



UvA-DARE (Digital Academic Repository)

Managing positive and negative media effects among adolescents: Parental mediation matters-but not always

Meeus, A.; Beyens, I.; Geusens, F.; Sodermans, A.K.; Beullens, K.

DOI

[10.1080/15267431.2018.1487443](https://doi.org/10.1080/15267431.2018.1487443)

Publication date

2018

Document Version

Final published version

Published in

Journal of Family Communication

[Link to publication](#)

Citation for published version (APA):

Meeus, A., Beyens, I., Geusens, F., Sodermans, A. K., & Beullens, K. (2018). Managing positive and negative media effects among adolescents: Parental mediation matters-but not always. *Journal of Family Communication*, 18(4), 270-285.
<https://doi.org/10.1080/15267431.2018.1487443>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

UvA-DARE is a service provided by the library of the University of Amsterdam (<https://dare.uva.nl>)



Managing Positive and Negative Media Effects Among Adolescents: Parental Mediation Matters—But not Always

Anneleen Meeus^a, Ine Beyens^b, Femke Geusens^a, An Katrien Sodermans^c, and Kathleen Beullens^a

^aLeuven School for Mass Communication Research, KU Leuven, Leuven, Belgium; ^bAmsterdam School of Communication Research, University of Amsterdam, Amsterdam, The Netherlands; ^cFlemish Agency of Entrepreneurial Training and the Centre for Sociological Research, KU Leuven, Leuven, Belgium

ABSTRACT

The current study examined the role of parental media mediation styles in the relationships between (1) prosocial media content and the performance of prosocial behavior and (2) antisocial media content and the performance of antisocial behavior. The results of a cross-sectional survey ($N = 475$; $Mage = 14.6$) indicated that autonomy-supportive restrictive mediation was positively related to prosocial behavior through increased prosocial media exposure, while it was also associated with less antisocial behavior through decreased antisocial media content exposure. Autonomy-supportive active mediation on the other hand strengthened the positive association between exposure to prosocial media content and the performance of prosocial behavior. However, this type of mediation did not moderate the association between exposure to antisocial media content and the performance of antisocial behavior. These results indicate that autonomy-supportive mediation styles are most effective in managing media effects, but that antisocial media content may warrant a more restrictive approach.

Over the years, a growing body of research has examined the role of parental mediation strategies in shaping children's media behavior and managing potential media effects (Fisher et al., 2009; Nathanson, 2002; Valkenburg, Piotrowski, Hermanns, & De Leeuw, 2013). Research on parental mediation generally differentiates between three media mediation strategies: Restrictive mediation, active mediation, and covieving or *couse* (Nathanson, 1999; Valkenburg, Krcmar, Peeters, & Marseille, 1999; Valkenburg et al., 2013). In the case of *active mediation*, parents actively discuss media use with their children and try, for instance, to explain the acceptability of certain content. By means of active mediation, parents aim to help their children become conscious media consumers (Fikkers, Piotrowski, & Valkenburg, 2017). *Restrictive mediation* on the other hand, involves regulating children's access to certain content or limiting their time spent with media. Finally, *covieving or couse* refers to the practice of parents and children using media together, without actively discussing the content (Nathanson, 1999; Padilla-Walker, Coyne, & Collier, 2016; Valkenburg et al., 1999).

Research on the effectiveness of these strategies has suggested that they may mitigate negative media effects such as aggression (Nathanson, 1999), fear (Buijzen, van Der Molen, & Sondij, 2007), sexual risk behaviors (Fisher et al., 2009), cyberbullying (Mesch, 2009), and (underage) alcohol use (Austin, Pinkleton, & Fujioka, 2000). Although studies on parental mediation have produced promising results, several limitations exist. First, parental mediation research has largely adopted a traditional media effects perspective, focusing on negative media effects (Clark, 2011). However, media effects can be positive as well. For instance, prosocial media content can teach prosocial attitudes (e.g., altruism, empathy),

CONTACT Anneleen Meeus  anneleen.meeus@kuleuven.be

The data that support the findings of this study are openly available in Mendeley Data at <https://doi.org/10.17632/64zf4gc4s2.1>. Color versions of one or more of the figures in the article can be found online at www.tandfonline.com/hjfc.

