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### A different(ial) perspective: How social context influences the media violence-aggression relationship among early adolescents

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**Publication date**

2016

**Document Version**

Final published version

[Link to publication](#)

**Citation for published version (APA):**

Fikkers, K. M. (2016). *A different(ial) perspective: How social context influences the media violence-aggression relationship among early adolescents*. [Thesis, fully internal, Universiteit van Amsterdam].

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## Chapter 1

Introduction and  
dissertation outline



## Does media violence exposure lead to aggression?

My stepson (12 years) has been playing *Call of Duty Black Ops* since February. We wanted to limit it, but then he would just play at his friend's house. Since we've had the game, he gets angry or aggressive over nothing at all. At school, they're also having problems with his behavior. I'm not sure if it's the game, but it's certainly remarkable. *Parent in response to "Does my son become violent when playing Call of Duty Black Ops?" on mediaopvoeding.nl* (Nikken, 2011)

Well, sorry, but this is just ridiculous. I am 17 years old now and have been playing *Call of Duty* since I was 13, and it didn't make me violent. Games like that don't harm us, especially because they're not realistic. *Teen in response to "Does my son become violent when playing Call of Duty Black Ops?" on mediaopvoeding.nl* (Nikken, 2011)

"Anders Breivik 'trained' for shooting attacks by playing Call of Duty"  
(Pidd, 2012, *The Guardian*)

"Don't blame video games for Anders Breivik's massacre"  
(Parkin, 2012, *The Guardian*)

"Much ado about something: Violent video game effects and a school of red herring: Reply to Ferguson and Kilburn"  
(Bushman, Rothstein, & Anderson, 2010, *Psychological Bulletin*)

"Much ado about nothing: The misestimation and over-interpretation of violent video game effects in Eastern and Western nations: Comment on Anderson et al." (Ferguson & Kilburn, 2010, *Psychological Bulletin*)

"Does doing media violence research make one aggressive?"  
(Elson & Ferguson, 2014a, *European Psychologist*)

These quotes – from parents, children, journalists, and academics – are just a few of many examples that show how divided the views are about a relationship between media violence and aggression among youth. Some are critical of the idea that violent media can cause real-life aggressive behavior – often people who enjoy such content themselves and do not notice any effects. Others worry about possible adverse outcomes – such as parents who do not want their child to become aggressive. Concerns (and discussions) about the effects of violent entertainment are also regularly reflected in the media, for example when new and very violent games are released (Polak, 2013), or in the wake of horrific acts such as the shooting spree in Norway by Anders Breivik, who admitted using *Call of Duty: Modern Warfare 2* as a “training tool” (Pidd, 2012). And although concerns about adverse effects apply to media users of all ages, they are most pronounced for teens, who are among the heaviest users of violent media entertainment (Krahé, 2014a; Olson et al., 2007).

These different views about the effect of media violence on teens’ aggression are not only part of the daily debates between parents and children or discussions in the media, but are also part of academic discourse. Since the early days of cinema (and even the advent of comic book violence before that), researchers have studied *and* debated whether or not media violence leads to aggressive behavior (cf. Anderson, 1977). Almost a century later, there are still academics who maintain that media violence contributes to aggression and others who strongly disagree with this. Both have the same scientific evidence at their disposal, which shows that on average people who consume more violent media content also tend to score slightly higher on aggressive behavior (see meta-analyses by Anderson et al., 2010; Bushman & Huesmann, 2006; Ferguson & Kilburn, 2009; Greitemeyer & Mügge, 2014; Paik & Comstock, 1994; Sherry, 2001). However, what this small and positive relationship *means* is passionately debated. Some researchers (Anderson et al., 2010; Bushman et al., 2010) argue that these small effects should be taken seriously because large parts of society are exposed to violent media, the effects accumulate over time, and the potential consequences are severe. Other researchers disagree with this interpretation, and argue that the effect of media violence on aggression is so small that it is basically negligible, and certainly not a risk to public health (Ferguson & Kilburn, 2009; 2010). These researchers see the small and positive effect size found in meta-analyses as “probably too liberal” (Ferguson & Kilburn, 2010, p. 176), because studies do not usually take into account risk factors of “real importance” (such as family, peer, and parental influences).

In this polarized debate, it is difficult to know who is right and who is not. Both “camps” have valid arguments and scientific papers readily available to support their case (Valkenburg, in press). By now, it is almost as if two parallel fields of media violence

research have emerged – one supporting effects, the other criticizing them. It is up to the reader (whether the reader is a parent, health care professional, journalist, or academic) to decide which side to accept: either media violence leads to aggression, or it does not.

