

AMERICAN ACADEMY OF PEDIATRICS

Committee on Public Education

Media Violence

ABSTRACT. The American Academy of Pediatrics recognizes exposure to violence in media, including television, movies, music, and video games, as a significant risk to the health of children and adolescents. Extensive research evidence indicates that media violence can contribute to aggressive behavior, desensitization to violence, nightmares, and fear of being harmed. Pediatricians should assess their patients' level of media exposure and intervene on media-related health risks. Pediatricians and other child health care providers can advocate for a safer media environment for children by encouraging media literacy, more thoughtful and proactive use of media by children and their parents, more responsible portrayal of violence by media producers, and more useful and effective media ratings.

ABBREVIATIONS. AAP, American Academy of Pediatrics; MTV, Music Television; FTC, Federal Trade Commission.

INTRODUCTION

At a Congressional Public Health Summit in July 2000, the American Academy of Pediatrics (AAP) was joined by the American Medical Association, the American Academy of Child and Adolescent Psychiatry, and the American Psychological Association in issuing an unprecedented "Joint Statement on the Impact of Entertainment Violence on Children" (<http://www.aap.org/advocacy/releases/jstmtev.html>). Although recent school shootings have prompted politicians and the general public to focus their attention on the influence of media violence, the medical community has been concerned with this issue since the 1950s.¹ On the basis of a growing and nearly unanimous body of evidence associating media violence with increased aggression in young people, the US Surgeon General issued a special report on the public health effects of media violence in 1972.² Ten years later, the National Institute of Mental Health issued a comprehensive review of the research on media violence and its effects, outlining concerns for children's psychological health,³ as did a report generated by the American Psychological Association in 1993.⁴

EXPOSURE

American children between 2 and 18 years of age spend an average of 6 hours and 32 minutes each day using media (television, commercial or self-recorded video, movies, video games, print, radio, recorded

music, computer, and the Internet).⁵ This is more time than they spend on any other activity, with the exception of sleeping. When simultaneous use of multiple media is accounted for, that exposure increases to 8 hours a day.⁶ A large proportion of this media exposure includes acts of violence that are witnessed or "virtually perpetrated" (in the form of video games) by young people. It has been estimated that by age 18, the average young person will have viewed 200 000 acts of violence on television alone.⁷

The National Television Violence study evaluated almost 10 000 hours of broadcast programming from 1995 through 1997 and found that 61% of the programming portrayed interpersonal violence, much of it in an entertaining or glamorized manner.⁸⁻¹⁰ The highest proportion of violence was found in children's shows. Of all animated feature films produced in the United States between 1937 and 1999, 100% portrayed violence, and the amount of violence with intent to injure has increased through the years.¹¹ More than 80% of the violence portrayed in contemporary music videos is perpetrated by attractive protagonists against a disproportionate number of women and blacks.¹² American media, in particular, tend to portray heroes using violence as a justified means of resolving conflict and prevailing over others.¹³

Prolonged exposure to such media portrayals results in increased acceptance of violence as an appropriate means of solving problems and achieving one's goals.^{14,15} Television, movies, and music videos normalize carrying and using weapons and glamorize them as a source of personal power.¹⁶ Children in grades 4 through 8 preferentially choose video games that award points for violence against others.¹⁷ Of the 33 most popular games, 21% feature violence against women.¹⁸ The popular music CD that led the sales charts and swept the Music Television (MTV) Video Music Awards in the year 2000 featured songs about rape and murder with graphic lyrics and sound effects.¹⁹ Because children have high levels of exposure, media have greater access and time to shape young people's attitudes and actions than do parents or teachers, replacing them as educators, role models, and the primary sources of information about the world and how one behaves in it.²⁰

After the tragic shootings at Columbine High School in 1999, President Clinton asked the Federal Trade Commission (FTC) to investigate whether the motion picture, music, and video game industries advertised and marketed violent material to children and adolescents. Working with industry-provided

The recommendations in this statement do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

PEDIATRICS (ISSN 0031 4005). Copyright © 2001 by the American Academy of Pediatrics.

documents, the FTC determined that, despite the fact that their own ratings systems found the material appropriate only for adults, these industries practiced “pervasive and aggressive marketing of violent movies, music, and electronic games to children.”²¹