prosocial behavior (e.g., helping), and positive skills (e.g., literacy), and can decrease aggression (Calvert, 1999; Gentile & Walsh, 2002; Greitemeyer, 2009; Mares & Woodard, 2005; Padilla-Walker et al., 2016). Some studies have indicated that parental mediation enhances several of these positive outcomes, such as learning from educational or prosocial television (Calvert, 1999; Huston & Wright, 1994). Second, as prior studies have predominantly focused on children under the age of 12, research has only recently begun to investigate parental mediation strategies among adolescents, who might react differently toward parental attempts to influence their media use (for a recent overview, see Collier et al., 2016) (Clark, 2011; Lee, 2013; Valkenburg et al., 2013). Finally, reports on the effectiveness of parental mediation strategies on behavioral outcomes have not been consistent (Fikkers et al., 2017; Valkenburg et al., 2013). For example, experiments on the relationship between active mediation and antisocial behavior such as aggression have generated mixed findings as to whether any moderating influence of parental mediation occurs (Fikkers et al., 2017; Nathanson, 1999). A plausible explanation for these conflicting results is that studies have not taken into account the specific style that parents use to implement their mediation strategies (Fikkers et al., 2017; Valkenburg et al., 2013). The style in which mediation strategies are communicated with children may have a significant impact on their effectiveness (Valkenburg et al., 2013). Specifically, restricting or discussing media content with respect for the child's autonomy likely leads to a higher acceptance of the transmitted values and rules, as opposed to mediation that is communicated in a controlling or inconsistent way (Fikkers et al., 2017; Valkenburg et al., 2013).

The current study aims to address these challenges and advance the research in this area in three important ways: (1) by focusing on both positive and negative media effects, (2) by focusing on adolescents, and (3) by examining the effectiveness of parental mediation *styles*.

Barriers to effective parental mediation

Research has shown that exposure to violent or antisocial media content yields various negative social, emotional, and cognitive outcomes among adolescents, such as anger, aggression and fear, and increased substance use (Buijzen et al., 2007; Villani, 2001). Parental mediation has been identified as a crucial factor that likely reduces these effects (Austin et al., 2000; Collier et al., 2016; Gentile, Reimer, Nathanson, Walsh, & Eisenmann, 2014; Nathanson, 1999). However, parents are often faced with a multitude of challenges when trying to regulate their children's media consumption. Because many parents experience a significant disparity in knowledge and practical skills between them and their children when it comes to new forms of media, they may find it difficult to relate to their children's media use behavior and set adequate regulations (O'Keeffe & Clarke-Pearson, 2011). Studies have indicated that this inequality in expertise may impact adolescents' perceptions of the (context specific) legitimacy of their parents' authority (Fletcher & Blair, 2016; Laupa & Turiel, 1993). Similarly, researchers have noted that adolescents tend to resist high levels of parental restrictions and endorse less positive attitudes toward their parents when overly strict rules are used (Clark, 2011; Nathanson, 2002; Valkenburg et al., 2013). Likewise, in a recent study Beyens and Beullens (2017) found that children whose parents engaged in greater restriction of children's tablet use were more likely to experience parent-child conflicts. Other studies have indicated that high levels of restrictive mediation are related to more positive attitudes toward the content and more viewing of the content with friends (Nathanson, 1999, 2002).

The tendency of adolescents to react aversively when parents attempt to impose rules that restrict their autonomy can be explained by psychological reactance theory (Valkenburg et al., 2013). Reactance theory posits that individuals react to perceived threats to their behavioral freedom (Brehm, 1966; Brehm & Brehm, 1981). As such, psychological reactance will motivate an individual to restore the reduced freedom, often through exercising it. Not only does reactance thus entail direct behavioral consequences, it also enhances the subjective attractiveness of potential outcomes (Brehm & Brehm, 1981). Consequently, in the case of parental mediation, adolescents might exhibit precisely the behavior that was prohibited by their parents in an attempt to restore their autonomy (Valkenburg et al., 2013).

Autonomy-supportive parenting

In view of the specificity of adolescents' media behavior, it is thus essential for parents to communicate their directions in consideration of the autonomy of their child. Drawing on self-determination theory (SDT; Deci & Ryan, 1985), research has described autonomy-supportive parenting as being acceptant of children's perspectives, strengthening their autonomous self-regulation, and allowing them to solve problems on their own (Valkenburg et al., 2013). Along with structure and involvement, autonomy support is considered to be one of the key factors to successful parenting, and is associated with a broad range of positive outcomes within children (Grolnick, Price, Beiswenger, & Sauck, 2007; Joussemet, Landry, & Koestner, 2008).

