

Media and Violence:

An Analysis of Current Research

A Common Sense Media Research Brief

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Introduction

In the aftermath of the shooting at Sandy Hook Elementary School that took the lives of 20 young children and six adults, the nation's attention has turned once again to the role that violent media may or may not play in such horrible national tragedies.

As the debate continues about media's impact, some argue that research has "irrefutably" (Bushman & Huesmann, 2012) shown a causal link between media violence and aggressive behavior, while others say studies have shown "no evidence" (Suellentrop, 2012) of a relationship between video games and violence.

In the context of such widely disparate views, it is the purpose of this brief to review the latest scientific research about violence in the media and its possible effects on aggressive behavior. The paper highlights where research is scarce, incomplete, or outdated; includes an assessment of the research findings; and offers some thoughts on promising new areas of study.

Amount of Violence in the Media

Research on the amount of violence in media consumed by children and teenagers is woefully out of date and incomplete.

The presence of violent images in **advertising** seen by children has barely been studied, comprehensive research on **TV** violence is nearly two decades old, **video game** research hasn't kept pace with current modes of gaming or tracked the content most consumed by youth, and studies of **online** exposure are nearly nonexistent. The research that has been done tends to use widely varying standards for counting "violence," ranging from studies limited to physical acts of aggression to those that include verbal threats, insults, and even accidental violence. Studies documenting media content are expensive and time consuming to conduct, and for some media are difficult to design (for example, interactive games and online content). A lack of funding prevents much progress in filling the gaps in this research.

Yet children and teens are consuming many hours of media content: an average of more than seven hours of screen media per day (Kaiser Family Foundation [KFF], 2010). From the research that has been conducted in the past, we can roughly estimate that about 90% of movies include some depictions of violence, as do 68% of video games, 60% of TV shows, and 15% of music videos (Wilson, 2008). There is substantial variation within genres, so any young person's exposure depends on the types of TV shows and movies they are watching, games they are playing, and music they are listening to. And the nature and frequency of the violence varies widely as well, from slapstick to gruesome, occasional to nearly constant. But it seems clear that most young people are seeing many examples of physical violence in the media they consume every day.

Following is a summary of the most widely cited research on the amount of violence in the media:

Advertising content. Children's exposure to violence in advertising has not received the same attention as violence in movies, TV shows, or video games. Yet advertising is one of the most ubiquitous forms of media that young people are exposed to, ranging from 30-second spots on TV and online video ads to print ads seen in magazines and outdoor ads on billboards or at the bus stop. And children's exposure to violent (or sexual) content in advertising has long been a special concern for parents, because it so often catches them unaware (KFF, 2007a). Following are findings from the few studies that have coded ads for violent content:

- One study of print magazine ads for video games in 2004 found that 56% contained violence, with an average of 2.5 weapons featured per ad (Scharrer, 2004).
- A 2003 study of ads in children's TV shows found that 37% included some type of physical or verbal aggression (Larson, 2003).

Research gap: We need current studies about children's exposure to violence in the scores of ads they see each day.

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Television content. The most recent studies indicate that 8- to 18-year-olds in this country watch an average of four hours of TV programming per day, more time than is spent with any other type of media (KFF, 2010). The most comprehensive content analysis of TV violence – the National Television Violence Study – was conducted in the mid-1990s (Smith, Wilson, Kunkel, Linz, Potter, Colvin, & Donnerstein, 1998). It coded more than 10,000 hours of programming across 23 channels, including cable and broadcast networks, PBS, and daytime as well as primetime programming. This study counted as violence any act or threat of physical force intended to cause physical harm. The key findings were:

- 60% of all shows included violence, ranging from 84% of premium cable shows to 51% of shows on the broadcast networks.
- Shows with violence averaged about 6 violent acts per hour. More than half of the violent shows contained lethal acts, and one in four of the programs with violence depicted gun use (Kunkel, 2007).
- Fewer than 5% of shows with violence featured an anti-violence theme or pro-social message emphasizing alternatives to or consequences of violence.
- Researchers concluded that child viewers will see an average of nearly two gun-related violent incidents for every hour that they watch television (Smith, Boyson, Pieper, & Wilson, 2001).