Many parents find the entertainment industry’s media ratings systems difficult to use; 68% of the parents of 10- to 17-year-olds do not use the television rating system at all,²² and only 10% check the ratings of computer or video games that their adolescents wish to rent or buy.²³ Many parents find the ratings unreliably low, with an objective parental evaluation finding as much as 50% of television shows rated TV-14 to be inappropriate for their teenagers.²⁴ The ratings are determined by industry-sponsored ratings boards or the artists and producers themselves. They are age based, which assumes that all parents agree with the raters about what is appropriate content for their children of specific ages. Furthermore, different ratings systems for each medium (television, movies, music, and video games) make the ratings confusing, because they have little similarity or relationship to one another. The AAP offers an informational brochure that pediatricians can offer to parents and children to help them use the various ratings systems to guide better media choices.²⁵

INFLUENCE

Research has associated exposure to media violence with a variety of physical and mental health problems for children and adolescents, including aggressive behavior, desensitization to violence, fear, depression, nightmares, and sleep disturbances. More than 3500 research studies have examined the association between media violence and violent behavior; all but 18 have shown a positive relationship.²⁶ Consistent and strong associations between media exposure and increases in aggression have been found in population-based epidemiologic investigations of violence in American society,²⁷ cross-cultural studies,²⁸ experimental^{29–31} and “natural” laboratory research,³² and longitudinal studies that show that aggressive behavior associated with media exposure persists for decades.^{33–35} The strength of the correlation between media violence and aggressive behavior found on meta-analysis³⁶ is greater than that of calcium intake and bone mass, lead ingestion and lower IQ, condom nonuse and sexually acquired human immunodeficiency virus infection, or environmental tobacco smoke and lung cancer³⁷—associations clinicians accept and on which preventive medicine is based without question.

Children are influenced by media—they learn by observing, imitating, and making behaviors their own. Aggressive attitudes and behaviors are learned by imitating observed models.^{38–41} Research has shown that the strongest single correlate with violent behavior is previous exposure to violence.^{42–44} Because children younger than 8 years cannot discriminate between fantasy and reality, they are uniquely vulnerable to learning and adopting as reality the circumstances, attitudes, and behaviors portrayed by entertainment media.^{45–49}

It is not violence itself but the context in which it is portrayed that can make the difference between learning about violence and learning to be violent. Serious explorations of violence in plays like *Macbeth* and films like *Saving Private Ryan* treat violence as what it is—a human behavior that causes suffering, loss, and sadness to victims and perpetrators. In this context, viewers learn the danger and harm of violence by vicariously experiencing its outcomes. Unfortunately, most entertainment violence is used for immediate visceral thrills without portraying any human cost. Sophisticated special effects, with increasingly graphic depictions of mayhem, make virtual violence more believable and appealing. Studies show that the more realistically violence is portrayed, the greater the likelihood that it will be tolerated and learned.^{50,51} Titillating violence in sexual contexts and comic violence are particularly dangerous, because they associate positive feelings with hurting others.^{52–54}

In addition to modeling violent behavior, entertainment media inflate the prevalence of violence in the world, cultivating in viewers the “mean world” syndrome, a perception of the world as a dangerous place.^{55,56} Fear of being the victim of violence is a strong motivation for some young people to carry a weapon, to be more aggressive, to “get them before they get me.”⁵⁶ For some children, exposure to media violence leads to anxiety, depression, and posttraumatic stress disorder⁵⁷ or to sleep disturbances and nightmares.⁵⁸ Some defend media violence as an outlet for vicariously releasing hostility in the safety of virtual reality. However, research testing this “catharsis hypothesis” found that after experiencing media violence, children displayed increased overt aggression because of lowered inhibitions.⁵⁹ Numerous studies have shown that the most insidious and potent effect of media violence is to desensitize all of us to real life violence.^{60–62}

