8. Does Playing Violent Games Cause Aggression?

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Abstract:

It is a widespread concern that violent video games promote aggression, reduce pro-social behaviour, increase impulsivity and interfere with cognition as well as mood in its players. Previous experimental studies have focused on short-term effects of violent video gameplay on aggression, yet there are reasons to believe that these effects are mostly the result of priming. In contrast, the present study is the first to investigate the effects of long-term violent video gameplay using a large battery of tests spanning questionnaires, behavioural measures of aggression, sexist attitudes, empathy and interpersonal competencies, impulsivity-related constructs (such as sensation seeking, boredom proneness, risk taking, delay discounting), mental health (depressively, anxiety) as well as executive control functions, before and after 2 months of gameplay. Our participants played the violent video game Grand Theft Auto V, the non-violent video game and no game at all for 2 months on a daily basis. No significant changes were observed, neither when comparing the group playing a violent video game to a group playing a non-violent game, nor to a passive control group.

8.1 Literature Review:

One of the main concerns that has constantly been raised against video games is that most of the games feature aggressive elements. This has led many people to assert that this may have a detrimental effect on individuals who play such games. Despite continuing controversy for over 15 years, there has been little in the way of systematic research. This article reviews the empirical studies in this area, including research methodologies such as the observation of free play, self-report methods, and experimental studies.

Example:

a. Grand Theft Auto V (GTA):

GTA is an action-adventure video game situated in a fictional highly violent game world in which players are rewarded for their use of violence as a means to advance in the game. The single player story follows three criminals and their efforts to commit heists while under pressure from a government agency.

The gameplay focuses on an open world (sandbox game) where the player can choose between different behaviours. The game also allows the player to engage in various side activities, such as action-adventure, driving, third-person shooting, occasional roleplaying, stealth and racing elements. The open world design lets players freely roam around the fictional world so that gamers could in principle decide not to commit violent acts.

b. Hypothesis:

G. A. Lundberg defines hypothesis as 'a tentative generalization, the validity of which remains to be tested.'

8.2 Positive Effects of Video Games:

a. Cognitive Skills:

Action video game players have better hand-eye and visuo-motor skills, such as resistance to distraction, sensitivity to information in the peripheral vision and ability to count briefly presented objects, than non-players Through the development of the play station move, Kinect and wii video games can help develop motor skills through full body movement Furthermore, video games have also been linked with increased visual and attentional skills. Studies have shown that video game players were not only able to track 2 more objects on average than non-videogame players, but were also more likely to recognize targets in a cluttered area Experiments have indicated increases in cognition and problem solving skills in professional gamers.

A common viewpoint is that playing video games is an intellectually lazy activity, but research suggests it may actually strengthen children's spatial navigation, reasoning, memory and perception skills. In 1994, a study conducted by the University of California in which fifth graders played extensive hours of video games, they managed to gain better spatial skills the children were split into two groups, with the experimental group playing Marble Madness, while the control group played Conjecture. The distinction is important because Marble Madness requires spatial skills while Conjecture does not.

The results may not be generalizable, since the sample of kids is taken from a single private school, and may not necessarily be representative of the population.

The children practiced their respective game for forty-five minutes per session for three sessions, all on separate days. Appropriate pre- and post-tests were also assessed for spatial ability, on the day before and after the sessions.

Irrespective of gender, practicing Marble Madness significantly increased spatial ability, especially in the children who had low performance on the spatial ability pre-test. Conversely, playing Conjecture did not increase children's spatial skills. This indicates that the type of game is important to consider when changes to cognitive abilities appear to be present. It is unknown if these increases in spatial ability persist into the long-term. This could mean that any benefits to practicing may only last if practice sessions are done at least intermittently.

b. Relief from Stress:

Olsen suggests video games can have social benefits for children, for example, video games can provide a topic of discussion and something over which children can bond, and can help children make friends; playing video games can increase a child's self-esteem when they are struggling in one aspect of their life, but are able to do something correctly in a video game; and, children can also learn to take on leadership roles within a multi-player online game.