Research gap: While it seems likely that the nature of violent depictions in television has changed substantially in the 15 years since this study was conducted, the only subsequent study was limited to primetime shows on the broadcast networks and counted accidental and natural violence along with intentional human behavior designed to inflict physical harm (Signorielli, 2003).

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Video game content. Eight- to 18-year-olds spend an average of an hour and a half per day playing video and computer games, including 36 minutes a day playing console games, 21 minutes using hand-held gaming devices, 17 minutes playing computer games, and 17 minutes playing cell-phone games (KFF, 2010). Relatively few studies have coded the violent content in video games (Wilson, 2008):

- A review of E-rated games released between 1985 and 2000 found that 64% included “intentional physical aggression” and that an average of 31% of the duration of game play involved violence (Thompson & Haninger, 2001).
- A study of T-rated games released before 2001 found that 98% included violence and that 36% of game-playing time involved violence (Haninger & Thompson, 2004).
- Among the 60 most popular games sold in 1999, 68% included physical aggression, averaging 2.3 violent interactions per minute of play (Smith, Lachlan, & Tamborini, 2003). Among E-rated games that season, 6 in 10 included violence, averaging 1.2 interactions per minute.
- A 2003 study concluded that a child playing a violent video game experiences an average of 138 aggressive exchanges during a typical period of game play (Smith et al, 2003).
- One review of the literature concluded that “Overall, roughly two out of three video games marketed for general audiences contained violence, and nearly all games marketed for older players do” (Wilson, 2008).
- Underage children often play violent video games, even those rated inappropriate for their age group. For example, a 2004 survey of kids in grades 7-12 found that 65% had played the game Grand Theft Auto (KFF, 2005).

Research gap: Surprisingly little is known about the violent content of current video games, particularly those games that are most widely played among young audiences today.

Social media and other online content.

The most recent research indicates that young people between the ages of 8 and 18 spend an average of approximately 50 minutes per day online pursuing activities other than games, including 22 minutes on social networking sites like Facebook, 15 minutes on video sites like YouTube, and 13 minutes visiting other types of websites (KFF, 2010). There has been almost no research attempting to document the amount of violent content that young people encounter online, whether through social media or via popular video or other websites.

- One in four teen social media users say they “often” encounter some type of hate speech online, such as racist, sexist, or homophobic remarks, but it is not clear what portion of that includes threats or discussions of physical violence (Common Sense Media, 2012).
- A 2008 survey of 1500 10- to 15-year-olds found that 38% had been exposed to violent scenes on the Internet (Ybarra & Suman, 2008).

Research gap: Very little is known about young people’s exposure to violent content in social media such as multiplayer online games or other online content.

Music content. In a typical day, 8- to 18-year-olds will spend an average of 2½ hours listening to music, the second most popular medium after television (KFF, 2010). Recent literature reviews have revealed only a handful of studies documenting violent content in music lyrics or videos.

- The “most comprehensive study to date”(per Wilson, 2008) published in 2002, looked at nearly 2,000 videos drawn randomly from MTV, BET, and VH-1 (Smith & Boyson, 2002). Of these, 15% featured instances of “intentional physical aggression.” Rap (29%) and heavy metal (27%) videos had more.
- With regard to song lyrics, a 1997 study found that guns were talked about in 50% of rap videos (Jones, 1997), while another review of gangsta rap from 1987-93 found that 22% of songs had violent or misogynistic lyrics (Armstrong, 2001).
- A 2004 survey of 7th-12th graders found that rap and hip-hop were the most popular genres among youth, with 65% listening in a typical day, more than twice the percent that had listened to any other genre (KFF, 2005).

Research gap: Clearly, little research has been done to document the violent content of popular music genres.

Movie content. Another popular medium among young people is movies, whether seen in the theater, on television, via online streaming, or through DVDs. Most studies of violence in the movies are quite dated.