However, there is a third perspective that has been relatively absent from this debate until now: a differential susceptibility perspective (Valkenburg & Peter, 2013a, 2013b). Researchers from this perspective interpret the small effects commonly found in media violence research to mean that media violence does not influence aggressive behavior for all users in the same way. Instead, some adolescents may react strongly to violent media content, whereas others may not (or less strongly so). Differences in developmental level, disposition, and social environment can help explain who is more likely to be affected (Valkenburg & Peter, 2013a). Most media effects studies (as well as meta-analyses) do not take into account such individual differences but instead investigate average effects across entire study samples (Valkenburg & Peter, 2013b; Valkenburg, in press). Although an average effect is an accessible way to see what is going on for *most* people, it does not tell the whole story. By definition, an average consists of scores that are higher as well as lower. To draw a conclusion about media violence effects for all users based on average effects (whether this conclusion is that media influences *all* or *none* of its users) is an oversimplification as well as a potential misinterpretation of such results (Valkenburg & Peter, 2013a, 2013b). After all, an average effect may hide the possibility that some adolescents are very vulnerable to media violence (and in need of more attention) whereas others (perhaps the majority) are not. Thus, whereas the current debate often focuses on the question “Does media violence lead to aggression?,” it may be more relevant to ask “*For whom* does media violence lead to aggression?” This dissertation aims to answer that question by investigating how adolescents’ social context may make some adolescents more susceptible to media violence.

Investigating which early adolescents are more vulnerable to media violence effects is important for three reasons. First, parents, educators, and health care professionals will be better able to identify and help those teens who are more likely to become aggressive as a result of media violence exposure. At the same time, if other teens are not as likely to experience such adverse effects, this may provide some relief for parents who see that their children enjoy violent media content, but feel torn about whether they should allow it. Second, systematic research exploring individual differences will add a relevant new perspective to the debate about media violence effects, both within and outside academia (Valkenburg, in press). A healthy debate is important, and research in this (or any) domain should certainly *always* be critically assessed for its

theoretical, empirical, and practical relevance. But the current debate becomes even more meaningful when discussants forego the notion that effects should be either large, important, and for everyone, or small, unimportant, and for none. Third, by systematically testing a differential susceptibility perspective, this dissertation provides useful insights for media effects researchers more broadly, as the theoretical questions asked here are also applicable to research on educational, sexual, political, health, and social media content.

### ***For whom does media violence exposure lead to aggression?***

The idea that different media users have different reactions to media content is not new. The first media effects studies in the 1930s, the Payne Fund studies, already noted that youth reacted to movies in varying, sometimes even opposite ways (Charters, 1933). A quote by Schramm, Lyle, and Parker (1961, p. 3) beautifully illustrates that researchers were aware early on that media effects are nuanced and subtle:

For some children under some conditions some television is harmful. For other children under the same conditions or for the same children under other conditions it may be beneficial. For most children under most conditions, most television is probably neither particularly harmful nor particularly beneficial. This may seem unduly cautious, or full of weasel words, or, perhaps, academic gobbledygook to cover up something inherently simple . . . We wish it were. Effects are not that simple.

Throughout the past century, a host of theoretical models has been developed to explain how entertainment media may affect people's beliefs, thoughts, and behavior. Most of these models acknowledge the complex nature of media effects and that they may be stronger for some than for others as a result of "individual differences" in personality or social context (General Aggression Model, Anderson & Bushman, 2002; Social Cognitive Theory, Bandura, 1986; Cultivation Theory, Gerbner, Gross, Morgan, & Signorielli, 1980; Reinforcing Spirals Model, Slater, 2007; Differential Susceptibility to Media Effects Model, Valkenburg & Peter, 2013a). Today, it is safe to say that most theoretical models and academics agree that media effects are not the same for everyone.

Although this *for whom?* question has been asked for decades, surprisingly, there is not a wealth of empirical studies that attempt to answer it. Media violence researchers certainly acknowledge that media violence is not the only factor that influences people's aggressive thoughts and behaviors (see, for example, Bushman & Anderson, 2015),

and that biological disposition, personality, and social context play an important role too (e.g., Bushman, 1995; Elson & Ferguson, 2014b; Slater, Henry, Swaim, & Cardador, 2004). In most empirical studies, however, these individual differences are controlled for. In other words, they are treated as background noise that should be cancelled out in order to see the “true” or “clean” relationship between media violence and aggression (Oliver & Krakowiak, 2009; Valkenburg & Peter, 2013b). Other studies treat individual difference variables as additional risk factors next to media violence (e.g., Exelmans, Custers, & Van den Bulck, 2015; Ferguson, San Miguel, & Hartley, 2009). The goal in these studies is to investigate whether violent media contributes to youth’s aggression *over and above* the effect of these risk factors – in other words, whether media violence has a meaningful additional influence on aggressive behavior.

