth are less likely to smoke, use drugs and alcohol, engage in risky sexual behavior, become antisocial or delinquent, and socialize with deviant peers.^{47,48}

Though parental monitoring may protect children from many of life's temptations and dangers, can it protect them from gun violence? Interviews conducted with 10 mothers in the public housing projects of inner-city

Chicago suggest that the answer is yes, at least in some settings. According to these mothers, closely monitoring children and adolescents is the only way to protect them from the widespread gang activity and gunfire that are characteristic of their community.⁴⁹ Similarly, studies indicate that many parents in urban areas try to compensate for the unpredictability of their environment by setting greater restrictions on their children's behavior and using more physical discipline.⁵⁰

Monitoring the Media

Parental interest in regulating the amount of violent imagery children watch has grown in recent years.³¹ Complicating matters, the deregulation of children's television programming has increased parents' responsibility for monitoring their children's television viewing. The growing demand for monitoring technology such as the V-chip suggests that American parents are struggling with the task.⁵¹

Similarly, there are efforts to impose—and, in some cases, enforce—age restrictions or recommendations on certain forms of violent media. Such efforts include restricting admission to R-rated movies, placing warning labels on music with explicit lyrics, and providing recommended audience ages for prime-time television shows. These initiatives are self-imposed and self-regulated by the entertainment industry, but many adults support stricter legal restrictions on children's access to certain forms of violent material.

In addition, many American parents are beginning to limit their children's access to violent video games in response to findings that they have played a role in the proliferation of youth violence, and that children with certain risk factors, especially signs of peer rejection and emotional instability, should have limited exposure to point-and-shoot video games.⁴ Some communities also are taking action to restrict children's access to video arcades. The city of Indianapolis, for example, has prohibited children under age 18 from playing violent video games in arcades without a parent present.⁵² Distributors of arcade video games have filed lawsuits that may overturn this action, but other cities have expressed interest in imposing similar restrictions. Legislation pending in Congress also would impose greater restrictions on access to violent video games and other types of violent or age-sensitive media.

Some school efforts to prevent gun violence on campus may foster more fear rather than a sense of security.

Schools' Attempts to Prevent Gun Violence

Schools face the difficult task of preparing for the possibility of school violence without creating a climate of fear. Nonetheless, prevention may be the best alternative to inaction or hysteria.

An essential aspect of school violence prevention is performing an effective and in-depth assessment of threats of violence. To avoid “profiling” potential school shooters, the Federal Bureau of Investigation (FBI) has developed a guide for teachers and school administrators to use after a student has made threats of violence.⁵³ The FBI urges school administrators to watch for warning signs that can include a low tolerance for frustration, depression, lack of empathy, exaggerated sense of entitlement, excessive need for attention, inappropriate humor, rigid views, fascination with violent entertainment, access to guns or weapons, and high exposure to violent media.⁵³

To help reduce the risk of violent incidents in schools, the FBI suggests that school administrators provide guidance to parents on issues such as the importance of restricting exposure to violent media,⁵³ and on the need to be aware of their children’s peer group and activities, to seek active involvement in their children’s life, and to avoid giving children an inordinate amount of privacy. Beyond educating the family, the FBI recommends that administrators evaluate their school’s culture and its contribution to the potential threat of gun violence. Indicators that could be monitored include the prevalence of bullying or social cliques, the level of comfort that students feel in sharing concerns with teachers and administrators, and even the physical layout of the school.⁵³ For example, researchers at the University of Michigan have studied “unowned places”: undefined territories within schools that are associated with violence and crime.⁵⁴ According to this research and similar studies,⁵⁵ hallways, dining areas, bathrooms, and parking lots are often centers for school violence because they are “unowned” and frequently unoccupied by school personnel.

However, some school efforts to prevent gun violence on campus may foster more fear rather than a sense of security. Metal detectors, bars on windows, and surveillance cameras may make students feel unsafe or that they are not trusted.⁵⁴ Similarly, emergency drills may send the message to expect a shooting, creating a climate of suspicion and anxiety among students and faculty. Furthermore, some experts note that if schools rely on “zero tolerance policies” and simply expel students who make threats, such practices may actually exacerbate the danger by inflaming students who are already at risk for violent activity. Rather, they suggest, administrators should make a careful assessment of potential risks (including access to weapons in the home or community) and direct these students toward mental health services if necessary.⁵³

Therapeutic Interventions with Youth Exposed to Gun Violence

Treating victims of gun violence involves healing both physical and emotional wounds and mitigating the factors that can perpetuate the cycle of violence. One promising approach is therapeutic group intervention.

Trauma-focused group interventions have successfully treated violence-exposed and victimized children and adolescents, but these programs are rare.⁷ When clinicians from the UCLA Trauma Psychiatry Program began a school-based therapy program in the early 1990s for teenagers who had sustained or witnessed violent injury, they discovered that virtually none of the victims had received any form of psychological assessment or therapeutic intervention beyond treatment of their physical injuries.⁸ The intervention that UCLA adopted addresses the youth’s traumatic experiences and posttraumatic stress reaction, including reminders of the trauma (such as scars), bereavement issues, and developmental disruptions (such as abandoned academic goals).⁸

The greatest challenge in providing services for traumatized youth is identifying who has been exposed to violence.⁷ Most young people do not seek support services and, quite often, family members and school

personnel are unaware of the youth's exposure. Consequently, a more uniform identification and referral procedure is needed, particularly in communities with high rates of gun violence. Schools appear to be the most promising avenue for successful identification of and therapeutic intervention for exposed and victimized youth.⁵⁶

Mental health services for these youth need to be both systematic and sustained, in contrast to short-term crisis intervention, because the severity of children's reactions to trauma can wax and wane over time. Just as effects of PTSD and exposure to violence vary with the youth's age, so do his or her service needs. Therefore, a developmentally appropriate approach is essential for effective intervention.⁶

Conclusion

Exposure to gun violence profoundly affects children and youth—even if they are not the direct victims or perpetrators. Psychologically, exposure to violence can normalize the use of violence to resolve conflicts. Socially, it can limit young people's ability to develop healthy relationships and friendships. Victims of gun violence also may suffer permanent physical damage, both visible (scars) and invisible (altered patterns of brain activity). Finally, children exposed to violence may do poorly in school and stop hoping for a productive and happy future. All of these outcomes can feed into a cycle of continuing violence.

Until recently, most of the psychological effects of gun violence have gone unanalyzed and unrecorded. How-

ever, the high-profile school shootings in the late 1990s have led to heightened awareness of and concern about the effects of gun violence on young people. These events have increased psychologists' understanding of the effects of gun violence on youth, and of the actions parents and schools can take to mitigate those effects. For example, parents can actively prevent exposure to gun violence by monitoring their children's activities and exposure to violent media. Parents also should seek professional help when they know their children have been directly exposed to or victimized by gun violence, even if they do not appear to be psychologically affected.

Schools can address the issue of youth gun violence by effectively identifying and referring violence-exposed youth to mental health services. School administrators also can create safer environments for students by altering the social and physical structure of the school, and by helping children feel connected to and supported by their teachers and peers. Finally, school administrators and mental health professionals can sponsor group interventions for violence-exposed and victimized students by adopting effective treatment approaches, such as those developed by the UCLA Trauma Psychiatry Program.^{7,8}

Working together, parents, school administrators, and mental health professionals can help to prevent gun violence and to minimize children's exposure to violence when it does occur. The potential rewards of such efforts are clear: fewer children and youth injured and killed by guns or burdened with the long-term emotional scars that result when young people witness violence.

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