

A Plea for Concern Regarding Violent Video Games

To the Editor: In the April issue of *Mayo Clinic Proceedings*, Hall et al¹ authored a “plea for caution” in the interpretation of research on the impact of viewing video violence on the development of children and youth.

The authors enumerated a series of investigations and reports on the impact of violence in media, including concerns about violence in comic books, movies, television, and video games. Additionally, they noted that the US Supreme Court was reviewing a California law that would ban the rental or sale of certain violent video games to those younger than 18 years. Hall et al pleaded for caution and expressed the hope that the Supreme Court would not be swayed by the evidence offered in support of the California law and suggested that the evidence was inconclusive on the effects of video violence and children. Indeed, the authors implied that all the research programs undertaken on the media violence topic during the past 50 to 60 years were merely examples of what they described as “moral panic” that emanated from well-intentioned but misguided concerns about society.

Hall et al went so far as to chastise the American Academy of Pediatrics (AAP) and the American Psychological Association (APA) for publishing reports and recommendations that urged their professional members to alert their patients and clients to the dangers of media violence. The authors argued that the evidence of harmful effects was so weak and confused that these professional organizations were being irresponsible (and perhaps incompetent) in expressing their concern about the dangers that viewing media violence pose for children and youth.

As professionals in communications, pediatrics, psychology, psychiatry, and public health, we are astounded by the inaccuracies evident in the conclusions offered by Hall et al. For example, they completely dismiss the extensive body of evidence accumulated during the past half century, starting with the Surgeon General’s research program on television violence and children in the late 1960s,^{2,3} the National Institute of Mental Health review in the 1980s,⁴ the review undertaken by the Group for the Advancement of Psychiatry in the 1980s,⁵ and the comprehensive review by the APA in the 1990s.⁶ In addition to overlooking these reviews by government and professional organizations, Hall et al raise an “old chestnut” of the *catharsis hypothesis*, suggesting that viewing media violence results in a purging of aggressive feelings and thereby reduces the likelihood of subsequent aggression. The catharsis hypothesis was popular in the 1960s and 1970s and was often cited by the media violence industry and its supporters. However, even the “father” of this notion, Seymour Feshbach,⁷ abandoned this theory and recanted his claims concerning “catharsis” as early as the 1980s. Finally, the fact that Hall et al suggest that large scientific and professional organizations, such as the AAP or APA, produced frivolous or ill-considered reports on policy and practice is an indica-

tion that the authors are poorly informed about the processes involved in developing and disseminating such reports. In the case of the APA report, 2 of us (E.D. and J.P.M.) can verify, from first-hand experience, that the APA spent almost 6 years and supported the work of a task force of 9 psychologists before reaching the conclusions that were finally passed by the 170 members of the Council of Representatives of APA. Similarly, 2 of us (M.R. and V.S.) were involved in the rigorous reviews undertaken by the AAP. One of us (R.W.M.) was chair of the Group for the Advancement of Psychiatry report and can attest to the rigorous deliberations of that group. These reports were undertaken in a very serious manner, and Hall et al simply dismiss these reports casually.

We have collectively more than 200 years of professional experience in research, public health interventions, and communication concerning the effects of media violence on children and youth. Indeed, one of us (B.B.) was honored with the Order of Australia for advocacy for children’s media. We have reviewed evidence from hundreds of studies, both behavioral and neurologic, in both laboratory and natural environmental settings, both cross-sectional and longitudinal. For example, we refer readers to the reviews and commentary by Kunkel and Wilcox,⁸ Pecora et al,⁹ Rich,¹⁰ and Strasburger.¹¹ The overwhelming conclusion to be drawn from this research is the fact that there are, indeed, harmful effects of viewing violence, as we noted in the aforementioned reviews.^{4,6} As such, there is a great need for concern on the part of parents, policy makers, and professionals in regard to the unbridled expansion of media violence directed to youngsters.

Hall et al cite several reviews of research, notably that of Ferguson,¹² which suggest that the state of research on media violence is complex and confused. They dismiss other reviews, such as those by Anderson et al¹³ and Huesmann,¹⁴ as irrelevant or perhaps biased.