- A 1999 study of the 50 top-grossing G- and PG-rated non-animated films found that 40% featured at least one main character carrying a firearm and an average of 4.5 armed characters per film (Pelletier, Quinlan, Sacks, Van Gilder, Gulchrist, & Ahluwalia (1999).
- The National Television Violence Studies conducted in the mid-1990s found that 90% of movies shown on television included violent content (Smith et al, 1998).
- A look at movie previews that were included in home video releases in 1996 found that 76% included at least one scene of physical aggression, and 46% contained at least one gun scene (Oliver & Kalyanaraman, 2002).
- Surveys find that even young audiences end up seeing violent, R-rated movies. One 2002 survey of 4,000, 10- to 14-year-olds found that one in four (28%) had seen “extremely violent” movies that were in that year’s top box-office hits; two-thirds (66%) had seen *Scream*, which the MPAA had rated R for its “strong graphic horror violence and gore” (Sargent, Heatherton, Ahrens, Dalton, Tickle, & Beach, 2002). A 2004 survey of 7th-12th graders found that 45% said that they had been to an R-rated movie in a theater without their parents (KFF, 2005).

Research gap: Studies of movie content are highly dated. Of special interest would be a study of streamed content and a review of the content of previews found on G- or PG-rated DVD releases.

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Advertising Violent Media to Children

Beyond the immediate exposure that children have to violence in ads, there is the related issue of whether media companies are promoting violent products to underage children through advertisements and marketing campaigns for teen- or adult-rated video games, music, movies, or TV shows. A 2007 study of advertising seen by children found that 8- to 18-year-olds see an average of 13-14 ads per day for media products (KFF, 2007b). At the request of Congress, the Federal Trade Commission (FTC) has conducted an extensive, ongoing review of the marketing of violent media products to children and has had access to internal media company documents to conduct this review. The Commission's most recent report was released in 2009 and included the following findings:

Ads for explicit music:

- The music industry still advertises music labeled with a Parental Advisory Label (PAL) on TV shows that are viewed by a "substantial number" of children; the Commission also found "numerous examples of ads for explicit-content music on TV shows popular with teens" (Federal Trade Commission [FTC], 2009a).

Ads for violent movies:

- The Commission found that "Movie studios targeted violent PG-13 films to children under 13 both through advertising and promotional tie-ins with foods, toys, and other licensed products" (FTC, 2009b).
- With regard to R-rated movies, the Commission found that "Studios continued to place a significant number of ads for violent R-rated movies on television shows and Internet sites highly popular with children under 17" and also noted that "the Commission's independent ad review showed that a significant number of ads for violent R movies ran on programs whose under-17 audience met or exceeded 35%," such as professional and college sports programs (FTC, 2009b).
- Finally, the Commission highlighted a problem with violent movie trailers being posted online, finding that movie studios are "increasingly" posting "red band" trailers for R-rated movies online "without age-based access restrictions" (FTC, 2009b).

Ads for violent video games:

- The Commission credited the video game industry with being more proactive than the movie or music industries in setting and enforcing standards for marketing violent content to children. They noted an improvement in the game industry's practices, saying "there were only a few instances of M-rated game ads on television shows popular with teens and, compared to the last report, far fewer ads for M-rated and T-rated games on websites popular with teens or younger children" (FTC, 2009b).
- However, the Commission also noted that the industry's rules "allow game marketers to advertise on many television shows and Web sites popular with children" and that the game industry's policies "do not necessarily limit the exposure of children under 17 to television ads for M-rated games" (FTC, 2009a).
- A newer practice the Commission uncovered was the proliferation of cross-promotional tie-ins between fast food companies and violent video games. One example cited was that "the M-rated game Halo 3 was heavily cross-promoted with Burger King, Mountain Dew, and 7-Eleven Slurpees." The Commission noted that "these types of promotions ... likely appeal to many teens under age 17" (FTC, 2009b).