In a similar vein, past studies on general parent-child interactions such as family communication patterns and parenting styles have highlighted the important role of autonomy as a necessary condition for effective media parenting, as opposed to the enforcement of parental control (Krcmar, 1996; Nathanson, 2001). For instance, authoritative parenting, characterized by high levels of psychological autonomy and demandingness, has been found to affect the nature and amount of parental mediation techniques (Eastin, Greenberg, & Hofschire, 2006; Fujioka & Austin, 2002; Padilla-Walker & Coyne, 2011) and has been related to different media outcomes such as less risky online behaviors (Rosen, Cheever, & Carrier, 2008), and children's television comprehension (Singer, Singer, Desmond, Hirsch, & Nicol, 1988).

Recently, research has begun to apply these insights to parental mediation theory, suggesting that both restrictive and active mediation strategies can be effective when presented in an autonomy-supportive way (Valkenburg et al., 2013). Autonomy-supportive parenting needs to be differentiated from controlling parenting, which involves parents imposing their own perspective, solving problems for children, and using power assertive techniques or pressure as impetus (Grolnick et al., 2007; Gurland & Grolnick, 2005). Controlling parenting values obedience and compliance, and thus undermines the autonomy of children. In line with reactance theory, studies have found controlling parenting to invoke psychological reactance and problematic behavior (Joussemet et al., 2008b; Van Petegem, Soenens, Vansteenkiste, & Beyers, 2015).

In addition, SDT explores human behavior through distinguishing the different types of motivation that shape an outcome (Ryan & Deci, 2000). As such, SDT differentiates between intrinsic (inherently satisfying activities) and extrinsic (doing something in order to attain a separable outcome) motivation. When activities are interesting and/or fun, parents can rely on the process of intrinsic motivation for their children to carry out the specified task. All they have to do is refrain from controlling parenting strategies in order to avoid psychological reactance (Joussemet, Landry, & Koestner, 2008a). However, in particular for inherently unenjoyable activities, this internalization process does not always occur spontaneously. Hence, children are often not intrinsically inclined to comply with their parents' media directions. According to SDT, the chances of successful socialization outcomes increase when parents exert their authority with respect to the autonomy of the child.

In sum, if parents fail to communicate their reasons for mediation, children will perceive their authority to be illegitimate, may experience psychological reactance, and will be less likely to feel intrinsically motivated to comply to their parents' requests. This may especially be the case for adolescents, who claim autonomous decision-making in an increasing number of domains as they grow older (Helwig, 2005; Valkenburg et al., 2013). Nevertheless, most studies on parental mediation of media behavior have overlooked the notion of parental communication styles. Valkenburg et al. (2013) attribute a number of inconsistencies within the literature to this lacuna and argue that the parenting style, and not the mediation strategy, is decisive in effective media-related parenting.

Parenting styles

In particular, Valkenburg et al. (2013) distinguish three different parenting styles that can influence the effectiveness of parental mediation: (a) autonomy-supportive, (b) controlling, and (c) inconsistent media mediation. Both active and restrictive parental mediation strategies can be communicated in an

autonomy-supportive, controlling, or inconsistent way, and may lead to different outcomes depending on the style that is being used. Building on the respective conceptual foundations of active and restrictive mediation, and in line with Fikkers et al. (2017), we expect these strategies to play distinct roles: Whereas *restrictive* mediation is aimed at regulating children's time spent with certain media content, only indirectly managing media effects, *active* mediation is assumed to influence the relationship between media content and children's behavior, attitudes and beliefs, while this type of mediation does not directly address exposure to certain content. In the case of antisocial content, for example, restrictive mediation is aimed at reducing children's exposure to such content, preventing the occurrence of any media related outcomes altogether. Active mediation on the other hand, is primarily directed at shaping the way children are affected by antisocial content when they do consume it (Fikkers et al., 2017). When communicated in an autonomy-supportive style, we thus expect restrictive mediation to effectively *predict* media exposure, while active mediation is hypothesized to *moderate* the relationship between media content and behavior.

