

Video Games and Violence

CRIME PREVENTION RESEARCH DIGEST

ISSUE 2

"Life is like a video game. You have to die sometime."

— Devin Moore, 18-year-old accused of fatally shooting three policemen in Fayette, AL

Quoted in Robert F. Howe, "Are kids so hooked on video game violence that it becomes their reality?" *Reader's Digest*, August 2005. www.rd.com, accessed 7/29/2008.

Why There is Concern

Video games¹ are a favorite pastime for American teens. In fact, only a small minority of teens *don't* play video games—one percent of boys and six percent of girls.²

Many of the most popular games feature graphic depictions of weapons, street fighting, armed conflict, carnage, and death. Games in the *Grand Theft Auto* series—which account for four of the ten best-sellers³—allow players to take on the role of a criminal whose adventures include bank robberies, assassinations, pimping, and street racing.⁴

According to the Entertainment Software Ratings Board (ESRB), the

fourth game in the series contains intense violence, blood, strong language, strong sexual content, partial nudity, and use of drugs and alcohol.⁵ The visual and audio effects in today's video games are extraordinarily lifelike, and these effects can be particularly striking in violent games.

The ratings system developed by the ESRB attempts to match the content of games to the maturity level of the audience. Despite this system, studies show that even games rated "M" (suitable for ages 17 and older) are widely available to, and played by, children as young

¹ Video games include interactive games played on specialized gaming consoles (arcade games, stand-alone systems, and portable game sets), computers, cell phones, and other handheld devices.

² Amanda Lenhart, Joseph Kahne, Ellen Middaugh, Alexandra Rankin Macgill, Chris Evans, and Jessica Vitake. *Teens, Video Games, and Civics*. Washington, DC: Pew Internet and American Life Project, 2008.

³ "The Best-Selling Videogames," www.newsweek.com/id/140003, accessed 8/13/2008.

⁴ [http://en.wikipedia.org/wiki/Grand_Theft_Auto_\(series\)](http://en.wikipedia.org/wiki/Grand_Theft_Auto_(series)), accessed 9/18/2008.

⁵ www.esrb.org, accessed 9/24/2008.



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as 12 or 13. According to one large survey, 68 percent of boys and 29 percent of girls ages 12 to 14 reported playing M-rated games “a lot”; the *Grand Theft Auto* series ranked first among boys and second among girls.⁶

“Cops: Grand Theft Auto video game inspired crimes.”

—*Newsday*, June 26, 2008

Many people worry that the line between fantasy play and reality may blur, especially for young people who play so-called “first person shooter” games, in which the player appears to be wielding the weapon and causing the mayhem. The Columbine shooters and the “DC sniper” have been cited as “poster children” demonstrating the extreme effects of violent video games on impressionable adolescents.⁷ In 2005, the American Psychological Association weighed in with a resolution to “advocate for the reduction of all violence in videogames and interactive media marketed to chil-

dren and youth.”⁸ In a like-minded effort, at least four bills are pending in the U.S. Congress⁹ to address concerns about video games by regulating the industry.

Steven Kirsh, a prominent researcher in this field, summarized the various theories that underlie the concern about the impact of violent video games on behavior, as follows:¹⁰

- Violent video games foster “identification with the aggressor” and reinforce violent behavior.
- Violent video games are more dangerous than violent television because gaming involves active participation and learning.
- Violent video games are more dangerous than violent television because of the frequency and intensity of the players’ exposure.
- Violent video games actually teach children to commit murder.

After reviewing the available research, he concluded there is little or no evidence to support any of these theories.

What the Research Says

When considering the available research on this subject, a variety of factors should be taken into account, including, for example:

- How the researchers define “violence”—in the video games they test and in the behavior they measure
- How the research is conducted—in a laboratory or in a classroom setting; with a paper-and-pencil questionnaire or with actual behavioral responses
- Who they studied, especially age and gender
- Whether other child, family, and environmental characteristics are considered

A Laboratory Experiment

Here’s an example of a laboratory experiment testing the hypothesis that playing violent video games leads to aggressive behavior:¹¹

The subjects were 161 children between nine and 12 years old and 354 young adults, ages 17 to 29, evenly divided between males and females. They were randomly

⁶ Lawrence Kutner and Cheryl K. Olson, *Grand Theft Childhood: The Surprising Truth About Violent Video Games and What Parents Can Do*. New York: Simon & Schuster, 2008, 94.

