

# Children's violent video game play associated with increased physical aggressive behavior

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Violent video game play by adolescents is associated with increases in physical aggression over time, according to a Dartmouth meta-analysis published in the *Proceedings of the National Academy of Sciences (PNAS)*.

Although most researchers on the subject agree that playing violent video games appears to increase physical aggression, a vocal minority continues to dispute this. To examine issues raised by the counterclaims on this topic, Dartmouth researchers conducted a meta-analysis of 24 studies from around the world from 2010 to 2017 with over 17,000 participants, ages nine to 19 years-old. The studies all examined how [violent video game](#) play affected changes in real-world physical aggression over time, ranging from three months to four years. Examples of physical aggression included incidents such as hitting someone or being sent to the principal's office for fighting, and were based on self-reports by children, parents, teachers and peers.

Dartmouth's study examined three specific critiques of the literature on video [game](#) play and aggression:

- To address claims that previous meta-analyses overestimate the association of violent video game play and aggression because they include "non-serious" measures of aggression, this meta-analysis was limited to studies that measured reports of overt, physical aggression over time. Despite this more stringent criterion, findings supported the hypothesis that playing violent games is associated with subsequent increases in physical aggression.
- To investigate claims that effects are often inflated because many studies do not take into account other variables predictive of aggressive behavior, Dartmouth researchers compared analyses that included or did not include information on such variables and found that taking these data into account had only a minor effect on the size of the observed relation between violent video game play and aggression.
- To evaluate claims that the estimated effect of violent game play on aggression is inflated because of a bias against publishing studies that fail to find a relation of violent game play and

aggression, Dartmouth researchers conducted a variety of different tests and found no evidence of publication bias.

In addition to providing evidence that violent video game play is associated with increased aggression over time, the study also reports that this effect appears to be significantly different for various ethnic groups: the largest effect was observed among white participants, with some effect noted among Asians and no effect observed among Hispanics. Although speculative, the authors suggest that this effect may reflect a greater emphasis on maintaining empathy toward victims of aggression among Eastern and Hispanic cultures in contrast to an emphasis on "rugged individualism" in Western cultures.

"Although no single research project is definitive, our research aims to provide the most current and compelling responses to key criticisms on this topic. Based on our findings, we feel it is clear that violent video game play is associated with subsequent increases in [physical aggression](#)," said lead author Jay G. Hull, the Dartmouth Professor of Psychological and Brain Sciences, and associate dean of faculty for the social sciences at Dartmouth.

"The most notable critic of the violent video game [aggression](#) literature conducted studies in primarily Hispanic populations and found no evidence of this association. If all of my studies showed null findings, I too, would be skeptical," said co-author James D. Sargent, the Scott M. and Lisa G. Stuart Professor of Pediatric Oncology and director of the C. Everett Koop Institute at Dartmouth. "I hope our findings prompt skeptics to reevaluate their position, especially since some of our other research indicates that violent video game play may increase deviance with implications for multiple risk behaviors," added Sargent.

The study builds on the research team's growing body of work that investigates the impact of video games on children's behavior, including

the link between mature-rated, risk-glorifying video games and [deviant behavior](#) (e.g., smoking, drinking, and risky sex) and the association between playing these type of [video](#) games and [reckless driving among teens](#).

**More information:** Anna T. Prescott et al., "Metaanalysis of the relationship between violent video game play and physical aggression over time," *PNAS* (2018).

[www.pnas.org/cgi/doi/10.1073/pnas.1611617114](http://www.pnas.org/cgi/doi/10.1073/pnas.1611617114)

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