This strategy is similar to the writings of authors who have submitted amicus curia briefs to the Supreme Court in support of the video game industry. One of those amicus briefs, authored by Patricia A. Millett as Counsel of Record, claimed to have 82 signatories who were experts in media violence and were opposed to the belief that there are demonstrable effects of video violence on children and youth. In this instance, the so-called Millett Brief¹⁵ stood in clear opposition to the briefs of the State of California, the petitioners in the Supreme Court case, and the so-called Gruel Brief¹⁶ filed by Steven F. Gruel as Counsel of Record for the amicus brief of State Senator Leland Y. Yee, PhD, the California Chapter of the AAP, and the California Psychological Association. These dueling briefs would be worrisome if it were not for the fact that the 82 signatories of the Millett Brief have relatively little expertise in research or writing on the topic of media violence. In contrast, a large percentage of the 115 signatories of the Gruel Brief have outstanding credentials and are experts on the issue of media violence. A recent article in the *Northwestern University Law Review*¹⁷ has provided a detailed comparison of the professional competence of the signatories of the 2 amicus briefs. Clearly, the professionals supporting the Gruel Brief are providing competent

and thoughtful analyses that urge professional concern about the harmful effects of media violence.

On June 27, 2011, the Supreme Court issued its decision¹⁸ on the California Law restricting the distribution of some violent video games to minors. The Court, in a 7 to 2 decision (Justices Stephen Breyer and Clarence Thomas dissenting), determined that the California law was overly broad in restricting access to protected free speech by minors. It noted that the evidence of harmful effects of violent video games was not any stronger than the evidence showing harm from other violent video media and therefore the proposal from California was actually “underinclusive” because it did not propose to restrict those other violent video media such as Saturday morning cartoons. On this point, the Court noted that

Underinclusiveness raises serious doubts about whether the government is in fact pursuing the interest it invokes, rather than disfavoring a particular speaker or viewpoint....Here, California has singled out the purveyors of video games for disfavored treatment—at least when compared to book-sellers, cartoonists, and movie producers—and has given no persuasive reason why.^{18,p14, para 1}

In his dissent, Justice Breyer noted that the evidence on video game violence being harmful was sufficient, and he appended a listing of about 150 research and review articles to support his claim. He concluded,

But what sense does it make to forbid selling to a 13-year old boy a magazine with a picture of a nude woman [as the Supreme Court did in *Ginsberg v. New York*] while protecting a sale to that 13-year-old of an interactive video game in which he actively, but virtually, binds and gags the woman, then tortures and kills her.^{18, p19, para 1}

Nevertheless, the Court was firm in its majority opinion that violent video games are a form of speech protected by the First Amendment.

Given the outcome of the Supreme Court deliberations, it is clear that both government and industry are unlikely to find a common way to solve the problem of protection from harm. Also, given the strong conclusions from research that viewing violence can lead to harmful effects, such as changes in attitudes, values, and behavior favoring the use of aggression to resolve conflicts,⁴⁻⁶ as well as possible neurologic changes produced by viewing violence,¹⁹⁻²² it is imperative that health care professionals become knowledgeable about video violence and share that information with their patients.

Thus, it is our considered opinion that the Hall et al article urging caution in giving advice about the harmful effects of media violence is overly cautious, if not foolish. Additionally, it is our considered opinion that we need to be very concerned about the impact of media violence on children and youth, for all the reasons identified in the professional reports and research reviews cited. Of course, it is true that there are no easy solutions to these problems, but we must remember that children and youth represent our future and that they depend on us to provide a healthy and safe environment in which they may grow and develop. Given the complexity of the issues, we

may err no matter what choice we make, but should we not err on the side of *concern* by following the Hippocratic advice to “do no harm?” Thus, we end this commentary with “A Plea for Concern.”

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A Further Plea for Caution Against Medical Professionals Overstating Video Game Violence Effects

To the Editor: On the day I write this, the US Supreme Court has struck down California's attempt to ban violent video games to minors. The State of California, while acknowledging that existing research could not determine that video games cause harm to minors, nonetheless relied on a biased and misleading representation of the research in this field to support *their contention* that video games "harm" minors. Writing for the US Supreme Court majority, Justice Antonin Scalia noted that the research is in fact "not compelling" and "most of the studies suffer from significant, admitted flaws in methodology." The only "harm" by video games in this case is not to minors but to the scientific

community itself because it has insisted on an ideological position that increasingly has come at odds with the data.