⁷ Craig A. Anderson and Karen E. Dill, “Video games and aggressive thoughts, feelings, and behavior in the laboratory and in life,” *Journal of Personality and Social Psychology* 78, no. 4 (2000): 772–90 (Columbine); Adam Liptak, “Defense portrays sniper suspect as indoctrinated,” *New York Times*, November 21, 2003.

⁸ American Psychological Association, “Resolution on Violence in Video Games and Interactive Media,” August 2005. www.apa.org/releases/resolutiononvideoviolence.pdf, accessed 9/18/2008.

⁹ H.R.1531, “Video Game Decency Act of 2007”; S.568, “Truth in Video Game Rating Act”; H.R.2958, “Children Protection from Video Game Violence and Sexual Content Act”; H.R.5990/S.3315, “Video Games Rating Enforcement Act.”

¹⁰ Steven J. Kirsh, *Children, Adolescents, and Media Violence: A Critical Look at the Research*. Thousand Oaks, CA: Sage Publications, 2006, 276–278.

¹¹ Craig A. Anderson, Douglas A. Gentile, and Katherine E. Buckley (2007), *Violent Video Game Effects on Children and Adolescents: Theory, Research, and Public Policy*. New York: Oxford University Press, 2007, 61–77.

assigned to play one of five video games: one was a nonviolent children's game, two were violent ("cartoonish") children's games, and two were violent games rated "T" by the ESRB (suitable for ages 13 and older; only the young adults played these games in this study). Subjects played their assigned game on a laptop computer for 20 minutes.

Subjects were told they were participating in a study of reaction time, competing against an unseen opponent to see who clicked the mouse fastest in response to a visual or audio cue after playing the game. Winners would punish their opponents by delivering a blast of noise at a volume level they were told they could set themselves. In reality, there was no opponent, and the noise volume was set by computer.

Here's what the researchers found:

- Participants who played violent video games punished their opponents with significantly more high-noise blasts than those who played nonviolent video games.
- Even cartoonish children's violent games seemed to have the same short-term effect as the more graphic T-rated violent games.
- There was no apparent difference between the children and the college students.

The authors claim that this study demonstrates a link between playing violent games and subsequent aggressive behavior. But does it really?

Study subjects who played violent video games punished their opponents with significantly more high-noise blasts than those who played nonviolent video games.

The greatest strength of laboratory experiments is the degree of control the researcher has in focusing the study specifically on the intervention (in this case, playing violent video games) and outcomes of interest (violent behaviors). The greatest weakness is the degree to which the laboratory environment resembles the real world. So, while these researchers can show statistical differences in a specific behavior between children and young adults who played violent video games and those who did not, there is one rather obvious question: *Does delivering a loud blast of noise readily translate to acts of violence?*

To address this question (and others), the researchers asked their subjects to complete a written questionnaire after they finished the reaction time test. This questionnaire captured additional information, including their recent history of violent behavior (which included, for example, "attacked someone with the idea of seriously hurting him or her" and "used force (or threatened to use force) to get money or things from a teacher or other adult at school"), and how often they play violent video games or watch violent television shows or movies.

Here are some additional findings from the responses:

- Violent video games were more strongly related to violent behavior than exposure to media violence in television and movies.
- Being male, having habitual prior exposure to media violence, having video games in the bedroom, and preferring violent media were all predictive of higher noise blasts in the laboratory.¹²

These findings lend credence to concerns about the impact of violent video games.

A Large-scale Survey

Here's an example of a study that relied on children to self-report their

¹² Anderson, Gentile, and Buckley, "Violent Video Game Effects," 77.

use of violent video games and their real-world behaviors.¹³

These researchers surveyed 1,254 middle school children (ages 12 to 14) in Pennsylvania and South Carolina. They focused on children’s exposure to M-rated games (for players age 17 and older) and asked the children to identify five games they played “a lot” in the last six months. To measure aggression (notably, not violence *per se*), the researchers selected questions from instruments that had been designed for previous, well-known studies of children in this age group. Questions related to aggressive behaviors and attitudes, problems at school, delinquent behaviors, and being a victim of aggressive behavior.

Boys and girls who played M-rated video games were significantly more likely than their peers who did not play M-rated games to engage in several problem behaviors.