Christopher Ferguson, a psychologist well known for his video game research, conducted a study in which results suggest that violent games reduce depression and hostile feelings in players through mood management.

8.3 Negative Effects of Video Games:

Theories of negative effects of video games tend to focus on players' modeling of behaviors observed in the game. These effects may be exacerbated due to the interactive nature of these games. The most well-known theory of such effects is the General Aggression Model (GAM), which proposes that playing violent video games may create cognitive scripts of aggression which will be activated in incidents in which individuals think others are acting with hostility. Playing violent video games, thus, becomes an opportunity to rehearse acts of aggression, which then become more common in real life.

The general aggression model suggests the simulated violence of video games may influence a player's thoughts, feelings and physical arousal, affecting individuals' interpretation of others' behavior and increasing their own aggressive behavior. Some scholars have criticized the general aggression model, arguing that the model wrongly assumes that aggression is primarily learned and that the brain does not distinguish reality from fiction. Some recent studies have explicitly claimed to find evidence against the GAM.

Some biological theories of aggression have specifically excluded video game and other media effects because the evidence for such effects is considered weak and the impact too distant. For example, the catalyst model of aggression comes from a diathesis-stress perspective, implying that aggression is due to a combination of genetic risk and environmental strain. The catalyst model suggests that stress, coupled with antisocial personality are salient factors leading to aggression. It does allow that proximal influences such as family or peers may alter aggressiveness but not media and games.

a. Relationship between Video Games and Violence:

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, Over watch, Counter-Strike, and Call of Duty. Some psychological studies have suggested that playing violent video games increases aggressive behavior, on the basis of experiments that compared the behavior of participants who played violent games with those who played nonviolent games. But critics say the findings fail to account for other possible factors, including differences in the mechanics of violent and nonviolent games.

b. Video Games Addiction:

Video game addiction, also known as gaming disorder or internet gaming disorder, is generally defined as the problematic, compulsive use of video games that results in significant impairment to an individual's ability to function in various life domains over a prolonged period of time. This and associated concept have been the subject of considerable research, debate, and discussion among experts in several disciplines and has generated controversy within the medical, scientific, and gaming communities.

Such disorders can be diagnosed when an individual engages in gaming activities at the cost of fulfilling daily responsibilities or pursuing other interests without regard for the negative consequences. Other names for video game addiction are gaming disorder and problematic online gaming.

Symptoms are depression, social withdrawal, playing video games for extremely long period time. Controversy around the diagnosis includes whether the disorder is a separate clinical entity or a Manifestation of underlying psychiatric disorders. Research has approached the question from a Variety of viewpoints, with no universally standardized or agreed definitions, leading to Difficulties in developing evidence-based recommendations.

8.4 Discussion:

Within the scope of the present study we tested the potential effects of playing the violent video game GTA V for 2 months against an active control group that played the non-violent, rather pro-social life simulation game The Sims 3 and a passive control group. Participants were tested before and after the long-term intervention and at a follow-up appointment 2 months later. Although we used a comprehensive test battery consisting of questionnaires and computerized behavioural tests assessing aggression, impulsivity-related constructs, mood, anxiety, empathy, interpersonal competencies and executive control functions, we did not find relevant negative effects in response to violent video game playing. In fact, only three tests of the 208 statistical tests performed showed a significant interaction pattern that would be in line with this hypothesis. Since at least ten significant effects would be expected purely by chance, we conclude that there were no detrimental effects of violent video gameplay.

8.5 Conclusion:

This part of the review outlines key gaps in our understanding, and provides an overview of the practicalities of carrying out good quality research in this area. In July 2000, the American Academy of Pediatrics presented a joint statement to the Congressional Public Health Summit stating that 'well over 1000 studies… point to a causal connection between media violence and aggressive behaviour in some children.' (AAP: 2000) A few months later the White House gave a figure of 300 studies, asserting that 'all' of them showed some link between entertainment and violent behaviour. As we have discussed in this paper, two of the US's leading authorities on experimental laboratory studies could only find a limited number of studies on which they based their meta-analysis study.

8.6 Reference:

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