Restrictive mediation styles

According to Valkenburg et al. (2013), *autonomy-supportive restrictive* mediation involves limiting the child's media use, yet still providing a rationale for the imposed rules and taking the child's perspective into account. While this type of mediation involves the enforcement of external control within a personal domain, and is thus prone to psychological reactance, the autonomy-supportive style in which the mediation is presented should be able to circumvent reactance effects and encourage internalization of the regulations. Hence, autonomy-supportive restrictive mediation likely results in adjusted media use even when the external regulatory agent (i.e., the parent) is not present, thus successfully regulating exposure to media content. Conversely, a controlling mediation style is characterized by a lack of respect or concern for the opinion of the child and involves exerting pressure to make them comply to parental guidelines (Valkenburg et al., 2013). Following Valkenburg et al. (2013), only overt forms of parental control were considered for this study. *Controlling restrictive mediation*, then, refers to the regulation of children's media use by using extrinsic motives such as (the threat of) punishments as incentive. Likewise, an *inconsistent restrictive* mediation style is characterized by an irregular and unpredictable application of media restrictions. Inconsistent parenting may lead to problematic outcomes in the long run, as internalization of regulations is hindered by short-term conflict avoidance and permissive behavior (Valkenburg et al., 2013). In the current study, we thus expect autonomy-supportive restrictive mediation to be negatively associated with the consumption of antisocial media content, and subsequently relate to less antisocial behavior, while controlling or inconsistent restrictive mediation is not.

In addition, studies have shown that restrictive mediation can lead to an increase in prosocial behavior, and that media content can be decisive in predicting behavioral outcomes while controlling for total amount of screen time (Gentile, 2011; Gentile et al., 2009, 2014). When restrictive mediation is communicated in an autonomy-supportive way, with parents explaining their motives behind their mediation, adolescents' internalization of these messages and understanding of adverse media content effects likely increases. Parents' use of an autonomy-supportive style as to clarify their reasons for engaging in restrictive mediation should thus stimulate adolescents' critical thinking about media content (Vanwesenbeeck, Walrave, & Ponnet, 2016) and could increase their intrinsic motivation to consume prosocial content. As a result, prosocial media content might become more attractive to adolescents who take restrictive mediation to heart.

Because studies have established that prosocial content is related to the performance of prosocial behavior (e.g., Greitemeyer, 2009), we expect a similar association in the current study. We thus expect that autonomy-supportive restrictive mediation also positively relates to prosocial media content exposure among adolescents, which will in turn be positively associated with the performance of prosocial behavior. In sum, we propose the following hypotheses:

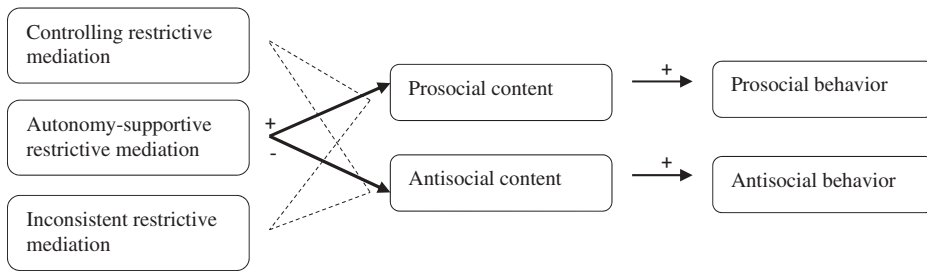


Figure 1. Hypothesized relationships between restrictive parental mediation styles, content exposure, and behavior (H1a-H1b).

H1a: Restrictive parental mediation communicated in an autonomy-supportive style is positively associated with prosocial behavior via increased prosocial media exposure, while controlling and inconsistent restrictive mediation styles are not.

H1b: Restrictive parental mediation communicated in an autonomy-supportive style is negatively associated with antisocial behavior via decreased antisocial media exposure, while controlling and inconsistent restrictive mediation styles are not.

A visual representation of the hypotheses is shown in [Figure 1](#).

Active mediation styles

Autonomy-supportive active mediation is defined as parent–child discussions about media content, in which a rationale is provided and the opinion of the adolescent is respected. This type of mediation likely results in a better internalization of the transmitted norms. When parents engage in active mediation, they aim for their children to develop a critical disposition towards media, while they do not directly address media exposure (Nathanson, 1999; Valkenburg et al., 1999). In other words, active mediation aims to change the impact of media exposure on children’s behavior by providing a counter perspective (Fikkers et al., 2017). In line with Fikkers et al. (2017), we thus expect active parental mediation to alter the strength of the relationship between media exposure and behavior. As such, we expect autonomy-supportive active mediation to act as a moderator between media content and behavior. *Controlling active mediation* on the other hand involves parent–child discussions in which the opinion of the adolescent is not heard or taken into account (Valkenburg et al., 2013). In this mediation type, parents strongly voice their opinions on certain content, without recognizing the child’s perspective. In line with these theoretical assumptions and empirical findings, we propose the following hypotheses:

H2a: Active parental mediation communicated in an autonomy-supportive style enhances the association between prosocial media exposure and prosocial behavior, while a controlling active mediation style will not.