Interactive media, such as video games and the Internet, are so new that there has been little time to assess their influence on children’s physical and mental health. Early studies of these rapidly growing and ever more sophisticated types of media indicate that the effects of child-initiated virtual violence may be even more profound than those of passive media, such as television.^{63–65} Experimental studies have shown that after playing video games, young people exhibit measurable decreases in prosocial and helping behaviors and increases in aggressive thoughts and violent retaliation to provocation.⁶⁶ Playing violent video games has been found to account for a 13% to 22% increase in adolescents’ violent behavior; by comparison, smoking tobacco accounts for 14% of the increase in lung cancer.⁶⁶

Children learn by observing and trying out “behavioral scripts.” Repeated exposure to violent behavioral scripts can lead to increased feelings of hostility, expectations that others will behave aggressively, desensitization to the pain of others, and increased likelihood of interacting and responding to others with violence.⁶⁶ Active participation increases effective learning. Video games are an ideal environment in which to learn violence. They place the

player in the role of the aggressor and reward him or her for successful violent behavior. Rather than observing part of a violent interaction, video games allow the player to rehearse an entire behavioral script, from provocation, to choosing to respond violently, to resolution of the conflict. Moreover, video games have been found to be addictive⁶⁷; children and adolescents want to play them for long periods of time to improve their scores and advance to higher levels. Repetition increases their effect.

Interpersonal violence, as victim or as perpetrator, is now a more prevalent health risk than infectious disease, cancer, or congenital disorders for children, adolescents, and young adults. Homicide, suicide, and trauma are leading causes of mortality in the pediatric population, resulting in cumulative death rates of 22.8 per 100 000 in those 5 to 14 years of age and 114.4 per 100 000 in those 15 to 21 years of age.⁶⁸ Among urban youth, interpersonal violence is the most prevalent cause of injury (33%), and the incidence of gunshot wounds has increased dramatically in the past decade.⁶⁹ Gun violence is now a leading killer of children and adolescents.^{70,71} Each year, 3500 adolescents are murdered⁷² and more than 150 000 adolescents are arrested for violent crimes.⁷³ Nonwhite children and adolescents, particularly black males, disproportionately suffer the effects of violence in their communities as aggressors and as victims. The number of murderers 15 to 17 years of age increased by 195% between 1984 and 1994, when 94% of juveniles arrested for murder were male and 59% were black.⁷⁴ The murder rate of young black males rose 300% during the 3 decades after television's introduction in the United States.⁷⁵ Although exposure to media violence is not the sole factor contributing to aggression, antisocial attitudes, and violence among children and adolescents, it is an important health risk factor on which we, as pediatricians and as members of a compassionate society, can intervene.

The AAP offers the following recommendations:

1. Pediatricians must remain aware of the pervasive influence that the wide and expanding variety of entertainment media have on the physical and mental health of children and adolescents. Pediatricians should incorporate a media history⁷⁶ into annual health maintenance examinations and, as with seat belts and bicycle helmets, suggest healthy alternatives, such as sports, creative pursuits, interactive play, and reading, for children at risk. When heavy media use by a child is identified, pediatricians should evaluate the child for aggressive behaviors, fears, or sleep disturbances and intervene appropriately.⁷⁷
2. Pediatricians should encourage parents to adhere to the AAP Media Education recommendations,⁷⁸ including making thoughtful media choices and covieing with children, limiting screen time (including television, videos, computer and video games) to 1 to 2 hours per day, using the v-chip, avoiding violent video games in homes where they may be observed or played by young chil-

dren, and keeping children's bedrooms media free.

