To kill or not to kill: Competition, aggression, and videogames, in adolescents

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Abstract

The competition-aggression link is a hypothesis that competition increases the probability of aggressive behaviour. The current investigation was focussed on this idea. There were two approaches utilised to conduct this investigation. Firstly, a literature review of empirical research was conducted using a critical procedure. Secondly, a series of studies were carried out that were guided by past research in the field.

The literature review entailed the search for and collection of empirical research on competitive aggression. There were 41 independent studies on this topic published between 1949 to 1997. Over half of these studies (68%) utilised Taylor's competitive reaction procedure. A number of conclusions were reached from a review of the literature. The competition-aggression link has been consistently demonstrated across a number of studies, and a number of situational and personality factors have been found to mediate the link. However, few studies have validated the dependent measure of aggression. One study explored competitors' angry feelings. Nearly all data were collected in North America and no studies have been published from the Australian context. Finally, few studies have been conducted on adolescents. A series of studies were thus conducted to fill a knowledge gap on this topic. These studies were based on Australian adolescents.

Two survey studies (Studies 1 and 5) were conducted on a general sample of adolescents and a specific sample of videogame players (viz, highly experienced Mortal Kombat players). The methodology was derived from a study by Anderson and Morrow (Study 1; 1995) who devised two measures to evaluate perceptions of competition and cooperation i.e., the Dimensional Ratings Questionnaire (DRQ) and the Common Features Questionnaire (CFQ). Data from the DRQ and CFQ revealed that all participants perceived competitive situations as aggressive, and cooperative situations as less aggressive. There was no variation in these perceptions across gender or videogame playing frequency groups. However, Mortal Kombat players tended to perceive cooperative situations as more aggressive in comparison to the

general sample of adolescents. These findings provide suggestive evidence for underlying competition and cooperation schemas that are consistent with the competition-aggression link.

A series of studies (Studies 2 to 4) was conducted on adolescents using videogame play as a measure of aggression. The procedure was derived from a study by Anderson and Morrow (Study 2; 1995). Paired participants were randomly assigned to either a competitive or cooperation situation. The dependent measure was the 'kill ratio' (defined as the number of videogame characters the participant kills divided by the total number of characters encountered i.e., killed plus avoided). It was consistently revealed across all three studies that male and female competitive participants did not demonstrate a higher 'kill ratio' than male and female cooperative participants (with the exception of an interaction effect in Study 2). These findings were reported despite the wide variation in utilised videogames and methodological designs.

Another series of studies of greater experimental power was conducted. Participants were self-selected males who were highly experienced at Mortal Kombat. The utilised videogame, which is a martial arts simulation, provides the winner the choice either to kill or not kill the opponent's videogame character. Study 6 revealed that winning participants were more likely to select the option to kill their opponent's videogame character during a high competitive situation (a tournament for prizes) than during a low competitive situation (i.e., a trial period). Study 7 was a replication of the previous study but excluded the prizes awarded during the tournament. Killing tendencies did not vary across the tournament and trial periods. This implies that a reward is an important element in the competition-aggression link. Study 8 replicated the findings of Study 6 in a non-tournament situation, thus increasing the reliability of the effect and discounting the influence of extraneous factors in the tournament situation (e.g., an audience). Study 8 also revealed that competitive aggression was displayed in the absence of self-reported angry feelings as measured by the State-Anger Scale (Spielberger, 1991). That is, the competitive aggression was 'affectless'. Study 9 showed that the kill ratio is a valid measure of aggressive behaviour by correlating Mortal Kombat videogame aggression with teacher ratings of participants' aggressive behaviour at school.

A number of conclusions were reached on the basis of the literature review and these studies. These include: Adolescents and adults perceive competitive situations as aggressive, and perceive cooperative situations as less aggressive; children, male adolescents, and adults, behave more aggressively during competitive situations relative to cooperative situations, and behave less aggressively during low competitive situations relative to high competitive situations; competitive aggression is 'affectless' amongst experienced videogame playing adolescent males and less experienced videogame playing university students. Recommendations were proposed for future research in this field, and strategies were formulated for preventing and reducing competitive aggression.