H2b: Active parental mediation communicated in an autonomy-supportive style mitigates the association between antisocial media exposure and antisocial behavior, while a controlling active mediation style will not.

[Figure 2](#) provides a visual representation of hypotheses H2a-H2b.

Method

Participants and procedure

A cross-sectional survey was conducted among high school students in Flanders, Belgium. Data were collected through the schooling system. Nine schools agreed to participate in the study. A link to an online survey was provided through the schools’ virtual learning environment, and an additional call for participation was placed on the Facebook profiles of local youth organizations. Social media have been identified as an effective tool to facilitate participant recruitment, and although studies have

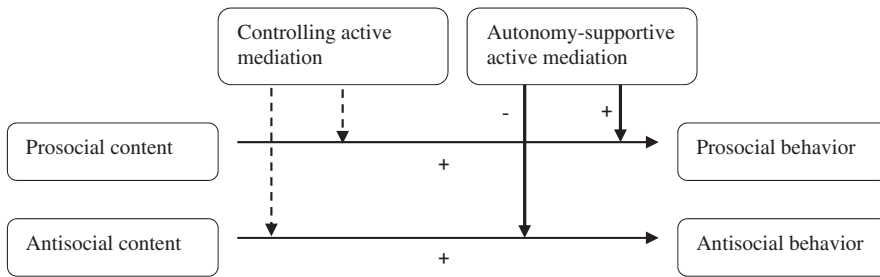


Figure 2. Hypothesized relationships between active parental mediation styles, content exposure, and behavior (H2a-H2b).

noted that online recruiting methods may result in a younger sample (e.g., Frandsen, Walters, & Ferguson, 2013), this corresponded with the targeted respondents for the current study (Khatri et al., 2015). A total of 475 adolescents (65% girls) aged 12–18 ($M = 14.6$; $SD = 1.28$) participated in the study. Most participants were of Belgian nationality ($n = 440$, 93%). The study was approved by the ethical review board of the authors' university.

Parental mediation

We used the Perceived Parental Media Mediation Scale (PPMMS) as composed by Valkenburg et al. (2013) to measure the frequency and style of parental mediation. Previous research confirmed that the PPMMS meets the standards of reliability, validity, and utility (Valkenburg et al., 2013). The PPMMS consists of two main item sets that measure the frequency of active (four items, e.g., 'How often do your parents tell you that something in the media (e.g., in movies or in commercials) can be very different in real life?') and restrictive mediation (four items, e.g., 'How often do your parents forbid you from watching certain television shows or movies because they have too much violence in them?') of television, gaming, and online games. Each main item is followed by scales that measure the communication style in which the mediation was presented. Specifically, restrictive mediation items are followed up by three subscales: (1) controlling restrictive (e.g., 'My parents would get mad if I still want to watch these shows or movies'), (2) autonomy-supportive restrictive (e.g., 'My parents would explain to me why it's better not to watch such shows or movies'), and (3) inconsistent restrictive mediation (e.g., 'My parents would tell me that I am not allowed to watch these shows or movies, but I know that the next time I want to watch these shows or movies, I will be allowed to it'). The four main active items are followed by two subscales each, measuring (1) controlling active (e.g., 'My parents would value their own opinion more than mine') and (2) autonomy-supportive active mediation (e.g., 'My parent would encourage me to voice my own opinion'). The response options for the main items include (1) *never*, (2) *almost never*, (3) *sometimes*, (4) *often*, and (5) *very often*, whereas the follow-up scales consist of (1) *completely not true*, (2) *not true*, (3) *neutral*, (4) *true*, and (5) *completely true*. A principal component analysis (PCA) with oblimin rotation ($KMO = .85$, $p < .001$) on the main items measuring the frequency of parental mediation confirmed a two-factor solution, which explained 56.8% of the total variance. All items loaded in the expected directions on either active or restrictive mediation. Both scales proved to be internally consistent with Cronbach's $\alpha = .78$ and $\alpha = .67$ for active and restrictive mediation, respectively. To confirm the expected model of the follow-up items measuring the parenting style, a second PCA ($KMO = .84$, $p < .001$) was performed. Again, all factor loadings confirmed the expected structure. The resulting five-factor model explained a total variance of 69%. All resulting scales had good reliabilities (all $\alpha > .76$), which is considered acceptable, especially in view of the small number of items for these scales (Carlo, Eisenberg, & Knight, 1992; Nunnally, 1978).