Statistically Significant Differences in Problem Behaviors Reported By Middle School Players of M-Rated Video Games

Problem Area	Type of Behavior	Boys	Girls
Aggression and Bullying	Been in a physical fight	X	X
	Hit or beat up someone	X	X
	Took part in bullying another student		
Delinquent Behaviors	Damaged property just for fun	X	X
	Got into trouble with police		
	Stole something from a store	X	
School Problems	Got poor grades on a report card	X	X
	Skipped classes or school without an excuse		X
	Got into trouble with teacher or principal	X	X
	Got suspended from school		X
Victimization	Been threatened or injured with a weapon	X	X
	Been bullied at school	X	

Source: Lawrence Kutner and Cheryl K. Olson. *Grand Theft Childhood: The Surprising Truth About Violent Video Games and What Parents Can Do*. New York: Simon & Schuster, 2008, 97–98.

The researchers found that boys and girls who played M-rated video games were significantly more likely than their peers who did not play M-rated games to engage in several problem behaviors, as shown in the chart below. The more M-rated games on children’s “most-played” lists, the stronger these relationships became.

Looking more closely at one particular problem behavior—being in a physical fight—40 percent of girls who played at least one M-rated game, versus 14 percent of girls who did not play M-rated games, had been in a fight during the previous year. Among boys, the corresponding figures were 51 percent and 28 percent.¹⁴

Important caveats to keep in mind when considering this research:

- Even though statistical differences were found between children who did and did not play M-rated video games, the actual number of children who engaged in problem behaviors was small.
- Many of the problem behaviors are quite common among middle school students, regardless of video game play.
- Self-reports are always prone to under- or over-stating reality.

Most importantly, this kind of research cannot be used to argue that playing violent video games *causes* children to engage in problem

¹³ Kutner and Olson, *Grand Theft Childhood*, 95–102.

¹⁴ Kutner and Olson, *Grand Theft Childhood*, 99.

behaviors. It only illuminates associations and cannot rule out a host of other reasons why children behave in these ways.

An Alternative Explanation

It is possible, for example, that children with aggressive tendencies might seek out violent video games, which in turn reinforce their preferences for violent media and encourage violent behavior. This hypothesis was tested in a large study of 6th and 7th graders in 20 middle schools in 10 school districts across the country.¹⁵ More than 2,500 students were asked to complete four surveys over the course of two years. Almost 70 percent (1,778) completed all four surveys. Researchers were primarily interested in two sets of measures:

- *Use of violent media content:* action movies, computer or video games involving firing a weapon, visiting Internet sites that describe or recommend violence
- *Aggressiveness:* cognitions, values, and engagement in aggressive behavior

The researchers found that an individual's greater use of violent media increased the likelihood of

that individual's aggressive behavior over time. They also found that teens who scored higher on aggressiveness reported greater use of violent media. As the authors suggest,

*“. . . effects of media content that reinforce tendencies to antisocial attitudes and behavior should be most conspicuous among youth who are most vulnerable to those attitudes and behaviors.”*¹⁶

In other words, some adolescents may be more at risk than others to experience adverse effects from their exposure to media violence.

Some adolescents may be more at risk than others to experience adverse effects from their exposure to media violence.

Like other survey research, this study relied solely on participating students' self-reports of aggressive attitudes and behaviors. It also did not isolate the effect of playing violent video games apart from exposure to other forms of violent media.

A Longitudinal, Cross-Cultural Study

A recent article in *Pediatrics* reported the results of survey-based research undertaken in the United States and Japan. The researchers looked at data from three independent surveys of teenagers' video game playing behaviors and measures of aggression, two in Japan and one in the United States. The teens were surveyed twice, between three and six months apart. The authors found that

- Boys played more violent video games and were more physically aggressive than girls.
- The best predictor of future aggression is a history of past aggression.
- Most importantly, *regardless of gender and past history of aggression, habitual playing of violent video games led to increased aggressive behavior.*¹⁷

These findings applied equally to Japanese and American youth, suggesting that the impact of playing violent video games transcends cultural differences.

Looking more closely at key elements of these surveys, there are some variations that should be

¹⁵ Michael D. Slater, Kimberly L. Henry, Randall C. Swaim, and Lori L. Anderson, "Violent Media Content and Aggressiveness in Adolescents: A Downward Spiral Model," *Communication Research* 30, no. 6 (2003): 713–736.

¹⁶ Slater et al., "Violent Media Content," 731.

