Study Finds No Evidence That More Violent, Difficult Video Games Spur Aggression

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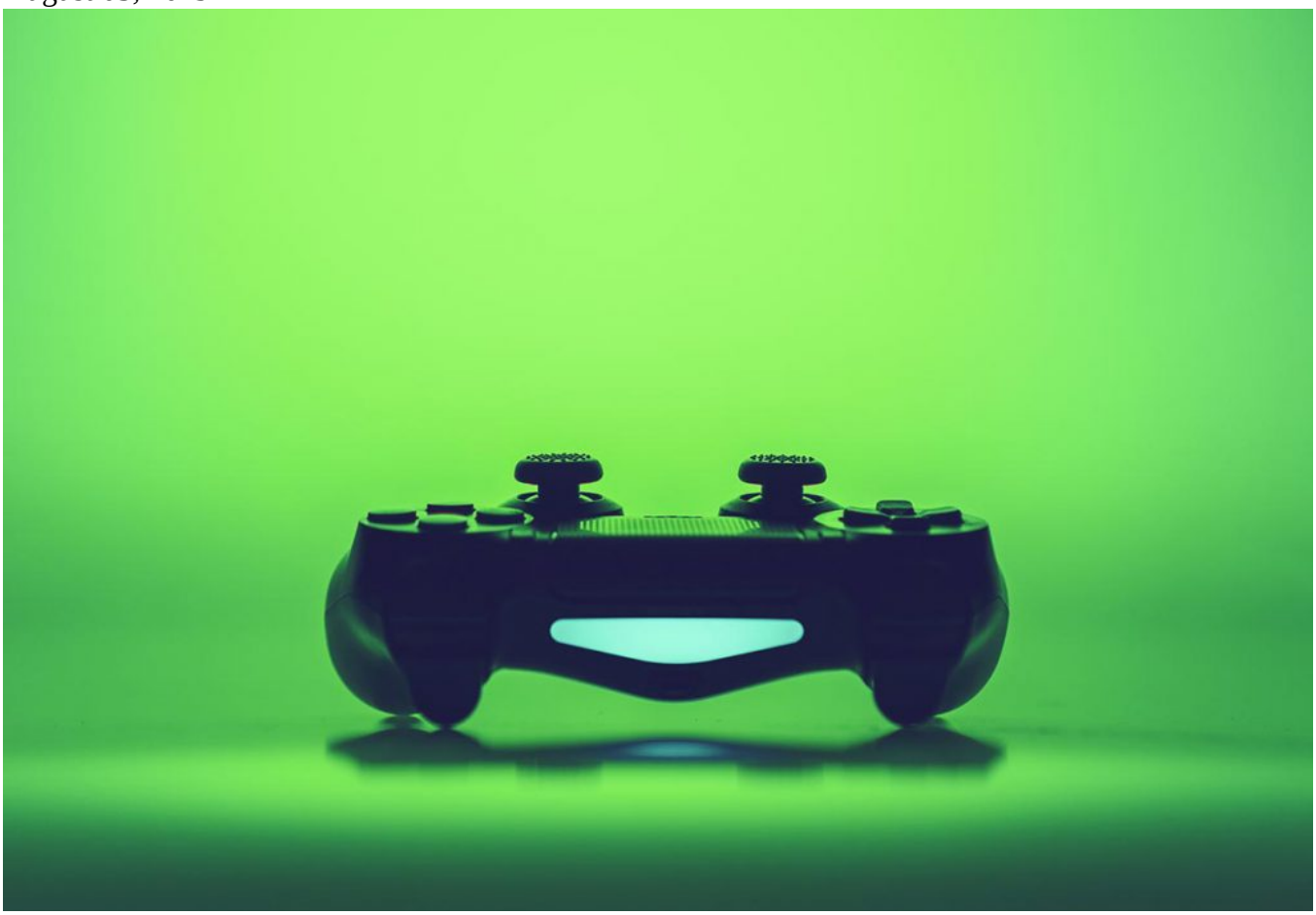

Global video game revenues top more than $140 billion every year and e-sports are becoming just as competitive (and potentially lucrative) as other professional sports. Some of the most popular video games — including *Fortnite*, *Grand Theft Auto*, *Rainbow Six Siege*, *Red Dead Redemption*, *Overwatch*, *Counter-Strike*,and *Call of Duty* — feature violence of some kind, but the question still stands: Does violent in-game behavior have an impact on real-world behavior?

