

## Chapter 18

# Gaming and Aggression: The Importance of Age-Appropriateness in Violent Video Games

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### ABSTRACT

*Video games play an important role in the modern entertainment industry and determine the leisure time activities of many children and adolescents. A huge amount of video games are available, but many of them are not suitable for youth because of their violent content. Violent content in video games became an issue of public concern, not only in cases of extreme violent acts, such as school shootings (e.g. Littleton, Colorado, 1999; Kauhajoki, Finland, 2008; Winnenden, Germany, 2009) but also concerning the question of whether playing violent video games generally influences the development of aggressive behavior in children and adolescents. Considerable research showed that playing violent video games increases aggressive cognitions, and aggressive behavior (e.g., Anderson et al., 2010). A crucial issue in studies concerned with violent video games is the question of how to assess the presence of violent content in games. Most of the studies used expert ratings (e.g. Krahé & Möller, 2004), some studies asked study participants themselves (e.g., Gentile & Gentile, 2008; Wallenius, Punamäki, & Rimpelä, 2007), and only a few studies used categorizations directly displayed on games (e.g. Schiller, Strohmeier, & Spiel, 2009). In 2003, the Pan European Game Information (PEGI) system was established, aiming at the protection of children and adolescents from unsuitable video games. PEGI evaluates games according to five age categories (+3, +7, +12, +16, +18) and seven content descriptors (bad language, discrimination, drugs, fear, gambling, sexual content, and violence). These age categories and content descriptors are printed on games to inform customers about their appropriateness for children and adolescents.*

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*Although these descriptors are highly visible for parents and adults in 30 European countries, they are rarely used in research. The current chapter presents a study on pre-adolescents in which violent content of games was categorized based on PEGI descriptors. A distinction between playing age-appropriate violent video games and age-inappropriate violent games was made. The main goal of the study was to examine whether pre-adolescents who play non-violent or age-appropriate violent games systematically differ in aggression from youth who play age-inappropriate violent games. Gender differences were also examined. Conclusions for practical implications for adolescents and for parents are discussed.*

*It requires a tortuous logic to believe that children and adolescents are affected by what they observe in their living room, through the front window of their house, in their classroom, in their neighborhood, and among their peers but are not affected by what they observe in movies, on television, or in the video games they play. L. Rowell Huesmann, 2010, p. 179*

### **VIDEO GAME USE IN CHILDREN AND ADOLESCENTS**

The sale of video games is a booming industry. Video games are the most popular entertainment products available for adolescents, especially for boys (Buchmann & Funk, 1996; Klimmt, 2004). A study conducted by the Interactive Software Federation of Europe (ISFE) reported interactive software sale volumes of € 7.3 billions in nine European countries (United Kingdom, France, Germany, Spain, Italy, Netherlands, Switzerland, Sweden, Finland) in the year 2007 (Nielsen Games, 2008). In accordance to ISFE, it has been predicted that growth rates will further increase over the next years. The international *Health Behaviour in School-aged Children Study* (Currie et al., 2004) of the World Health Organization reported that, on average, 31% of eleven-year-olds, 35% of 13-year-olds and 31% of 15-year olds play video games for two or more hours on weekdays. Video game use varies among countries. For 11-year olds and 13-year-olds, the highest prevalence rates were

reported in Israel and the lowest in Switzerland. For 15-year-olds, the highest prevalence rates were reported in Romania and the lowest in France.

Furthermore, consistent gender patterns were found in a considerable number of studies. Boys outperformed girls in frequency (Buchmann & Funk, 1996; Ferreira & Ribeiro, 2001; Funk, Buchmann, Jenks, & Bechtoldt, 2003; Lucas & Sherry, 2004) and duration of video game use (Colwell & Payne, 2000; Colwell & Kato, 2003; Durkin & Barber, 2002; Gentile, Lynch, Linder, & Walsh, 2004; Möller & Krahe, 2009; Willoughby, 2008). Moreover, more boys than girls play video games with violent content (Dill & Dill, 1998; Polman, Orobio de Castro, & van Aken, 2008; Wallenius et al., 2007).

Violent content is an essential element of numerous video games. Thompson and Haninger (2001) revealed that 64% of available video games contained violent content. Smith, Lachlan, and Tamborini (2003) showed that 90% of games considered appropriate for teens and adults contained violent content. Games appropriate for children contained at least 57% violent content (Smith et al., 2003). Games that are appropriate for 17 year olds and above always contain violent content, according to Thompson, Tepichin, Haninger (2006). Furthermore, several violent video games contain violence in an extent that is not reasonable for children and adolescents. Therefore, the access to these games is controlled via age restrictions. Nevertheless, children and adolescents play games which are inappropriate for their age (Krahe &

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