3. Pediatricians and other child health professionals should ensure that only nonviolent media choices be provided to patients in outpatient waiting rooms and inpatient settings. Specific content guidelines should be established for entertainment options at all child and adolescent health care settings. Movies, video games, and print media should be prescreened, and broadcast television should be filtered through a v-chip before being made available to young patients.
4. On a local level, pediatricians should encourage parents, schools, and communities to educate children to be media literate as a means of protecting them against deleterious health effects of media exposure.⁷⁸⁻⁸¹ Media education involves teaching how media work, how media can influence the ways that we perceive reality and develop attitudes, how to determine whether media messages are appropriate, and how to reject messages that are not healthy. Research has demonstrated that media education and thoughtful media use can reduce violent behavior in children.⁸²
5. On state and national levels, pediatricians should collaborate with other health care organizations, educators, government, and research funding sources to keep media violence on the public health agenda. Because leading researchers now state that the link between media violence and aggressive behavior is undeniable,⁸³ public health, psychology, and communications investigators should focus future research efforts on effective social, artistic, and clinical interventions to mitigate the harmful effects of media exposure.
6. Pediatricians should advocate for more child-positive media, not censorship. Pediatricians should support and collaborate with media producers, applying our expertise in child health and development toward creating child-friendly and truthful media. The entertainment industry should be urged to extend personal concern for the well-being of children to their business of creating and selling movies, television, music, and video games. Pediatricians offer the following recommendations to the entertainment industry:
 - Avoid the glamorization of weapon carrying and the normalization of violence as an acceptable means of resolving conflict.
 - Eliminate the use of violence in a comic or sexual context or in any other situation in which the violence is amusing, titillating, or trivialized.
 - Eliminate gratuitous portrayals of interpersonal violence and hateful, racist, misogynistic, or homophobic language or situations unless explicitly portraying how destructive such words and actions can be.
 - If violence is used, it should be used thoughtfully as serious drama, always showing the hurt and loss suffered by victims and perpetrators.

- Music lyrics should be made easily available to parents so they can be read before deciding whether to purchase the recording.
 - Video games should not use human or other living targets or award points for killing, because this teaches children to associate pleasure and success with their ability to cause pain and suffering to others.
 - Play of violent video games should be restricted to age-limited areas of gaming arcades; the distribution of videos and video games and the exhibition of movies should be limited to appropriate age groups.
7. Pediatricians should advocate for simplified content-based media ratings to help parents guide their children to make healthy media choices. A new child- and family-friendly rating system that describes media content in several areas (violence, language, sex, nudity, etc) is needed so parents can align their children's media exposure to their personal values. Although remaining respectful of and responsive to inherent differences between media, simple content-descriptive ratings that are consistent across various entertainment media should be devised. Just as it is important that parents know the ingredients in food they may feed to their children, they should be fully informed about the content of the media their children may use.
 8. Pediatricians should remember, and remind their patients' families, that if we do not buy or use entertainment media that are harmful to children, these media will no longer be produced.

COMMITTEE ON PUBLIC EDUCATION, 2000–2001

Miriam E. Bar-on, MD, Chairperson
 Daniel D. Broughton, MD
 Susan Buttross, MD
 Suzanne Corrigan, MD
 Alberto Gedissman, MD
 M. Rosario González de Rivas, MD
 Michael O. Rich, MD, MPH
 Donald L. Shifrin, MD

LIAISONS

Michael Brody, MD
 American Academy of Child and Adolescent Psychiatry
 Brian Wilcox, PhD
 American Psychological Association

CONSULTANT

Paul Horowitz, MD
 AAP Media Resource Team

STAFF

Jennifer Stone

REFERENCES

1. Smith A. Influence of TV crime programs on children's health. *JAMA*. 1952;150:37
2. US Surgeon General's Scientific Advisory Committee on Television and Social Behavior. *Television and Growing Up: The Impact of Televised Violence: Report to the Surgeon General, US Public Health Service*. Rockville, MD: National Institute of Mental Health; 1972. Publ. No. HSM 72-9090
3. Pearl D, Bouthilet L, Lazar J. *Television and Behavior. Ten Years of Scientific*

Progress and Implications for the Eighties. Rockville, MD: National Institute of Mental Health; 1982