Effects of Violent Media on Youth

The public discourse about media violence tends to flare up whenever there is an extremely violent incident perpetrated by a young offender. In 2012, there were two incidents in particular that garnered national attention:

- In July, 24-year-old James Holmes walked into a movie theater in Aurora, Colorado, where the new Batman movie *The Dark Knight Rises* was playing. Seemingly dressed as a character from the Batman movies, with his hair dyed bright red and carrying multiple firearms, Holmes threw tear gas canisters into the crowd and began shooting. Some in the audience thought it was part of a publicity stunt for the PG-13 movie, a film that San Francisco Chronicle movie critic Mick LaSalle later called “a wallow in non-stop cruelty and destruction, a film that was anti-life” (LaSalle, 2013). Fifty-eight people were injured, and 12 were killed.
- Six months later, on December 14, 2012, 20-year-old Adam Lanza walked into Sandy Hook Elementary School in Newtown, Connecticut, and opened fire, killing 20 young children and six adults. Amid media reports that Lanza was an avid video game player – and disclosures that major gun manufacturers were receiving lucrative promotional and marketing partnerships through tie-ins with video game studios (Meier & Martin, 2013) – a neighboring town launched a video game “buy-back” program offering participants \$25 gift cards in exchange for their violent video games.

In the aftermath of such tragic incidents, attention often turns to the role that violent media may have played. But despite how it sometimes feels, mass murders in this country continue to be quite rare, and affixing “causes” for them is not scientifically possible. Most researchers, whether their specialty is media, psychology, violence, or criminal justice, reject the idea that any single factor can “cause” an otherwise nonviolent individual to become violent, particularly when it comes to violence on the scale of a massacre. Rather, they speak in terms of a variety of factors that increase the risk that an individual will behave violently – from pushing and shoving on a playground as a child to getting involved in physical fights as a teenager to hitting a spouse or committing other criminally violent acts as a young adult.

This section of the research brief will summarize some of the key research on the effect of media violence on violent behavior.

- In order to limit its scope to the most essential questions, the brief will focus only on violent behavior, not on aggressive thoughts or words or on related issues such as desensitization to violence or children’s fears of victimization.
- Of the three main types of “effects” research available – experimental, correlational, and longitudinal – this review will be limited to longitudinal studies, which, although there are far fewer of them, are acknowledged by those on all sides of the issue to be the best way of assessing causality and directionality in the real world.

Longitudinal studies track the same group of young people over a period of time – sometimes as many as 30 years – monitoring the types of media they consume and the behavior they engage in through teachers, peers, or self reports. In addition to being able to identify causal relationships if conducted appropriately – for example, linking media consumed at one point in time with aggressive behavior at a later point in time – longitudinal studies can also help attribute the directionality of the causal relationship (i.e., whether aggressive people seek out more violent media or violent media causes people to become more aggressive). However, longitudinal studies are expensive and time consuming and inevitably lag behind the most popular media of the day.

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Cross-media studies. Longtime media scholars Brad Bushman and Rowell Huesmann (2012) summarize how and why media may impact violent behavior this way: “Children who watch violent movies and TV or who play violent video games imitate the aggressive scripts they see; become more condoning of violence, start to believe the world is a more hostile place, become emotionally desensitized to violence, and lose empathy for victims. The violence they see justifies to them their own violent acts; the violence they see arouses them; and the violence they see cues aggressive ideas for them.”

- A study released in 2003 (Slater, 2003) surveyed more than 2500 students over a two-year period, measuring their exposure to violent movies, video games, and websites and their aggressive behavior. This study, which controlled for age, gender, and several other variables but not for exposure to family violence, found that consumption of violent media predicted subsequent increases in aggression. It also found that being aggressive at baseline did not predict increased exposure to violent media over time – meaning that the relationship between media and behavior was not due to aggressive youth choosing more violent media.
- In the “most comprehensive meta-analysis to date” (per Wilson, 2008), Bushman and Huesmann (2006) looked at 431 studies (experimental, correlational, and longitudinal) across various types of media and including a variety of aggression outcomes. Among the 262 studies that included aggressive behavior, they found a small effect size (.19), meaning they did see a relationship between violent media use and later aggressive behavior, but a modest one. It is not possible to isolate the results to the subset of longitudinal studies that included behavioral outcomes in their meta-analysis.

