

# Gamers may not be desensitized by violent video games: study

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(PhysOrg.com) -- Violent video games such as Grand Theft Auto may not desensitize players to negative situations or events, suggest psychology researchers from Ryerson University.

Holly Bowen, a PhD candidate in psychology, is the lead author of a study that looked at chronic exposure to violent video games (VVG) and its impact on emotional long-term memory. Co-authored by psychology professor Julia Spaniol, the study showed that VVG exposure was not associated with differences in players' emotional memory or their responses to negative stimuli. Their findings refute previous research that has shown the opposite: playing violent video games in lab settings cause people to exhibit more aggressive behavior, or become less emotionally responsive to violent images.

"Emotional long-term memory helps us avoid negative situations," Bowen said. "This has significant implications for public health. For example, if you remember the negative experience of being involved in a bar fight, you will avoid future situations that may lead to an altercation."

The study involved 122 male and female undergraduate students who fell into two categories: 45 participants who had some video game experience within the last six months and 77 students who reported no video game exposure. Among both male and female video game players, Grand Theft Auto, Final Fantasy and NHL were the most commonly listed video games. Male video game players also listed Call of Duty and

Tekken among their top five game preferences, while female video game players preferred Mario Kart and Guitar Hero/Rock Band.

Participants were shown 150 images representing negative, positive and neutral scenes. One hour later, the students viewed those same images again along with a new set of 150 "distractor" images, shown in random order. With each image, participants had to respond whether or not they had seen it before. Finally, at the end of the experiment, the students completed a self-assessment test regarding their state of emotional arousal.

The researchers hypothesized that video [game players](#) would be less sensitive to the negative images and therefore show reduced memory for these materials. The results, however, showed no difference in the memory of [video game](#) players and non-players. Moreover, exposure to video games was not associated with differences in self-reported arousal to emotional stimuli.

"The findings indicate that long-term [emotional memory](#) is not affected by chronic exposure violent video games," said Bowen.

The researchers caution, however, that further study is needed to see if these results would apply to all age groups and not just young adults.

"While we are working with young adults, there may be still differences among kids who play VVGs," said Spaniol.

Looking to the future, the researchers are undertaking a new study that looks at the brain activity of VVG players while they view emotional images. They will also explore what impact chronic exposure to [violent video games](#) has on players outside of a lab setting.

**More information:** The research paper, Chronic Exposure to Violent Video Games is Not Associated with Alterations of Emotional Memory,

was published online in January 2010 in the journal *Applied Cognitive Psychology*.

Provided by Ryerson University

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