

Violence in computer games



Is there any evidence of a causal relationship between exposure to violence in computer games and aggressive behaviour in children?

The popularity of video games has increased considerably as technology has developed, and continues to grow as video gaming becomes more advanced, realistic and addictive. It has been widely predicted that this is a predominant factor in the increase in aggression over recent years, however empirical research remains inconclusive. Although aggression is difficult to define explicitly, it is commonly referred to as behaviour with the intent to cause harm or pain.

In April 1999, two teenagers initiated a massacre at their high school in America, killing 12 pupils and a teacher as well as injuring 24 others. The mass murder has been linked to the offenders' obsession with violent video games and their social withdrawal as a consequence of this. This is one of many case studies that have fuelled a public outcry and extensive research into the effects of video games on aggression.

From incidents such as this, it has been predicted that violent video games cause aggressive behaviour. Gentile, Lynch, Linder & Walsh (2004) tested this hypothesis by issuing 607 American students between the ages of 13 and 15 with surveys. Information including exposure to video games, levels of hostility, school grades, limits imposed by parents, and their relationship with teachers and pupils, was gathered. It was found that teenagers who played more video games were more hostile, had more fights with other students, were involved in more arguments with teachers, and generally had a lower academic performance. This research supports the hypothesis that

there is a causal link between violent video games and aggression; however there are also limitations of this study. The main confounding variable of this research is the reliance on self report. Students were asked to fill in the surveys personally, and as a result the data may be inaccurate. There was also no measure of what was classified as a violent video game.

Despite this, this research has been supported by Anderson and Dill (2000). They used two studies to test the relationship between video game violence and aggression. In the first study, participants were asked to play violent video games in their own environment, before completing a series of questionnaires regarding irritability, trait aggression, delinquency, information about personal game play, their opinions about the world and their academic achievement. It was found that violent video games and aggressive personalities were both accountable for subsequent violence and aggression, the violent games were also positively correlated with delinquency. These affects were most apparent on those with aggressive personalities and amongst males.

In the second study participants played graphically violent video games within a laboratory environment before being tested cognitively and behaviourally. Aggressive thought, aggressive affect, behaviour, opinions about the world, trait irritability and differences between genders were assessed. It was found that men have more hostile opinions on world than women, and that video games have a cognitive effect on the players. From the findings, it was predicted that the short term affects of video game violence involve priming aggressive thoughts where as long term affects provide scripts for aggression that are stored in the memory. Both studies

support the General Aggression Model, and the hypothesis that there is a causal link between violent video games and aggression.

In addition, Carnagey, Anderson and Bushman (2006) explored the effect of violent video games on desensitization, and found that heart rate and galvanic skin response were significantly reduced when witnessing real violence after playing a violent video game. This supports the prediction that violent video games have a physiological effect on players, and therefore can provide support for the causal link between violent video games and aggression.

However, there is also much contradictory research evidence, suggesting that there is no causal link between the two variables. William and Skoric (2008) conducted longitudinal research involving an online violent video game and two conditions. In the first condition participants were asked to voluntarily play the game over a period of one month. The average playing time over this period was 56 hours. In the second condition, participants were not exposed to the video game at all. Measures such as questionnaires about personality and behaviour, beliefs about aggression, and aggressive social interactions were measured before and after the experiment. It was found that there were no significant effects on the participants in the violent condition suggesting that there is no causal link between video game violence and aggression. However, it was stated in this research that, due to the nature of the study, it was unable to detect small effects. The non significant results may have been a consequence of the sample size as opposed to the independent variable.

This research is supported by Ferguson, et al. (2008) who used a laboratory study and a real life study to test the correlation. In the first study, participants were randomly assigned to two conditions. In the first the participants were randomly assigned to play a game of either violent or non violent content. In the second condition, participants were given a choice, after a description of each game. After 45 minutes of game play, participants then completed the Taylor Competitive Reaction Time Test, which is a behavioural test of aggression, as well as a short questionnaire. It was found that participants who played the violent video game were no more aggressive than those who played the non violent game, and this was consistent for both long term and short term game play, therefore suggesting that no causal link exists between the two variables.

Ferguson, et al.'s (2008) second study involved undergraduate university students completing a number of questionnaires. They gathered information including gaming habits, trait aggression, family exposure to violence and violent criminal behaviour. This allowed for the investigation of the influence of other variables on aggression. It was found that aggressive personality traits and exposure to violent video games did predict the likelihood of violent crime; however, it was also found that violent video games showed no correlation with likelihood of violent crime, and therefore it cannot be assumed that the games are the core problem. It was also found that the development of trait aggression was not linked to exposure to violent video games and that exposure to violence within the family caused trait violence and increased the likelihood of violent crimes. It can therefore be assumed that

external factors such as situation and family background must have a bigger effect on causing aggression than violent video games.

Many models have been developed to define aggression and to understand all factors that influence it. The most relevant is the General Aggression Model, which has many variations and uses. One variation is the General Affective Aggression Model by Anderson, Anderson and Deuser (1996). It is often portrayed through a diagram and explains how individual variables and situational variables come trigger cognitions such as aggressive thoughts, affects such as hostile feelings, and arousal. This then allows an interpretation of the situation and affect and from this the behavioural choice is made, although reinterpretation of the situation and assessing the consequences is sometimes necessary.

Bushman and Anderson (2002) tested the General Aggression Model. They stated that it now needs to be accepted that there is a link between violent media and increased aggression, and it is now important to understand why. Participants were split into two groups and were given either a violent or a non violent video game to play. They were then given a fictional situation, involving conflicts, and were asked to say what they think the character would do next. Those who played the violent video game described more aggressive behaviours and thoughts, than those playing the non violent games, and predicted angry emotions. This research provides support for the General Aggression Model, and suggests that it is a valid way of describing human behaviour. It also provides evidence for a causal link between violent video games and aggression.

To conclude, there is a valid and convincing argument that can be presented for both sides of the debate about the influence of violent video games on aggression, and each are supported by a wealth of research evidence.

It cannot be denied that violent video games have an effect on children, however, exactly what effect is still unclear. It cannot be inferred that video games cause aggression. Instead, many other factors including family background, residential area, health and personal experience need to be accounted for, as they have a considerable impact on a child.

Finally, there is an undeniable link between violent video games and aggression, but it is not necessarily of a causal nature. Personal and external factors cannot be ignored and in order to gain a more concrete understanding of the connection, further research into the influences on aggression should be conducted.