Research gap: Current longitudinal studies are needed that reflect the variety of media content children consume and that include measures for critical variables such as family violence.

Television effects. Several large-scale, long-term longitudinal studies have been conducted on the effects of violent television.

- A 1972 study followed children from age 8 to age 19 (Eron, Huesmann, Lefkowitz, & Walker, 1972). This study controlled for the participants’ initial aggressiveness, social class, and IQ but did not control for children’s exposure to violence in the home, another variable thought to be a key contributor to violent behavior (Ferguson, 2008). Among boys, heavy viewing of TV violence at age 8 predicted peer reports of violent behavior at age 19, but not self-reported behavior. The only effect found among girls in the study was that those who watched more violent programming at age 8 were less likely to be reported by peers as engaging in violent behavior at age 19 (Lefkowitz, Eron, Walder & Huesmann, 1977). This study also found that children who were already more aggressive at age 8 were not more likely to consume violent television at age 19 – in other words, that any relationship between TV violence and later behavior was not due to people with violent tendencies seeking out more violent media content.
- Among the same study participants, now at age 30, early exposure to TV violence did correlate with self reports of adult aggression among men (Huesmann & Miller, 1994), including the “severity” of criminal behavior (Wilson, 2008); there was still no positive relationship between TV and violent behavior among women (Huesmann, 1986). There are two primary critiques of this study when it is cited to demonstrate a link between media violence and behavior: first, that “It is difficult to understand the unique contribution of media violence to violent behavior while studies leave family violence variables uncontrolled” (Ferguson, 2009a); and second, that the finding concerning violent crimes was based on a very small number of respondents (Rhodes, 2000).
- A separate longitudinal study released in the early 1980s (Milavsky, Kessler, Stipp, Rubens, Pearl, Bouthilet, & Lazar, 1982), this one covering only a two-year period, also found no positive relationship between exposure to violent media and later violent behavior among girls. In one out of nine measures of violence (e.g., knife fight, mugging, gang fight), boys who had seen more TV violence two years earlier were more likely to commit violent acts.

- A 15-year study of 500 individuals, released in 2003, followed children from the 1st or 3rd grades into their early to mid-20s (Huesmann, Moise-Titus, Podolski, & Eron, 2003). This study, which did control for parental aggression as well as early IQ, social class, and other variables, found that heavy exposure to TV violence in childhood predicted increased physically aggressive behavior in adulthood for both boys and girls (based on self-reports) (Bushman & Huesmann, 2012). Among the findings were that “heavy viewers of violent TV shows in 1st and 3rd grade were three times more likely to be convicted of criminal behavior by the time they were in their 20s” (Bushman & Huesmann, 2012). Specifically, males who had watched large amounts of violent television during childhood were “nearly twice as likely to have assaulted their spouses 15 years later, 18% more likely to have threatened or used a knife or gun on someone in the last year, and significantly more likely to have been arrested for a crime” (Bushman & Huesmann, 2012). However, while the overall correlations with physical aggression were statistically significant, they were small ($r = .17$ among men and $r = .15$ among women) (Office of the Surgeon General [Surgeon General], 2001).
- A year-long international study published in 1986 (Huesmann & Eron, 1986) found that, in the United States, girls’ viewing of TV violence had a small but significant effect (.17) on their later aggression, but the same was not true for boys. For boys, TV violence alone did not predict later aggression. However, when researchers looked at both exposure to TV violence and identification with aggressive TV characters, they found a positive relation with aggressiveness among boys (.19).
- A meta-analysis of TV violence conducted in 1994, with a sample of 217 studies (it is unclear how many were longitudinal), found a statistically significant but small effect size, especially for the most violent behaviors (Paik & Comstock, 1994).

Research gap: The nature of TV programming has changed tremendously in recent years, with a large array of channels and a huge variety of content now available to children and teens. The degree of violence, particularly on cable, has intensified, and there is a need for more up-to-date and methodologically sophisticated research on the effects of exposure to the types of violent programming currently available on television.

