

Study shows mean screens prime the brain for aggression

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Douglas Gentile, an associate professor of psychology at Iowa State, is co-author of a new study, published in the journal *Aggressive Behavior*, finding that onscreen relational aggression may prime the brain for aggression. Credit: Photo by Bob Elbert, Iowa State University News Service

Research over the past few decades has shown that viewing physical violence in the media can increase aggression in adults and children. But a new study, co-authored by an Iowa State University psychology professor, has also found that onscreen relational aggression -- including social exclusion, gossip and emotional bullying -- may prime the brain

for aggression.

Douglas Gentile, an associate professor of psychology at Iowa State, was one of four authors of the study "Frenemies, Fraitors, and Mean-em-aitors': Priming effects of viewing physical and relational aggression in the media on women," which was recently published by the journal *Aggressive Behavior*. The study of 250 college women showed that mean screens may also activate the neural networks that guide behavior.

"What this study shows is that relational aggression actually can cause a change in the way you think," said Gentile, who runs the Media Research Lab at Iowa State. "And that matters because of course, how you think can change your behavior."

Sarah Coyne and David Nelson, both researchers in Brigham Young University's School of Family Life; and Jennifer Ruh Linder, a professor of psychology at Linfield College (Ore.), were the study's other authors.

In the study, the researchers evaluated the cognitive patterns of the college women after they viewed one of three fictional video clips. One clip depicted [physical aggression](#), including a gun and knife fight that ended in murder. A second clip portrayed relational aggression, where girls steal boyfriends, spread malicious gossip and kick someone out of their social circle. The third clip was simply a scary scene, one that would raise the heartbeat.

Researchers assessed physiological arousal, finding that all three films produced similar levels of excitement. They then measured reaction times when aggressive or neutral words flashed on a screen. Participants who had watched either aggressive film clip ascribed more meaning to words connected with aggression.

"Past research has shown that viewing [physical violence](#) on TV activates

aggressive scripts in the brain, but our findings suggest that watching both onscreen physical or relational aggression activates those cognitive scripts," Linder said. "Viewers don't simply choose to imitate TV characters or make a conscious decision to engage in aggressive behavior. Aggressive reactions are more automatic and less conscious than most people assume."

Gentile sees the study having significance to today's societal norms.

"This matters because relational aggression tends to be considered more socially acceptable -- it's often portrayed on television as funny and how friends treat each other," he said. "Yet, several studies are starting to show that relational aggression can cause long-term harm."

And some of the most highly publicized effects have been a result of the rising incidence of cyberbullying, which Gentile says is a classic case of relational aggression.

"We're treating cyberbullying as if it's something totally different and totally new. It's actually relational aggression and it does all the things that relational aggression does," Gentile said. "You can spread rumors, you can ignore people, I can unlike you on Facebook, I can tell your secrets, and I can lie and make up stuff. So this study relates to cyberbullying."

The researchers say more research is needed to determine whether their results are gender-specific, and whether this script activation indeed changes behavior.

Provided by Iowa State University

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