By treating individual difference variables as control variables or risk factors, the existing body of research has provided relevant insights into the general relationship between media violence and aggression. However, controlling for or comparing the effect of media violence to the effects of individual difference variables still implicitly assumes that an effect of violent media is only true or meaningful when it holds for all media users. In other words, essentially it still treats media violence effects as a “yes or no”-question, but that may be “too broad a brush stroke” (Slater, 2015, p. 378). In order to advance our understanding of media violence effects, including its subtleties and nuances, we need empirical research that *conceptualizes and tests* the complex interrelations among media violence and individual difference variables. Such research would not only match more closely with predictions made by theoretical models but also fit better with how we experience media effects in real life (that is, simply not for everyone to the same extent).

The most recent theoretical model that conceptualizes these interrelations among individual difference variables and media use is the Differential Susceptibility to Media Effects Model (DSMM, Valkenburg & Peter, 2013a). The DSMM distinguishes three types of individual differences: (1) developmental susceptibility factors such as age and emotional or cognitive developmental level; (2) dispositional susceptibility factors such as pre-existing traits and cognitions; and (3) social susceptibility factors, such as family, parents, and peers. In addition, the DSMM details how each of these individual difference variables can play a role in media effects. For example, they can predict media use directly, but they can also strengthen media effects, such as when there is a match between type of media content used by children and their social context (context-content convergence).

Of the three types of individual differences, social susceptibility variables have received the least attention in both the broader media effects literature and media

violence research specifically (but see Slater et al., 2004; Wallenius & Punamaki, 2008; Yang & Bushman, 2014). Traditionally, the roles of family, parents, and peers have been studied outside communication science. This lack of attention for the role of the context of children's lives in media effects is surprising, given that media use does not take place in a social vacuum (Jordan, 2004). Rather, parents and peers can shape both children's media use and their behavior, and by doing so may have an important role in explaining which children are more likely to become aggressive as a result of media violence exposure, and which children are not. This dissertation therefore conceptualizes and tests the roles of family, parents, and peers in media violence effects, in order to disentangle the complex ways in which media violence may be related to aggression among adolescents in different social contexts.

### **Outline of this dissertation**

This dissertation presents the results of five empirical studies into the relationship between media violence exposure and early adolescents' aggression. Each study is presented in a separate chapter with its own abstract, theoretical background, method, results, and conclusion. The studies are published, in press, or submitted for publication. All studies investigate the media violence-aggression relationship using longitudinal survey data of Dutch teens between 10 and 14 years old. These teens answered questions about their exposure to violence on television and in games, and how often they engage in direct physical or verbal aggressive behaviors against other adolescents (such as hitting, kicking, or calling names). In addition, they answered questions about conflict in their family (chapters 3 and 6), parental mediation of their media use (chapter 4), and perceived peer norms about aggression (chapter 5). By asking questions about these variables at two points in time, we could investigate whether adolescents' aggressive behavior *changed* over time as a result of media violence exposure – and whether this change was more or less pronounced for adolescents in particular social contexts.

Each chapter answers a different question related to media violence exposure and aggression. The first empirical study reported in **chapter 2** focuses on an important requirement in survey research that relies on self-reported answers, which is that the questions used to measure key variables should be reliable (do the questions result in similar answers when they are asked again?) and valid (do the questions actually measure what they should be measuring?). Media violence research has been criticized for using unreliable and invalid measures (Elson & Ferguson, 2014b). Because they result in more error, unreliable measures can make it more difficult to detect effects, which means that the small effects of media violence on aggression typically found

in the empirical literature may also be due to unreliable measurement. For the main outcome variable in this dissertation, aggressive behavior, a self-report scale was already available that had been positively evaluated among adolescents (the Direct and Indirect Aggression Scale, Björkqvist, Lagerspetz, & Kaukiainen, 1992). More surprisingly – given the long history of this field – no such information was available for self-report measures of exposure to violence in television and games. Therefore, the aim of the study in chapter 2 was to evaluate the reliability and validity of the most common self-report measures of media violence exposure in an early adolescent sample. The measure that was evaluated best in this study was used in the subsequent chapters in this dissertation.