In generations past, medical scholars warned society about the purported harms of various media ranging from dime novels through jazz music, comic books, rock and roll music, and Dungeons and Dragons (a role-playing game).¹ None of these fears materialized, and the scientific community expended significant capital in pursuing these beliefs long past the time in which data could support them. In their article, Hall et al² caution us that medical science may be repeating the errors of the past, ratcheting up claims of harmful video game violence effects even as data increasingly contradict such claims. As one of the leading video game researchers in the United States, I read this well-researched and timely article with great interest. To the warning by Hall et al, I add my own: Previous claims of "harm" due to video games were a mistake, and the medical community will only expend further political and scientific capital by insisting on the existence of harmful effects despite increasing evidence to the contrary.

Careful review of the scientific evidence reveals that not only are data increasingly pointing away from harmful effects but also that such data were never consistent even when some scholars attempted to claim they were.³ Methodological problems abound in this field, including lack of valid aggression measures, failure to adequately control for other important variables, and a tendency to interpret weak and inconsistent results as if supportive of causal theories. However, although small in number, a few studies have corrected these issues. When aggression is measured using valid tools and other variables are carefully controlled, little evidence emerges for harmful video game violence effects.^{4,6} Interestingly, these results are achieved regardless of the position in the debates the authors have taken in the past, although some scholars attempt to deemphasize their own results.⁵ Prospective analyses have found little evidence for long-term harm,⁶ and some suggest violent game exposure may be associated with reduced aggression.⁷ Of 3 groups to have conducted meta-analyses on the topic, 2 replicated each other in concluding that no evidence exists for harmful effects.^{8,9} Both these groups have been critical of the third group¹⁰ for, among other issues, exaggerating the importance of the weak effects observed in their own research and failing to include studies that conflicted with their views. Add to these societal data in which the introduction of violent games into our society has been met with a precipitous decline in youth violence to 40-year lows, and we see that the data from various sources converge to oppose the belief that violent games are harmful.

These conclusions are not merely my own but are also based on a review of the literature by the Australian government,¹¹ to date the only independent review on the topic. (Policy statements by professional groups were compromised by committees of antigame scholars reviewing their own work and declaring it beyond further debate. Such statements should not be considered independent reviews.) The US Supreme Court now appears to concur in this assessment as well. Thus, comments by Hall et al and other scholars increasingly warn us of the damage done by the insistence on a rigid scientific

ideology in the face of contrasting evidence. I have little doubt that the reasonable cautionary statements by Hall et al will be met by angry calls from some scholars for an insistence on doctrinal purity. In past media moral panics, medical scholars expended significant prestige and capital insisting media effects *must be true* even as evidence rolled in to contradict those claims. We have reached this point once again. I call on medical science to begin the process of self-correction and cease making spurious claims for harmful effects that increasingly conflict with the available data. The time for scientific correction has arrived.

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In reply: We thank Dr Murray and his colleagues and Dr Ferguson for their interest in our article. Debate in scientific literature is important for the field to advance and for all sides to be heard. One of the senior authors of our article, a law professor (T.D.), thinks it is important to remember that the First Amendment to the US Constitution, which was at issue in the case of *Brown* (formerly Schwarzenegger) v *Entertainment Merchants Association*, allows the medical profession and the population at large to engage in vigorous substantive debate.¹ We think that the letter from Ferguson speaks for itself. In this reply, we focus on the letter from Murray et al entitled *A Plea for Concern* because they express

more disagreement and concern with our article and its premise. Unfortunately, their letter enforces the points we made in our article that some in the scientific community are acting in an overly emotional, biased, academically dishonest, and ipse dixit (legal term for something asserted but not proved) "I am the expert" manner that hampers medicine's credibility and objectivity in our courts.