Media exposure

Antisocial and prosocial media content exposure was measured using an adapted version of the Content-Based Media Exposure Scale (C-ME; Den Hamer et al., 2017). The C-ME scale includes 12

items that measure how often respondents watch antisocial content, such as drug abuse, violence, and stealing, and 10 items that measure how often respondents watch prosocial media content, such as helping and empathy. The C-ME scale estimates content exposure in films or shows through direct questions (e.g., ‘When you are watching a film or show, how many times do you watch people shooting another person?’). Answer categories for this scale are: (1) *never*, (2) *barely*, (3) *sometimes*, (4) *often*, and (5) *constantly*. A PCA ($KMO = .9$, $p < .001$) using two factors explained a total variance of 49.6%. All items loaded in the expected directions, resulting in one subscale measuring prosocial content, and one scaling antisocial content. Consistent with previous studies (e.g., Den Hamer & Konijn, 2015; Den Hamer, Konijn, & Keijer, 2014), the C-ME measurements proved to be reliable, with $\alpha = .91$ for the prosocial content measures and $\alpha = .87$ for the dimension measuring antisocial content. Average scores were calculated for both scales, in which higher scores indicate a higher exposure to prosocial or antisocial content, respectively.

Antisocial behavior

Adolescents’ antisocial behavior was measured using six items from the Direct and Indirect Aggression Scale (Björkqvist, Lagerspetz, & Kaukiainen, 1992), as adapted by Fikkers, Piotrowski, Weeda, Vossen, and Valkenburg (2013). This scale consists of six items, each describing a certain type of direct aggressive behavior, such as striking or kicking. Adolescents were asked to report how often they displayed the described behavior in the past six months using a 6-point Likert scale. Answer categories ranged from (1) *never*, (2) *1 time in the past 6 months*, (3) *2–3 times in the past 6 months*, (4) *about 1 time per month*, (5) *about 1 time per week*, to (6) *about every day*. A PCA ($KMO = .85$, $p < .001$) confirmed the existence of one construct, which explained 61.6% of the variance (all component loadings $>.64$). An average was calculated across the six items, with a higher score indicating greater aggressive behavior (Fikkers et al., 2013). In this study, the scale had a Cronbach’s alpha of .85.

Prosocial behavior

The performance of prosocial behavior of adolescents was assessed using the prosocial behavior subscale of the Strengths and Difficulties Questionnaire (SDQ; Van Widenfelt, Goedhart, Treffers, & Goodman, 2003). The subscale consists of five items (e.g., ‘I try to be nice to other people, I care about their feelings’). Respondents were asked to indicate their responses using five response options (*certainly not true*, *not true*, *somewhat true*, *true*, *certainly true*). The underlying factor was confirmed by factor analysis ($KMO = .84$, $p < .001$), which explained 57.1% of variance (all component loadings $>.65$). Responses were averaged to obtain an overall score ($\alpha = .81$).

Covariates

Gender (0 = *boy*, 1 = *girl*) and age ($M = 14.6$; $SD = 1.28$) were included as covariates in the study.

Analytic approach

First, the data were analyzed using zero-order correlations. Next, mediation models (H1a-H1b) including restrictive parental mediation styles were calculated using model 4 of the PROCESS macro for SPSS (Hayes, 2013). Active parental mediation styles (H2a-H2b) were analyzed through moderation models (model 1). A normality check indicated that data were skewed; we accounted for the non-normality of the data by using bootstrapping procedures (with 5000 bootstraps) in all models (Efron & Tibshirani, 1986). As such, we tested the hypothesized effect of parenting styles in predicting change in both prosocial behavior related to prosocial content as well as antisocial behavior in relation to antisocial content. Predictor variables in the moderation analysis were centered at the mean to ensure meaningful interpretation of the coefficients. Gender and age were included as covariates in all models. In line with previous research (e.g., Fikkers et al., 2017; Nikkelen, Vossen, Piotrowski, & Valkenburg, 2016), we controlled for other restrictive styles in the mediation models, while active mediation styles were included as covariates in the moderation analysis. Cases with missing values on the study

variables were excluded from analysis. As a result, the analytical sample size varied between 377 and 391 participants. However, Little's MCAR test was not significant ($\chi^2(195) = 194.98, p = .49$), indicating that data were missing completely at random.