Video game effects. Because video games have not been around as long as television (especially not the most violent, first-person shooter games) and because longitudinal studies by their nature take many years to complete, there are far fewer long-term studies exploring the possible effect of violent video games on aggressive behavior. Some scholars hypothesize that there are reasons to believe that video games may have a greater effect on violent behavior than more passive media such as television: because users are actively engaged in actually perpetrating the violent behavior, because identification with the character is more likely, and because violent actions are rewarded with points and new levels within the game (Bushman & Huesmann, 2012).

- The most recent meta-analysis of research about video game violence (Anderson, Shibuya, Ihori, Swing, Bushman, Sakamoto, Rothstein, & Saleem, 2010) included 12 longitudinal studies that met the “best practices” criteria and that explored the effect on physical aggression. These studies, some of which were conducted internationally, included a total sample of 4,526 participants. They found a positive relationship between amount of time spent playing violent video games and later violent behavior. The average effect size was .203 (small).
- Critics of the research on video games and violence argue that these studies don’t adequately control for other variables, such as exposure to familial violence or genetics, that there is publication bias in academic journals favoring the publication of studies that find a positive relationship between game-playing and violence, and that the work of older, non-game-playing researchers is being used to incite a “moral panic” designed to “sell” news and distract attention from the more intractable causes of violence (Ferguson, 2008).
- In addition, Ferguson (2008) points out that “Almost all research on video game violence examines ‘normal’ populations of individuals. Unfortunately, little research has examined the possibility that, whilst most children are unaffected by violent video games, small groups of children with existing problems may be ‘at risk’. Only further investigation will elucidate whether this is a possibility.”

- The scholarly disagreement over research on video games and violence is encapsulated in briefs filed with the courts over California's attempt to prohibit the sale of violent video games to minors and in the Supreme Court's ultimate ruling on the issue.
 - A brief submitted on behalf of California, known as the Gruel Brief (*Brown v. Entertainment Merchants Association*, 2011a), was authored primarily by researchers specializing in the study of media violence (Sachs, Bushman, & Anderson, 2011). It argued that "scientific research on violent video games clearly shows that such games are causally related to later aggressive behavior in children and adolescents. ... Overall, the research data conclude that exposure to violent video games causes an increase in the likelihood of aggressive behavior." On the other hand, the Millet Brief filed on behalf of the entertainment industry (*Brown v. Entertainment Merchants Association*, 2011b) was signed primarily by scholars from fields other than media studies (such as criminology) and argued that "the big fears bandied about in the press – that violent video games make children significantly more violent in the real world ... – are not supported by the current research."
 - In the Supreme Court's 7-2 ruling in the case (*Brown v. Entertainment Merchants Association*, 2011c), five of the Justices concurred with the decision written by Justice Scalia that "Psychological studies purporting to show a connection between exposure to violent video games and harmful effects on children do not prove that such exposure causes minors to act aggressively. Any demonstrated effects are both small and indistinguishable from effects produced by other media." But Justice Alito, while concurring with the ruling of the majority, disagreed with their conclusion about video games, writing that, according to the Court, "Spending hour upon hour controlling the actions of a character who guns down scores of innocent victims is not different in 'kind' from reading a description of violence in a work of literature. The Court is sure of this; I am not. There are reasons to suspect that the experience of playing violent video games just might be very different from reading a book, listening to the radio, or watching a movie or a television show." Justice Breyer's dissent goes further, noting that "Social scientists, for example, have found causal evidence that playing these games results in harm. Longitudinal studies, which measure changes over time, have found that increased exposure to violent video games causes an increase in aggression over the same period."

Research gap: One of the most pressing needs is for additional longitudinal research on the effects of violent video game play, to continue to build the body of research, to include current titles, and to include the multitude of related and important variables such as family violence. Paying careful attention to the possibility of a reciprocal relationship between innate aggressiveness and consumption of violent media will be key, as will examining whether there are subsets of children who are especially vulnerable to video game effects.