As will be evident to individuals who read our article, Murray et al misrepresent, mischaracterize, and literally misquote our work. For example, the phrase "moral panic" does not appear in our article, but this did not stop the authors from putting it in quotes and directly stating that it did. In addition, they either intentionally or unintentionally confuse the points of our article, which focused on the specific issue of the effects that video games played in the Supreme Court case of *Brown v Entertainment Merchants Association*.¹ Instead of looking at the issue before them, they focused on general media violence. Many of their references are from the 1970s and 1980s, a period before the violent video games in question were even developed. The situation of experts testifying about the effects of all media violence, instead of testifying specifically about violent video games, has been a frequent criticism of the courts concerning these cases, as we discussed in our article.

Murray et al suggest that literature that should have been reviewed was not and that the works of specific organizations were summarily discounted for no reason. Contrary to their contention, a balanced review of the literature was presented, with specific sections in our article devoted to studies suggesting harm and studies not finding harm. The fair review of the literature in our article was not unlike Supreme Court Justice Breyer's dissenting opinion with attached appendix listing 115 studies "supporting the hypothesis that violent video games are harmful" and 35 studies "not supporting/rejecting the hypothesis that violent video games are harmful."² What is alarming is that Murray et al not only misrepresent and discount our article in an academically unbalanced fashion but also dismiss and mischaracterize the findings of the Supreme Court. They discuss Justice Breyer's dissenting opinion as "...he appended a listing of about 150 research and review articles to support his claim [video game violence being harmful]." The casual reader would not realize that about one-fourth of the 150 articles cited by Justice Breyer showed no harm, just as a casual reader would not realize that the studies cited in our article were in fact balanced pro and con.

For those who have not read our article, it provided 48 references, which included a broad range of sources, including law reviews, court opinions, congressional testimony, and scientific articles. Many who have written articles understand that journals often have restrictions both as to the scope of a topic and the space available. Unfortunately, our article had to be reduced from its original size by about 2000 words and 30 references. Considering that books and thousands of articles over decades have been written on the general topic of media violence, it becomes a straw man argument to claim that the lack of inclusion of certain older works about general media violence is a flaw of our article. Works that find that video games do have a negative impact and the posi-

tions taken by professional organizations, such as the American Academy of Pediatrics, were cited and discussed, not simply rejected out of hand as Murray et al claim. In fact, there were no statements that either directly or indirectly criticized any professional organizations' stances on the issue of video game violence, again showing that Murray et al are engaging in an unfounded ad hominem attack on those with whom they disagree.

In terms of familiarity with professional organizations, both of our article's physician authors (Ryan C.W.H., Richard C.W.H.) are members of the American Psychiatric Association (APA) and have served as delegates to the APA Assembly. We are very familiar with the process by which organizations approve policy and disagree with Murray et al that 170 American Psychological Association Assembly members voting on a position paper (unaware if unanimous vote of approval or not) written by 9 individuals is proof that a scientific issue is settled. There is a long history of organizations, such as the APA and the American Psychological Association, having an established position on a fact-based scientific issue that changed with time and the political environment. The classic case is that, before 1973, the APA defined homosexuality as a mental disorder and listed it as such in the *Diagnostic and Statistical Manual of Mental Disorders, Second Edition*, a widely accepted and used scientific document that was approved by the APA Board of Trustees and the APA Assembly at the time of its publication in 1968.³ The American Psychological Association held a similar position, which it did not change until 1975.⁴

Murray et al state that we suggested in our article that physicians should not talk to families about violence. This is another gross misrepresentation of our article. No matter why the blatant misrepresentation occurred, it serves only to inflame the tone and emotions of the debate and weaken the scientific credibility of our disciplines. Our article clearly dealt with physicians' interactions in the legal realm, not their clinical interactions. **No recommendations** were given, one way or the other, about what physicians should discuss with patients or their families. Obviously, if a physician is concerned that a particular child is affected negatively by a video game, as can occur with any stimulus (eg, drugs, negative peer influence, family dynamic, abuse), he or she should address that issue. We neither endorsed nor repudiated video games in our article; however, we did provide a historical context for the current debate by reviewing the 1950s comic book debate and testimony (which was referenced in the Supreme Court opinion), discussed the pros and cons found in the literature (also discussed in the Supreme Court opinion), and suggested points for physicians to be aware of when critically examining and reviewing the literature, such as whether studies showed correlation or direct causation (also referred to in the Supreme Court opinion). The overall tone of the letter by Murray et al, although not directly stated, was to remind physicians to approach testifying, whether before legislators or courts, "with opinions and testimony that are honest and as objective [eg, admitting limitations and plausible alternatives] as possible" as encouraged by The American Academy of Psychiatry and the Law, another organization to which 2 of us (R.C.W.H., R.C.W.H.) belong.^{5,6}