Results

Correlations

Zero-order correlations between the key variables are included in Table 1. Exposure to prosocial and antisocial media content was significantly associated with the performance of prosocial and antisocial behavior in the expected directions. Mean scores for the parental mediation measurements were generally below the mid-point of the scales, indicating that respondents showed relatively little agreement with the statements. Adolescents' age was negatively related to the reported frequency of both active and restrictive mediation, indicating that parents of older adolescents were less likely to engage in parental mediation. Older adolescents also watched more antisocial content, and displayed less prosocial but more antisocial behavior.

Restrictive mediation

In confirmation of hypothesis H1a, autonomy-supportive *restrictive* mediation was indirectly associated with prosocial behavior through prosocial content exposure (indirect effect: $b = .02, SE = .01, LLCI/ULCI = .01/.04$) (see Table 2). Results indicated that autonomy-supportive restrictive mediation was positively associated with an increase in prosocial content exposure ($b = .10, SE = .03, t(385) = 3.50, p < .001, LLCI/ULCI = .04/.16$). Both prosocial content ($b = .17, SE = .05, t(384) = 3.67, p < .001, LLCI/ULCI = .08/.27$) and autonomy-supportive restrictive mediation ($b = .09, SE = .03, t(384) = 3.23, p < .01, LLCI/ULCI = .03/.14$) were directly associated with the performance of prosocial behavior. Altogether, the model accounted for a significant amount of variance in prosocial behavior related to prosocial content and autonomy-supportive restrictive mediation ($R^2 = .16, F(6,384) = 11.8, p < .001$). Restrictive mediation communicated in a controlling or inconsistent style was *not* associated with an increase in prosocial behavior through prosocial content exposure. However, inconsistent restrictive mediation was directly related to a decrease in prosocial behavior ($b = -.06, SE = .03, t(6,384) = -1.98, p < .05, LLCI/ULCI = -.11/-.0003$).

Results also supported hypothesis H1b: Autonomy-supportive restrictive parental mediation was negatively related to the performance of antisocial behavior through antisocial media content exposure (indirect effect: $b = -.02, SE = .01, LLCI/ULCI = -.06/-.002$; total model $R^2 = .21, F(6,375) = 16.7, p < .001$). There was no significant direct association of autonomy-supportive parental mediation with the performance of antisocial behavior.

Furthermore, H1b expected that controlling and inconsistent mediation would not be related to antisocial behavior through antisocial media exposure. Although our expectations regarding the role of controlling restrictive mediation were confirmed, we did find that inconsistent mediation was indirectly related to increased antisocial behavior through antisocial media exposure (indirect effect: $b = .03, SE = .01, LLCI/ULCI = .01/.06$; total model $R^2 = .21, F(6,375) = 16.7, p < .001$).

Active mediation

Next, we evaluated the moderating role of autonomy-supportive *active* mediation in the association between exposure to prosocial content and the performance of prosocial behavior (H2a). The analysis showed a significant interaction ($b = .11, SE = .05, t(6,380) = 2.13, p < .05, LLCI/ULCI = .01/.21$) between autonomy-supportive active mediation and prosocial content (cf. Figure 3). In total, the model ($R^2 = .16, F(6,380) = 12.2, p < .001$) supports the notion that an autonomy-supportive active media mediation strategy enhances the association between prosocial media exposure and prosocial behavior.