4. American Psychological Association. *Summary Report of the American Psychological Association Commission on Violence and Youth*. Washington, DC: American Psychological Association; 1993
5. The Henry J. Kaiser Family Foundation. *Kids and Media at the New Millennium: A Kaiser Family Foundation Report*. Menlo Park, CA: The Henry J. Kaiser Family Foundation; 1999
6. Roberts DF. Media and youth: access, exposure, and privatization. *J Adolesc Health*. 2000;27(suppl):8–14
7. Huston AC, Donnerstein E, Fairchild H, et al. *Big World, Small Screen: The Role of Television in American Society*. Lincoln, NE: University of Nebraska Press; 1992
8. University of California, Center for Communication and Social Policy. *National Television Violence Study, I*. Thousand Oaks, CA: Sage Publications; 1996
9. University of California, Center for Communication and Social Policy. *National Television Violence Study, II*. Thousand Oaks, CA: Sage Publications; 1997
10. University of California, Center for Communication and Social Policy. *National Television Violence Study, III*. Thousand Oaks, CA: Sage Publications; 1998
11. Yokota F, Thompson KM. Violence in G-rated animated films. *JAMA*. 2000;283:2716–2720
12. Rich M, Woods ER, Goodman E, Emans SJ, DuRant RH. Aggressors or victims: gender and race in music video violence. *Pediatrics*. 1998;101:669–674
13. Comstock G, Strasburger VC. Media violence: Q&A. *Adolesc Med*. 1993; 4:495–510
14. Leifer A, Roberts D. Children's Responses to Television Violence. In: Murray J, Rubinstein E, Comstock G, eds. *Television and Social Behavior, II: Television and Social Learning*. Rockville, MD: United States Department of Health, Education, and Welfare; 1977:43–129
15. Collins WA. Effect of temporal separation between motivation, aggression, and consequences: a developmental study. *Dev Psychol*. 1973;8: 215–221
16. DuRant RH, Rich M, Emans SJ, Rome ES, Allred E, Woods ER. Violence and weapon carrying in music videos: a content analysis. *Arch Pediatr Adolesc Med*. 1997;151:443–448
17. Funk JB, Buchman DD. Playing violent video and computer games and adolescent self-concept. *J Commun*. 1996;46:19–32
18. Dietz TL. An examination of violence and gender role portrayals in video games: implications for gender socialization and aggressive behavior. *Sex Roles*. 1998;38:425–442
19. Eminem. *The Marshall Mathers LP*. Interscope Records; 2000
20. Strasburger VC. Sex, drugs, rock 'n' roll, and the media—are the media responsible for adolescent behavior? *Adolesc Med*. 1997;8:403–414
21. US Federal Trade Commission. *Marketing Violent Entertainment to Children: A Review of Self-Regulation and Industry Practices in the Motion Picture, Music Recording and Electronic Game Industries*. Washington, DC: US Federal Trade Commission; 2000
22. The Henry J. Kaiser Family Foundation. *Parents, Children, and the Television Ratings System*. Menlo Park, CA: The Henry J. Kaiser Family Foundation; 1998
23. Walsh DA. Testimony submitted to the Committee on Commerce, Science and Transportation, United States Senate. <http://www.senate.gov/~commerce/hearings/hearings.htm>. Accessed July, 20, 2000
24. Walsh DA, Gentile DA. A validity test of movie, television, and video-game ratings. *Pediatrics*. 2001;107:1302–1308
25. American Academy of Pediatrics. *The Ratings Game. Choosing Your Child's Entertainment*. Elk Grove Village, IL: American Academy of Pediatrics; 2000
26. Grossman D, DeGaetano G. *Stop Teaching Our Kids to Kill: A Call to Action Against TV, Movie & Video Game Violence*. New York, NY: Crown Publishers; 1999
27. Centerwall BS. Television violence. The scale of the problem and where we go from here. *JAMA*. 1992;267:3059–3063
28. Huesmann LR, Eron LD. *Television and the Aggressive Child: A Cross-National Comparison*. Hillsdale, NJ: Lawrence Erlbaum; 1986
29. Malamuth NM, Check JV. The effects of mass media exposure on acceptance of violence against women: a field experiment. *J Res Personal*. 1981;15:436–446
30. Malamuth NM, Briere J. Sexual violence in the media: indirect effects on aggression against women. *J Soc Issues*. 1986;42:75–92
31. Peterson DL, Pfof KS. Influence of rock videos on attitudes of violence against women. *Psychol Rep*. 1989;64:319–322
32. Williams TM. *The Impact of Television: A Natural Experiment in Three Communities*. Orlando, FL: Academic Press; 1986