¹⁷ Craig A. Anderson, Akira Sakamoto, Douglas A. Gentile, Nobuko Ithori, Akiko Shibuya, Shintaro Yukawa, Mayumi Naito, and Kumiko Kobayashi, "Longitudinal Effects of Violent Video Games on Aggression in Japan and the United States," *Pediatrics* 122, no. 5 (2008): 1066–1072, downloaded from www.pediatrics.org on 11/10/2008.

considered when interpreting the findings:

- The Japanese teens were older than the American teens (ages 12 to 15 and 13 to 18 in the Japanese studies, nine to 12 in the American study). The researchers report that their findings were even stronger for the younger children in the American sample.
- All three surveys relied on the youth themselves to rate the degree of violence in the games they played.
- All three surveys used self-reports to measure physically aggressive behaviors, but the American study also considered reports from teachers and peers.

Despite these differences, the findings were consistent: “[F]requent playing of violent video games is an important causal risk factor for youth aggression.”¹⁸

The Bottom Line

On balance, the research described in this digest tends to support a relationship between playing violent video games and aggressive or violent behavior, although it cannot be

concluded that playing these games “causes” people to become violent.

It is also important to place these findings in a larger perspective.

Three observations are in order:

1. There are relatively few published studies that specifically tested the effects of violent games on actual aggressive behavior. One researcher combed through the literature and found only 17 studies over a 12-year period that met these criteria. He also found a “publication bias”: studies that fail to report positive findings tend not to be published.¹⁹
2. As noted earlier, playing video games is normal behavior for today’s American teens. Teens who *don’t* regularly play video games are unusual indeed—especially boys. In the survey of middle-school youth in Pennsylvania and South Carolina described above, only 17 (1.4 percent) of 1,254 children had never played *any* video or computer games, let alone violent games. Boys in this survey who didn’t play video games, or who only played less than once in a typical week, “were more likely than even boys who played

M-rated games to get into fights, steal from a store, or have problems at school.”²⁰ Seung Hui Cho, the Virginia Tech shooter, was a loner, socially isolated: A college roommate never saw him play video games.²¹

3. Given the nearly universal enjoyment of video games—and violent games in particular—among American youth, it might be reasonable to expect that the rate of violent crime for juveniles would escalate in step with the rising popularity of these games. Not so—several researchers have examined this question, pointing out that the violent crime arrest rate for juveniles declined sharply between 1994 and 2003 and has remained relatively stable since then (see figure below).²²

In sum, youthful fascination with violent video games has not produced a generation of violent teens. Playing violent video games, in and of itself, appears not to have the dire consequences some have predicted. As Dr. Kirsh concluded, “By itself, even the vilest, goriest, and most aggressive video game will not cause youth to aggress.”²³

¹⁸ Ibid. at 1071.

¹⁹ Christopher John Ferguson, “The Good, the Bad, and the Ugly: A Meta-analytic Review of Positive and Negative Effects of Violent Video Games,” *Psychiatric Quarterly* 78 (2007): 309–316.

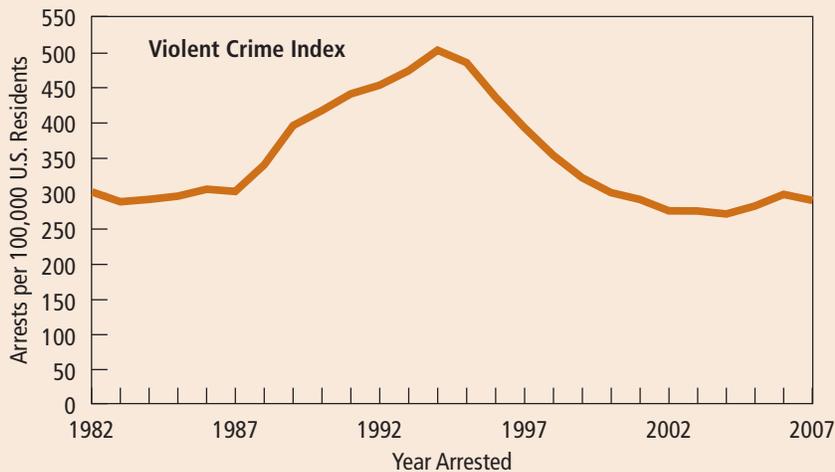
²⁰ Kutner and Olson, *Grand Theft Childhood*, 102.