Another accusation made by Murray et al is that we dismissed the work by Dr Anderson and Dr Huesman "as irrelevant or perhaps biased." Both these individuals' works were cited and discussed. As part of the discussion, there were quotations and references to Anderson's work from other published articles and court opinions, which did suggest bias or ineffective testimony, such as:

The research underlying Anderson's testimony, however, does not support such a stark and sweeping conclusion...[Defense experts] noted that Dr. Anderson not only had failed to cite any peer-reviewed studies that had shown a **definitive** [bold typeface added] causal link between violent video game play and aggression, but had also ignored research that reached conflicting conclusions...They also cited studies concluding that in certain instances, there was a *negative* [italics added] relationship between violent video game play and aggressive thoughts and behavior (e.g., initial increases in aggression wore off if the individual was allowed to play violent video game for longer period)... Dr. Anderson also has not provided evidence to show that the purported relationship between violent video game exposure and aggressive thoughts or behavior is any greater than with other types of media violence...or other factors that contribute to aggression, such as poverty. In fact, several of the studies he uses to support his conclusions examine media violence generally and do not disaggregate the effect of video game violence or compare the effects of video game violence to these or other forms of media violence.⁷

This excerpt comes from the judicial opinion of an earlier court case in which Anderson testified. It was very appropriate to include in our article because our article discussed how expert testimony has been perceived by the courts. It was also prophetic considering how the Supreme Court majority opinion (signed by 5 justices with 2 others agreeing with the holding but submitting differing concurring opinions, for a 7-2 decision) referred to Anderson's work and past testimony:

The State's evidence is not compelling. California relies primarily on the research of Dr. Craig Anderson and a few other research psychologists whose studies purport to show a connection between exposure to violent video games and harmful effects on children. These studies have been rejected by every court to consider them, and with good reason: They do not prove that violent video games **cause** [bold typeface added] minors to *act* [italics added] aggressively (which would at least be a beginning). Instead, "[n]early all of the research is based on correlation, not evidence of causation, and **most of the studies suffer from significant, admitted flaws in methodology** [bold typeface added]." They show at best some correlation between exposure to violent entertainment and minuscule real-world effects. . . . In his testimony in a similar lawsuit, Dr. Anderson admitted that the "effect sizes" of children's exposure to violent video games are "about the same" as that produced by their exposure to violence on television. And he admits that the *same* [italics added] effects have been found when children watch cartoons starring Bugs Bunny or the Road Runner, or when they play video games like Sonic the Hedgehog that are rated "E" (appropriate for all ages), or even when they "vie[w] a picture of a gun."¹¹

It is also worth noting that Murray et al reference part of this opinion as well (eg, effects of video games being similar to those of television) but fail to mention that the Court found the science of many of the studies flawed. It is understandable why Murray et al did not acknowledge this finding by the majority of the Court, because it would make them look "foolish" (term used by Murray et al) when

they “chastised” (another term used by Murray et al) us for suggesting that some have found “the evidence of harmful effects weak and confused.”

The notion that our article used “old chestnuts” of discredited theory further highlights one of the many points of that report, which was that most of the arguments being brought to courts and legislators about violence and video games are theories that can change and are modified over time. We disagree that there is no validity to the *catharsis theory*. Along with learning theory, this theory was discussed in our article, with the catharsis theory being particularly discussed in the context of a 2010 study that found better mental health in individuals who played a moderate amount of video games compared with individuals who played extreme amounts or no video games.⁸

The ipse dixit aspects of “trust us, we are the experts” are clear when Murray et al talk about their collective 200 years of experience, awards they have won, and discussion of positions they have held. We can make similar claims: We have won multiple major journal awards, have authored more than 400 publications, held national leadership positions in various organizations, served as delegates to the APA and American Medical Association, and collectively have 75 years of experience (considering there are just 3 of us, this is on par with their 200 years among 7 people). We also point out that the companion law review article to our article in *Mayo Clinic Proceedings* was chosen as one of the most influential law review articles in the field of entertainment law for 2010 by Reuters (for in-depth legal analysis and First Amendment concerns on this issue, such as legal differences between obscenity/nudity and violence, see this article).⁹