The Size of Media Effects

One of the debates about media's effect on violent behavior concerns the magnitude of the "effect" media has. How does one assess the importance of something that is one factor among many that contributes to the risk that some children will become more violent?

Academic studies include an "effect size" that measures the strength of the relationship between a variable and an outcome. The higher the effect size, the stronger the relationship. As a rule, an effect size of .1 is considered small, .3 is medium, and .5 is considered large (Cohen, 1988). Critics of media violence research suggest that even if a causal relationship has been demonstrated, the effect size is so small that media should not be a focus of violence-prevention efforts (Ferguson & Kilburn, 2009; Ferguson, 2009b). The effect size in media studies has generally been in the small to medium-sized range; for longitudinal studies focused on violent behavior specifically, it has generally been small.

However, variables with a small effect size can have a large impact when change is implemented at the population level; that is, while the effect for any one individual may be small, the impact at a national level may be substantial. Bushman and Huesmann (2012) write that "Although the typical effect size for exposure to violent media is relatively small ... this 'small effect' translates into significant consequences for society as a whole, which may be a better standard by which to measure the magnitude of the effect." The U.S. Surgeon General came to a similar conclusion in her 2001 report on youth violence, writing that: "Taken together, findings to date suggest that media violence has a relatively small impact on violence," but also noting that "research to date justifies sustained efforts to curb the adverse effects of media violence on youths" (Surgeon General, 2001).

Pediatrician and media scholar Vic Strasburger (Strasburger, Wilson, & Jordan, 2009) also emphasizes the cumulative impact of media on behavior, arguing that "longitudinal studies provide powerful evidence that television violence can have a cumulative effect on aggression over time." Again, rather than speaking in terms of a "cause" of violent behavior, the American Academy of Pediatrics, the American Medical Association, and other medical associations have noted the potential or risk for a long-term, cumulative impact: "Children exposed to violent programming at a young age have a higher tendency for violent and aggressive behavior later in life than children who are not so exposed" (American Academy of Pediatrics, American Academy of Child & Adolescent Psychiatry, American Psychological Association, American Medical Association, American Academy of Family Physicians, & American Psychiatric Association, 2000).

"Children exposed to violent programming at a young age have a higher tendency for violent and aggressive behavior later in life than children who are not so exposed."

American Academy of Pediatrics,
American Academy of Child & Adolescent Psychiatry,
American Psychological Association,
American Medical Association,
American Academy of Family Physicians, &
American Psychiatric Association, 2000

Moderators and Interactions: Multiple Factors Play a Role

There appear to be a variety of factors that can influence whether and how much violent media affects viewers – in the research world, these are called moderators and interaction effects. The Surgeon General’s (2001) report summed it up as follows: “Factors that appear to influence the effects of media violence on aggressive or violent behavior include characteristics of the viewer (such as age, intelligence, aggressiveness, and whether the child perceives the media as realistic and identifies with aggressive characters) and his or her social environment (for example, parental influences), as well as aspects of media content (including characteristics of perpetrators, degree of realism and justification for violence, and depiction of consequences of violence).”

Some of the most interesting work today concerns exploring subpopulations at greater risk of media effects and whether, for those youth, there is a complex multi-directional relationship between media and violence: i.e., a child with “trait aggression” is raised in a home where s/he witnesses aggression and violence, has exposure to violent or aggressive incidents (either as a victim or bystander), consumes violent media, and becomes even more aggressive.

Most longitudinal studies seem to show a greater effect for boys than girls. Wilson (2008) concludes that “Research suggests that children, especially boys, who strongly identify with violent characters in the media are more susceptible to the long-term effects of media violence.”

Media scholars also note that a history of family violence is not only a predictor of violent behavior on its own but that it may actually enhance a young person’s response to violent media. Strasburger et al (2009) write that “Children raised in homes characterized by parental rejection and parental aggression show stronger effects of media violence.” A national study (Vandewater, Lee, & Shim, 2005) of more than 1,000 children aged 6 to 12 found that family conflict was positively associated with violent television viewing and violent electronic game playing.

