

PEDIATRICS PERSPECTIVES

Why Is It So Hard To Believe That Media Influence Children and Adolescents?

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The perpetrator of the Naval Yard shooting, who killed 12 people in September 2013, spent up to 16 hours a day playing violent video games (eg, "Call of Duty"). CNN asked Dr Bushman to write an OpEd piece about the possible role of violent video games in violence.¹ In response to that OpEd, over 1400 people made comments denying any harmful effects of violent video games. Indeed, in the US Supreme Court's 2011 decision on video games (*Brown v. Entertainment Merchants Association et al*, No. 08-1448), Justice Scalia compared violent video games like "Call of Duty" to Grimm's Fairy Tales and Homer's *Odyssey*.

A Super Bowl ad costs ~\$4 million for 30 seconds. Clearly, advertisers believe that a mere 30 seconds will lead consumers to buy their products. However, the media industry claims that the programming surrounding the ads has no impact on viewers. This is a paradox. How is it possible for the media to have no effect on children and adolescents when they spend an average of >7 hours/day with media (>11 hours/day if they have bedroom media)² consuming it?

Thousands of studies now exist, and the literature is increasingly clear about the potential impact of media on a variety of health issues (Table 1).^{3,4} Part of the problem may be that the general public, and even some academics, don't know how to interpret this vast literature. The studies are epidemiologic in nature, meaning that predicting the greater impact of media on any given child is meaningless. Other factors may trump media, such as socioeconomic status, parents' education status, personality traits, etc (although many studies control for such variables). In addition, as the American Academy of Pediatrics has stated numerous times in policy statements, the media are not the leading cause of any particular health concerns. Again, epidemiologically speaking, they may contribute 10% to 20% to any given problem³; but that is a considerable amount given that we potentially have more control over media than other risk factors (eg, poverty, low IQ, mental illness). In addition, human behavior is complex and is determined by multiple factors, often acting together. Listed below are some possible reasons people deny media effects.

THE THIRD-PERSON EFFECT

As is well documented in the literature, people think the media have a much stronger effect on others (eg, the illiterate kids down the street) than on themselves.

TABLE 1 Health Effects of Media

Media violence
>2000 studies show a link with aggressive attitudes and behavior
Strong desensitization effect
Exposure of normal children to media violence has been associated with antisocial and even criminal behavior in adults
No studies exist on the impact of media violence on children or adolescents who are mentally ill
Sex
18 studies have used longitudinal data to show a 2× increased risk for early sexual intercourse with exposure to sexual content at a young age
Dozens of studies show an impact on sexual attitudes and beliefs
Drugs
Alcohol and tobacco advertising = 1 cause of adolescent drinking and smoking
Exposure to scenes of movie smoking and drinking may be the leading cause of teenage drinking and smoking
Obesity
Strong evidence for screen time causing an increased risk for obesity
Etiologic factors include: (1) displacement of active play, (2) exposure to food advertising, (3) changes in eating habits while viewing, and (4) impact of screen time on sleep
Other concerns
Several studies link television viewing with attention-deficit/hyperactivity disorder
At least 14 studies now find language delays in infants <2 y exposed to screens
Association of television viewing with depression, and an increased risk for imitative suicide
Impact of television, movies, and magazines on body self-image and on development of eating disorders

FAULTY REASONING

Many people think that violent media have no effect on aggression and violence because they have never killed anyone after watching a violent TV show or film or playing a first-person shooter video game. But murder is such an uncommon occurrence, and mass murders are even more uncommon, that it is virtually impossible to establish a link between murder and violent media (or any other factor). People fail to consider the low base rates for rare events.

REFUSAL TO BELIEVE THE EVIDENCE

Despite thousands of research studies on media effects, many people simply refuse to believe them. Some academics may contribute to this because they like to “buck the establishment,” which is an easy way to promote themselves and their research. Of course, many people still believe that President Obama wasn't born in the United States, President Kennedy wasn't assassinated, men didn't walk on the moon, and the Holocaust didn't occur.

COGNITIVE DISSONANCE

Conflicting thoughts cause psychological discomfort called “cognitive dissonance.” Media are fun and entertaining, so it is difficult for people to believe that they actually might cause harm. As a result, people think that the research must be wrong.

PSYCHOLOGICAL REACTANCE

People often experience unpleasant tension called “reactance” whenever they feel that someone is trying to limit their freedom, such as by restricting media. For example, when children are told they are too young to play a video game, they want to play it even more. The violent game becomes “forbidden fruit.”

CATHARSIS THEORY

Aristotle believed that people are vicariously “purged” of their unhealthy emotions by watching Greek tragedies. Many Hollywood directors and producers still believe this theory, but there is absolutely no evidence to

support it. In fact, the research suggests exactly the opposite.

HOLLYWOOD DENIALS

Interestingly, the entertainment industry will point to its award-winning products like “Schindler's List” and “Saving Private Ryan” as “ennobling” society, but then deny any negative effects from other violent films. When millions and even billions of dollars are at stake, it is difficult to take personal responsibility for any harmful effects.

A LOT OF MEDIA ARE GOOD FOR CHILDREN AND TEENAGERS

“Sesame Street” is the gold standard for high-quality television for young children, and PBS programs for both children and adolescents are uniformly high quality, entertaining, and educational. Similarly, there have been some extraordinary films for children and adolescents (eg, “Small Change,” “Breaking Away,” “Toy Story,” “The Secret of NIMH,” “Up”). So critics of the media are often accused of being overly negative and shortsighted.

THE MEDIA THEMSELVES DON'T OFTEN REPORT ON NEGATIVE MEDIA EFFECTS

A study of research studies and news reports from 1975 to 2000 showed that whereas media effects were increasing over time in research studies, news reports of media causing harm were actually decreasing.⁵ A more recent study⁶ revealed similar effects through 2012, and further noted that journalists typically rely on weak sources that do not match the experience and expertise of the lead researcher, thus leaving the reader even more confused about the findings. The relationship between media violence and real-life aggression is actually stronger than

many of the common public health connections people readily accept (eg, exposure to asbestos and cancer, secondhand smoke and lung cancer, lead exposure and cognitive impairment).^{3,4} It is simply not in any TV network's or film studio's economic interests to report on, or even acknowledge, negative media effects.

So what to do about all of this?

The American Academy of Pediatrics has certainly done its part; numerous policy statements have been published, press releases issued, and media appearances made. Pediatric journals have also done their part; both *Pediatrics* and *JAMA Pediatrics*

are at the forefront of publishing current research and review articles on media effects on children and adolescents. Now it is time for other medical organizations to step up (eg, the American Medical Association, the American Academy of Family Practice, the Society for Adolescent Medicine). A joint task force on children, adolescents, and the media could be a powerful public health force and could interact with both the entertainment industry and the federal government. Schools should play a key role as well. Few American schools teach media literacy, yet nearly every other Western country mandates such education.⁷

The federal government and private foundations could help as well, by funding more media research and by creating a new 2016 comprehensive report on children, adolescents, and the media (the last one was in 1982, long before iPhones and iPads). Finally, we need to think creatively about how to better educate the public; pediatricians cannot do it alone. Educating future reporters in journalism schools and future writers, producers, and directors in film schools might pay rich dividends in several years. And we should not forget that we need to teach our academic researchers how to better communicate science to the public.

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