33. Eron LD. Relationship of TV viewing habits and aggressive behavior in children. *J Abnorm Soc Psychol.* 1963;67:193–196
34. Lefkowitz M, Eron LD, Walder LO. *Television Violence and Child Aggression: A Follow-up Study.* Albany, NY: New York State Department of Mental Hygiene; 1971
35. Huesmann LR, Eron LD, Lefkowitz MM, Walder LO. Stability of aggression over time and generations. *Dev Psychol.* 1984;20:1120–1134
36. Paik H, Comstock G. The effects of television violence on antisocial behavior: a meta-analysis. *Commun Res.* 1994;21:516–546
37. Bushman BJ, Huesmann LR. Effects of televised violence on aggression. In: Singer D, Singer JL, eds. *Handbook of Children and the Media.* Thousand Oaks, CA: Sage Publications; 2001:223–254
38. Bandura A, Ross D, Ross SA. Transmission of aggression through imitation of aggressive models. *J Abnorm Soc Psychol.* 1961;63:575–582
39. Bandura A, Ross D, Ross SA. Imitation of film-mediated aggressive models. *J Abnorm Soc Psychol.* 1963;66:3–11
40. Bandura A. *Social Learning Theory.* Englewood Cliffs, NJ: Prentice-Hall; 1977
41. Bandura A. Social Learning Theory of Aggression. *J Commun.* 1978;28:12–29
42. DuRant RH, Treiber F, Goodman E, Woods ER. Intentions to use violence among young adolescents. *Pediatrics.* 1996;98:1104–1108
43. DuRant RH, Getts A, Cadenhead C, Emans SJ, Woods ER. Exposure to violence and victimization and depression, hopelessness, and purpose in life among adolescents living in and around public housing. *J Dev Behav Pediatr.* 1995;16:233–237
44. DuRant RH, Cadenhead C, Pendergrast RA, Slavens G, Linder CW. Factors associated with the use of violence among urban black adolescents. *Am J Public Health.* 1994;84:612–617
45. Flavell JH. The development of children's knowledge about the appearance-reality distinction. *Am Psychol.* 1986;41:418–425
46. Morison P, Gardner H. Dragons and dinosaurs: the child's capacity to differentiate fantasy from reality. *Child Dev.* 1978;49:642–648
47. Potter WJ. Perceived reality in television effects research. *J Broadcasting Electronic Media.* 1988;32:23–41
48. Reeves B. Perceived TV reality as a predictor of children's social behavior. *Journalism Q.* 1978;55:682–689, 695
49. Wright JC, Huston AC, Reitz AL, Pieymat S. Young children's perceptions of television reality: determinants and developmental differences. *Dev Psychol.* 1994;30:229–239
50. Liebert RM, Sprafkin J. *The Early Window: Effects of Television on Children and Youth.* 3rd ed. New York, NY: Pergamon Press; 1988
51. Cantor J. *Mommy, I'm Scared: How TV and Movies Frighten Children and What We Can Do to Protect Them.* New York, NY: Harcourt Brace; 1998
52. Linz DG, Donnerstein E, Penrod S. Effects of long-term exposure to violent and sexually degrading depictions of women. *J Pers Soc Psychol.* 1988;55:758–768
53. Strasburger VC, Donnerstein E. Children, adolescents, and the media in the 21st century. *Adolesc Med.* 2000;11:51–68
54. Grossman D. *On Killing: The Psychological Cost of Learning to Kill in War and Society.* Boston, MA: Little, Brown and Company; 1996
55. Gerbner G, Gross L, Morgan M, Signorielli N. The "mainstreaming" of America: Violence Profile No. 11. *J Commun.* 1980;30:10–29
56. Bryant J, Carveth RA, Brown D. Television viewing and anxiety: an experimental examination. *J Commun.* 1981;31:106–119
57. Singer MI, Slovak K, Frierson T, York P. Viewing preferences, symptoms of psychological trauma, and violent behaviors among children who watch television. *J Am Acad Child Adolesc Psychiatry.* 1998;37:1041–1048.
58. Owens J, Maxim R, McGuinn M, Nobile C, Msall M, Alario A. Television-viewing habits and sleep disturbance in school children. *Pediatrics.* 1999;104(3). Available at: <http://www.pediatrics.org/cgi/content/full/104/3/e27>