Another way of looking at this is that children who are exposed to multiple risk factors are the most likely to behave aggressively. Violent media is one risk factor.

Although early longitudinal studies seemed to find that aggressive children did not seek out more violent media, a more nuanced and complex view appears to be emerging now: that there is a “reciprocal” relationship in which children with aggressive tendencies do, over time, seek out more violent media content and are even more affected by it than other youth, creating a “downward spiral” (Huesmann et al, 2003; Slater, 2003). Although some scholars consider it important to note that “even relatively nonaggressive children can be influenced by violent messages” (Gentile, Lynch, Linder, & Walsh), others note that “Youth who are high in trait aggression are often attracted to violent television and videogames” and that “Research indicates that highly aggressive individuals are more susceptible to the effects of exposure to media violence than less aggressive individuals are” (Wilson, 2008).

In more recent years, researchers have been focusing on this “spiral” or “cycle of influence,” in which “those with aggressive predispositions seek out violent content, and repeated exposure to violent content contributes to more violent behavior, especially among those with a violent predisposition” (Wilson, 2008). According to Wilson (2008), “In this way, trait aggression is a heightened risk factor. Put another way, the relationship between exposure to violent media and aggression appears to be bi-directional.” A 2010 study (Markey & Markey, 2010) indicates that “children with certain personality features (e.g., high neuroticism, low agreeableness, and low conscientiousness) may be the most vulnerable to violent game effects.”

Another way of looking at this is that children who are exposed to multiple risk factors are the most likely to behave aggressively. Violent media is one risk factor. As the Surgeon General (2001) noted, “Risk factors do not operate in isolation – the more risk factors a child or young person is exposed to, the greater the likelihood that he or she will become violent. ... The bulk of the research that has been done on risk factors identifies and measures their predictive value separately, without taking into account the influence of other risk factors. More important than any individual factor, however, is the accumulation of risk factors. Risk factors usually exist in clusters, not in isolation.” As Anderson, Gentile & Dill (2012) note, “[S]ome risk factors may interact, increasing their effects more together than they would individually. ... In order for a child to behave seriously violently, he or she would need to have multiple risk factors and few protective factors.”

Conclusion

Certainly there are gaps in the research, especially in monitoring children’s cumulative exposure to violence across multiple forms of media, including advertising, music, social media, and other online venues. In addition, longitudinal studies that include the most current media – especially the hyper-violent first-person shooter games – should be conducted. And research needs to pay special attention to (and control for) the constellation of risk factors and variables that are potentially influencing violent behavior, including trait aggression and family violence. The concept of subpopulations at special risk - and of a bi-directional spiral effect of media violence - should continue to be pursued.

But in sum, a review of longitudinal studies about media violence indicates reasons to be concerned that viewing (or playing) violent content increases the chance that a child will engage in violent behavior later in life – especially if the child is aggressive to begin with and especially if other risk factors are present, such as growing up in a violent home. While

longitudinal research does allow us to speak in terms of a “causal” relationship, it is probably more accurate and useful to think about media violence as a “risk factor” rather than a “cause” of violence – one variable among many that increases the risk of violent behavior among some children. **Just as not all children raised in violent homes will become violent, not all children who play violent video games will become violent – but there is a greater chance that they will, especially if there are multiple risk factors operating at the same time.** And while it is tempting to think in terms of mass incidents such as Columbine, Aurora, or Sandy Hook, it may be that the more important relationship between media and behavior lies with the “everyday” violence of pushing and hitting rather than with the more shocking – and rare – rampages of mass murder.

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The mission of Common Sense Media's *Program for the Study of Children and Media* is to provide parents, educators, health organizations, and policymakers with reliable, independent data on children's use of media and technology and the impact it has on their physical, emotional, social, and intellectual development. For more information about the program and to read reports on these studies, visit www.commonsense.org/research.

For inquiries, contact Colby Zintl, (415) 553-6753.

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SAN FRANCISCO	650 Townsend Street, Suite 435, San Francisco, CA 94103	(415) 863-0600
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