²¹ Virginia Tech Review Panel, *Mass Shootings at Virginia Tech, April 16, 2007*. Arlington, VA: System Planning Corporation, August 2007, 42.

²² See, e.g., Patrick Kierkegaard, “Video Games and Aggression,” *International Journal of Liability and Scientific Enquiry* 1, no. 4 (2008): 411–417; Kutner and Olson, *Grand Theft Childhood*, 8.

²³ Kirsh, *Children, Adolescents and Media Violence*, 250.

1982-2007 Juvenile Arrest Rates (Under Age 18)



Source: www.jeffreybutts.net, accessed 9/19/2008. University of Chicago calculations of national arrest estimates using data from Crime in the United States, 1982 through 2007. Washington, DC: Federal Bureau of Investigation (www.fbi.gov/ucr/ucr.htm).

Implications

Although playing violent video games may not be the “smoking gun” accounting for youthful violence, a young teen’s use (or non-use) of video games, in conjunction with other behaviors and characteristics, may indicate reason for concern.

Researchers and other commentators advise that parental involvement is one key to mitigating the negative impact of violent video games.²⁴ Their recommendations can be summarized as follows:

- Pay attention to the ESRB ratings system when purchasing video games. For more information about this system, visit www.esrb.org.

- Visit any of several websites that collect parent ratings of video games (see list).
- Be conscious of how much time your child spends playing violent video games.
- Talk with your teens to help them interpret the messages and values that are conveyed in the games.
- Be aware of other aspects of your child’s interests and his or her social life.

Although these suggestions are directed to parents, they apply as well to educators, school counselors and resource officers, and other youth-serving crime prevention practitioners. The Resources section lists several web sites devoted to helping

parents and others who want to learn more about what they can do to guard against any possible negative impact of violence in video games.

RESOURCES

Research Reviews

- Craig A. Anderson, Douglas A. Gentile, and Katherine E. Buckley. *Violent Video Game Effects on Children and Adolescents: Theory, Research, and Public Policy*. New York: Oxford University Press, 2007.
- Lawrence Kutner and Cheryl K. Olson. *Grand Theft Childhood: The Surprising Truth About Violent Video Games and What Parents Can Do*. New York: Simon & Schuster, 2008.
- Steven J. Kirsh. *Children, Adolescents, and Media Violence: A Critical Look at the Research*. Thousand Oaks, CA: Sage Publications, 2006.

Organizations and Web Sites

- Center for Media Literacy, www.medialit.org—works to help citizens, especially the young, develop critical thinking and media production skills needed to live fully in the 21st century media culture.
- Common Sense Media, www.commonsensemedia.org—provides information, tools, and an independent forum to help families manage their children’s media lives.
- National Institute on Media and the Family, www.mediafamily.org—an organization that is based on research, education, and advocacy.
- www.whattheyplay.com—provides parents with resources and guidance about the various forms of popular entertainment that engage children.

²⁴ See, e.g., Kutner and Olson, *Grand Theft Childhood*, 209–229; Anderson, Gentile, and Buckley, *Violent Video Game Effects*, 160–163; Kirsh, *Children, Adolescents, and Media Violence*, 288–289.



The National Crime Prevention Council (NCPC) is a private, nonprofit tax-exempt 501(c)(3) organization whose primary mission is to be the nation's leader in helping people keep themselves, their families, and their communities safe from crime. NCPC's strategic plan for 2007 through 2011 is centered on four goals: protect children and youth; partner with government and law enforcement to prevent crime; promote crime prevention and personal safety basics; and respond to emerging crime trends. NCPC publishes books, kits of camera-ready program materials, posters, and informational and policy reports on a variety of crime prevention and community-building subjects. NCPC offers training, technical assistance, and a national focus for crime prevention: it acts as secretariat for the Crime Prevention Coalition of America, more than 400 national, federal, state, and local organizations representing thousands of constituents who are committed to preventing crime. NCPC sponsors the National Crime Prevention Association, an individual membership association to promote resources and career development to crime prevention practitioners. It hosts two websites: www.ncpc.org for adults and www.mcgruff.org for children. It operates demonstration programs in schools, neighborhoods, and entire jurisdictions and takes a major leadership role in youth crime prevention and youth service. NCPC manages the McGruff® "Take A Bite Out Of Crime®" public service advertising campaign. NCPC is funded through a variety of government agencies, corporate and private foundations, and donations from private individuals.



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