The use of the “we are the experts” argument is further highlighted by Murray et al when they reference a law review article that examines the qualifications of the experts involved in the amici curiae briefs. They spend time talking about who submitted the Gruel brief and the organizations that signed on to it, such as the California Psychological Association. However, they gloss over which authors contributed to the brief. Both the Gruel brief and the law review article were written in part by Anderson and Bushman.^{10,11} It is not surprising that Anderson and Bushman found their own qualifications and the qualifications of the people who agree with them to be superior to the qualifications of the individuals who disagree with them. They came to this conclusion after reviewing the number of publications of individuals on the briefs by just searching the PsycINFO database, which is maintained by the American Psychological Association. This is important because, although none of us were involved in the amici briefs, if we were, we would have been overlooked because we are primarily published in medical journals such as *Mayo Clinic Proceedings* (not listed in PsycINFO database) and law reviews. Although it is sometimes important to know the accomplishments of authors, it is just as important not to blindly accept them as infallible. It is not the organizations to which authors belong, the number of years of experience they have, or the number of articles they have published that de facto defines the truth.

In our article and again in this reply, we ask physicians to be “cautious” in how they present data and studies to legislators and

courts, so as not to overrepresent their findings or implications for society. We caution them not to claim there is “no” disagreement, engage in ad hominem attacks, or mischaracterize the state of the field as being totally settled, when debate still exists. Engaging in a biased public policy crusade hurts all of medicine and the people we try to treat.

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Sleep Apnea and Weight Loss

To the Editor: In the June 2011 issue of *Mayo Clinic Proceedings*, Park et al¹ presented an excellent update on obstructive sleep apnea (OSA) and succinctly covered the latest information on this disorder, which seems to be encountered ever more frequently.

I was surprised, however, that weight loss was mentioned almost as an afterthought in the last few words of the conclusion. Because obesity is the cause of many cases of OSA and is an important factor in all cases, weight loss can result in a cure for many patients and in an improvement in others. The importance of treating OSA as a causative factor in cardiovascular disease, hypertension, stroke, and other comorbidities as well as mortality is clearly pointed out in the body of the article. However, obesity alone is an independent and modifiable risk factor for these same complications.² Would it not be more appropriate to treat a cause of OSA and these comorbidities rather than acquiesce to the patient's lack of motivation to lose weight and simply initiate symptomatic treatment?^{3,4}

The current American Academy of Sleep Medicine guidelines by Epstein et al⁵ state that, after 10% body weight loss, patients should be retested to determine whether continuous positive airway pressure (CPAP) assistance is still necessary. In a nation in which obesity is an epidemic, we should consider primary prevention, rather than simply treating the symptoms. Is a CPAP machine or even bariatric surgery medically necessary for an obese patient with OSA before implementation of an aggressive and comprehensive weight loss program?⁶ In my experience, even in unusually well-controlled circumstances, CPAP machines are frequently disliked and used only intermittently.

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In reply: We thank Dr Barnett for bringing up an excellent point regarding the importance of weight loss in the overall management of OSA. We did not intend to overlook its importance. We fully agree with Dr Barnett that weight loss should be emphasized and encouraged in all overweight patients with OSA. Weight loss in those with OSA may help decrease comorbidity burden, improve breathing parameters during sleep, and possibly expand the role for non-CPAP options in the treatment of OSA.

Unfortunately, few patients successfully maintain weight loss.¹ Furthermore, many sleep facilities do not have well-developed referral links to successful weight loss programs. Even dramatic weight loss via bariatric surgery may not cure OSA. A recent meta-analysis² of 12 studies encompassing 342 patients that examined the effect of bariatric surgery on OSA revealed that only 25% of patients achieved resolution of OSA after surgery, even with a mean body mass index decrease of 16.9 kg/m². For all these reasons, there is a sobering tendency to quickly look beyond weight loss when reviewing OSA management options.

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