Some psychological studies have suggested thatplaying violent video games increases aggressive behavior, on the basis of experimentsthat compared the behavior of participants who played violent games with thosewho played nonviolent games. But critics say thefindings fail to account for other possible factors, including differences inthe mechanics of violent and nonviolent games.

To more directly answer the question, Joseph Hilgard of Illinois State University and colleagues altered a single game to examine the unique influence of two aspects of game play: content and difficulty. The findings, published in *Psychological Science*, provide no evidence that either violent or difficult content intensifies players' aggression toward others.

For the study, Hilgard and colleagues created four versions of the video game *Doom II*. The more violent versions contained enemy graphics and sounds borrowed from *Brutal Doom*, a game mod designed to make everything more extreme — participants were tasked with defeating aliens, which resulted in the enemies exploding in gory fashion. The less violent versions contained sillier-looking alien enemies drawn from *Chex Quest*; rather than killing the aliens, participants were tasked with sending them home with their "zorcher."

In the difficult versions of the game, theenemies fought back and participants had to restart the level if they receivedtoo many hits. In the easy versions, the enemies simply walked slowly insteadof directly attacking the player.

Although the content and overall objective variedacross the four versions, the game play remained the same.

When the participants, all college-aged men, cameto the lab, they completed a 5-minute writing assignment in which theydescribed their views on abortion; they then received and rated anotherparticipant's essay (in reality, a fake essay chosen because it opposed theparticipants' stated beliefs).

Following the writing task, the participantsplayed one of the versions of the video game for 15 minutes, after which theyread the feedback they had received on their own essay. The feedback, which wasdesigned to provoke an emotional response, was the same for each participant,featuring low ratings and the comment "This is the stupidest thing I've everread."

The researchers then measured participants'aggression by having them engage in an exercise that supposedly examineddecision making under distraction. As part of the exercise, participants chosehow long their partner had to keep his hand in the water while performing thetask.

Data from 275 participants showed no indicationthat playing the more violent or more difficult versions of the game influencedthe amount of time participants assigned their partner to be exposed to thecold water. In other words, neither game violence nor difficulty resulted inincreased aggressive behavior toward an antagonistic partner.

The researchers also examined another factor longsuspected as an indicator of male aggression — the ratio of index finger lengthand ring finger length. Scientists have theorized that a low ratio reflects increasedtestosterone exposure in utero and is associated with aggressive behavior. ButHilgard and his team also found no relationship between this ratio and aggression.

Additional Bayesian analyses indicated that amodel assuming no relationship between game characteristics and aggression wasthe model best supported by the data.

"Results indicate that when game stimuli arecarefully controlled, the effects of 15 min of violent and difficult game playon aggressive behavior may be small and indistinguishable from zero. Thissuggests that the effects of brief violent-video-game play on aggressiveoutcomes may be smaller and less robust than the published research literaturewould indicate," Hilgard and colleagues write.

The researchers mention several factors thatshould be investigated further, including the fact that many participants inthe original sample reported awareness of the study aims and were thereforeexcluded from analyses. This awareness could be due, at least in part, to thetwo-step debriefing process the researchers used — establishing standardizedpractices in deception and debriefing could address this issue in futureresearch, they say.

“Researchers may need to reevaluate whetherviolent-video-game manipulations are useful for revealing the causes andmechanisms of aggression. Further research will also be necessary to determinewhether, and under which conditions, competitive or frustrating game playcauses aggression,” Hilgard and colleagues conclude.

Reference

Hilgard, J., Engelhardt, C. R., Rouder, J. N.,Segert, I. L., & Bartholow, B. D. (2019). Null effects of game violence, gamedifficulty, and 2D:4D digit ratio on aggressive behavior. *Psychological Science*, 30, 606–616. https://doi.org/10.1177/0956797619829688