59. Berkowitz L, Rawlings E. Effects of film violence on inhibitions against subsequent aggression. *J Abnorm Soc Psychol.* 1963;66:405–412
60. Drabman RS, Thomas MH. Does media violence increase children's toleration of real-life aggression? *Dev Psychol.* 1974;10:418–421
61. Thomas MH, Drabman RS. Toleration of real life aggression as a function of exposure to televised violence and age of subject. *Merrill-Palmer Q.* 1975;21:227–232
62. Thomas MH, Horton RW, Lippincott EC, Drabman RS. Desensitization to portrayals of real-life aggression as a function of exposure to television violence. *J Pers Soc Psychol.* 1977;35:450–458
63. Anderson CA, Dill KE. Video games and aggressive thoughts, feelings and behavior in the laboratory and in life. *J Pers Soc Psychol.* 2000;78:772–790
64. Irwin AR, Gross AM. Cognitive tempo, violent video games, and aggressive behavior in young boys. *J Fam Violence.* 1995;10:337–350
65. Silvern SB, Williamson PA. The effects of video game play on young children's aggression, fantasy, and prosocial behavior. *J Appl Dev Psychol.* 1987;8:453–462
66. *The Impact of Interactive Violence on Children. Hearing Before the Senate Committee on Commerce, Science, and Transportation.* 106th Cong, 1st Sess (2000) (statement of Craig Anderson, Professor, Iowa State University, Department of Psychology)
67. Griffiths MD, Hunt N. Dependence on computer games by adolescents. *Psychol Rep.* 1998;82:475–480
68. Hoyert DL, Kochanek KD, Murphy SL. Deaths: final data for 1997. *Nat Vital Stat Rep.* 1999;47:19
69. Nance ML, Stafford PW, Schwab CW. Firearm injury among urban youth during the last decade: an escalation in violence. *J Pediatr Surg.* 1997;32:949–952
70. Cherry D, Annett JL, Mercy JA, Kresnow M, Pollock DA. Trends in nonfatal and fatal firearm-related injury rates in the United States, 1985–1995. *Ann Emerg Med.* 1998;32:51–59
71. Centers for Disease Control and Prevention. Nonfatal and fatal firearm-related injuries—United States, 1993–1997. *MMWR Morb Mortal Wkly Rep.* 1999;48:1029–1034
72. Centers for Disease Control and Prevention. *Homicide and Legal Intervention Deaths and Rates per 100 000—United States, 1988–1994.* Atlanta, GA: Centers for Disease Control and Prevention; 1996
73. National Adolescent Health Information Center. *Fact Sheet on Adolescent Homicide.* San Francisco, CA: University of California; 1995
74. Snyder HN, Sickmund M, Poe-Yamagata E. *Juvenile Offenders and Victims: 1996 Update on Violence.* Washington, DC: US Department of Justice; 1996
75. Fingerhut LA, Kleinman JC. International and interstate comparison of homicide among young males. *JAMA.* 1990;263:3292–3295
76. American Academy of Pediatrics. *Media Matters: A National Media Education Campaign.* Elk Grove Village, IL: American Academy of Pediatrics; 1997
77. American Academy of Pediatrics, Committee on Injury and Poison Prevention. Firearm-related injuries affecting the pediatric population. *Pediatrics.* 2000;105:888–895
78. American Academy of Pediatrics, Committee on Public Education. Media education. *Pediatrics.* 1999;104:341–343
79. Huston AC, Wright JC. Educating children with television: the forms of the medium. In: Zillman D, Bryant J, Huston AC, eds. *Media, Children, and the Family: Social Scientific, Psychodynamic, and Clinical Perspectives.* Hillsdale, NJ: Lawrence Erlbaum; 1994:73–84
80. Strasburger VC. Children, adolescents, and the media: five crucial issues. *Adolesc Med.* 1993;4:479–494
81. Dietz WH, Strasburger VC. Children, adolescents, and television. *Curr Probl Pediatr.* 1991;1:8–32
82. Robinson TN, Wilde ML, Navracruz LC, Haydel KF, Varady A. Effects of reducing children's television and video game use on aggressive behavior: a randomized controlled trial. *Arch Pediatr Adolesc Med.* 2001;155:17–23
83. Eron L. *The Problem of Media Violence and Children's Behavior.* New York, NY: Guggenheim Foundation; 1993