Chapters 3 through 6 each investigate the role of a social susceptibility factor in the media violence-aggression relationship. An important context in which early adolescents spend much time (also while using media) is the family, which can be a positive but also a negative environment. **Chapter 3** focuses on the role of family conflict, defined as openly expressed anger, hostility, and aggression in the home (Moos & Moos, 1994), and asks whether adolescents in high conflict families are more vulnerable to media violence effects on aggression than those in low conflict families. Adolescents who observe aggression both in their family and in the media may experience a “double dose” (Gerbner et al., 1980, p. 20), and as a result show a stronger increase in aggression. This chapter provides a formal test of the theoretical concept of “context-content convergence” (Valkenburg & Peter, 2013a, p. 234) between adolescents’ social context and the content of their media entertainment (also known as “resonance” in Cultivation Theory, Gerbner et al., 1980).

**Chapter 4** explores not only how negative aspects of a family environment may increase media violence effects on aggression, but also how positive aspects may decrease them. This chapter considers the role of parental media mediation and the different styles in which such mediation is communicated to adolescents. Parents generally have two strategies to manage their children’s media use and try to prevent adverse effects: (1) restrictive mediation, meaning that they restrict or regulate their children’s violent media use, or (2) active mediation, meaning that they discuss violent content with their children in an attempt to make them more critical of such content (Nikken & Jansz, 2006; Valkenburg, Krmar, Peeters, & Marseille, 1999). Recent work has proposed that it is not *how often* parents restrict or actively mediate their child’s media use that matters, but rather *in which style* (Valkenburg, Piotrowski, Hermanns, & de Leeuw, 2013). Like general parenting, parental mediation can be communicated in a way that is autonomy-supportive (which is expected to lead to positive outcomes), or in a way that is controlling or inconsistent (which are expected to lead to negative

outcomes). Thus, chapter 4 investigates whether the style of restrictive and active parental mediation may reduce or increase aggression as a result of media violence exposure.

Although the family and parents are important models for children, their influence tends to decline during adolescence, while the influence of peers becomes much more pronounced. **Chapter 5** therefore shifts the attention from the family and parents to peers and investigates how perceived peer norms (adolescents' perceptions about the frequency and approval of aggression in the peer group, Brechwald & Prinstein, 2011) may influence the relationship between media violence and aggression. Based on the theoretical literature, three potential roles were identified and tested. First, perceived peer norms may strengthen the *effect* of media violence on adolescents' aggression, such that adolescents who perceive more aggression among their peers are more affected by media violence exposure (context-content convergence) compared to adolescents who do not perceive aggression among their friends. Second, perceived peer norms themselves may be influenced by media violence exposure and subsequently increase aggressive behavior. In this case, peer norms provide an explanatory pathway *between* media violence and aggression. Third, it is possible that *both* roles are true, and that perceived peer norms are a pathway between media violence and aggression, but only among adolescents who perceive their friends to be more aggressive. By testing multiple potential roles of perceived peer norms (individually as well as simultaneously), this chapter moves beyond the notion of universal and direct effects of media violence exposure, and provides insight into both for whom *and* how media violence and aggression may be related.

In each of these four chapters, media violence exposure is operationalized as time spent with violent media. In other words, these chapters investigate whether adolescents may become more aggressive when they spend *more time* using violent games or violent television programs. This is how nearly all media violence research conceptualizes its independent variable. Yet, when looking more closely at the processes described by different theoretical models, it becomes clear that it is not the time *per se* that is expected to lead to effects on aggression. Instead, playing a violent game or watching a violent television program is expected to induce cognitive, emotional, and excitative *responses*, and it is these responses that are ultimately responsible for aggressive outcomes (Anderson & Bushman, 2002; Valkenburg & Peter, 2013a). Therefore, **chapter 6** moves beyond effects of time spent with violent media, and asks how cognitive, emotional, and excitative responses to violent games are related to aggressive behavior. In addition, this chapter explores whether these responses to violent games are predicted by family conflict, a social susceptibility

factor. Chapter 3 discussed the relationship between (time spent with) violent media and aggression in adolescents from high conflict families. Chapter 6 continues with this idea and investigates whether adolescents growing up in such families may be more vulnerable to violent media *because* they experience stronger responses in response to it. In doing so, chapter 6 attempts to unravel a potential explanatory pathway through which violent games may increase aggression.

After these five empirical chapters, **chapter 7** summarizes the findings and presents the five main conclusions of this dissertation. Based on these conclusions, two practical take-aways are provided for parents, teachers, and health care professionals who are involved in adolescents' daily life. In addition, this chapter offers several suggestions for media researchers to come closer to understanding the elusive nature of media effects in children's lives.