Table 1. Descriptive statistics and zero-order inter-correlations for all key variables.

| | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. |
|---------------------------|--------------------|--------------------|--------------------|---------------------|--------------------|---------------------|--------------------|---------------------|--------------------|--------------------|--------------------|----------------------|
| 1. Antisocial content | | | | | | | | | | | | |
| 2. Prosocial content | | | | | | | | | | | | |
| 3. RM | | | | | | | | | | | | |
| 4. Autonomy Supportive RM | | | | | | | | | | | | |
| 5. Controlling RM | | | | | | | | | | | | |
| 6. Inconsistent RM | | | | | | | | | | | | |
| 7. AM | | | | | | | | | | | | |
| 8. Autonomy Supportive AM | | | | | | | | | | | | |
| 9. Controlling AM | | | | | | | | | | | | |
| 10. Antisocial behavior | | | | | | | | | | | | |
| 11. Prosocial behavior | | | | | | | | | | | | |
| 12. Age | | | | | | | | | | | | |
| | M = 2.85, SD = .63 | M = 3.50, SD = .67 | M = 1.87, SD = .78 | M = 2.83, SD = 1.20 | M = 1.71, SD = .82 | M = 2.35, SD = 1.07 | M = 2.26, SD = .93 | M = 2.74, SD = 1.10 | M = 2.34, SD = .96 | M = 1.67, SD = .85 | M = 4.01, SD = .62 | M = 14.6, SD = 1.28, |
| | .02 | .07 | .33** | .31** | .12* | .11* | .46** | .33** | -.06 | .05 | -.31** | -.17** |
| | -.17** | .19** | .41** | .17** | .29** | .15** | .40** | -.14** | .05 | -.17** | -.13** | |
| | -.12* | -.00 | .41** | .41** | .47** | .24** | .40** | -.07 | -.07 | .17** | -.08 | |
| | -.02 | .02 | .03 | .17** | -.00 | .07 | .07 | -.07 | .12* | .12* | -.07 | |
| | .15** | .11* | .50** | .41** | .29** | .11* | .46** | .33** | .05 | .17** | -.07 | |
| | -.12* | .21** | .21** | .62** | .20** | .15** | .46** | .33** | -.06 | .05 | -.31** | |
| | -.08 | -.04 | .25** | .40** | .47** | .24** | .40** | -.14** | .05 | .17** | -.07 | |
| | -.03 | -.17** | .02 | -.17** | -.00 | .07 | -.07 | -.14** | .05 | .17** | -.07 | |
| | .32** | .24** | .05 | .24** | .04 | -.07 | .12* | .17** | .05 | .17** | -.07 | |
| | -.26** | .24** | .05 | .24** | .04 | -.07 | .12* | .17** | .05 | .17** | -.07 | |
| | .20** | .03 | -.27** | -.19** | -.15** | .05 | -.21** | -.08 | -.07 | .17** | -.13** | |

* $p < .05$, ** $p < .01$

RM = Restrictive mediation/AM = Active mediation.

Range all constructs = 5.

Table 2. Mediation of the association of restrictive parental mediation styles with pro- and antisocial behavior through pro- and antisocial content exposure.

| | Prosocial content | | | Antisocial content | | | Prosocial behavior | | | Antisocial behavior | | |
|------------------------|--|-------|----------------|---|-------|----------------|---|-------|----------------|---|-------|----------------|
| | Coeff | t | Boot LLCI/ULCI | Coeff | t | Boot LLCI/ULCI | Coeff | t | Boot LLCI/ULCI | Coeff | t | Boot LLCI/ULCI |
| Constant | 2.53** | 6.23 | 1.73/3.33 | 1.63** | 3.99 | .83/2.44 | 3.66** | 9.30 | 2.88/4.43 | .48 | .96 | -.51/1.48 |
| Autonomy-supportive RM | .10** | 3.50 | .04/.16 | -.06* | -2.20 | -.12/-.01 | .09** | 3.23 | .03/.14 | -.05 | -1.44 | -.12/.02 |
| Controlling RM | -.01 | -.34 | -.10/.07 | .00 | .02 | -.08/.08 | .04 | 1.15 | -.03/.12 | -.00 | -.01 | -.10/.10 |
| Inconsistent RM | -.03 | -1.14 | -.09/.03 | .08** | 2.77 | .02/.14 | -.06* | -1.98 | -.11/-.00 | .03 | .71 | -.05/.10 |
| Gender | .37** | 5.47 | .24/.50 | -.12 | -1.76 | -.26/.01 | .23** | 3.49 | .10/.35 | -.53** | -6.35 | -.69/-.37 |
| Age | .04 | 1.54 | -.01/.09 | .09** | 3.37 | .04/.14 | -.04 | -1.73 | -.09/.01 | .04 | 1.39 | -.02/.11 |
| Prosocial content | | | | | | | .17** | 3.67 | .08/.27 | | | |
| Antisocial content | | | | | | | | | | .34** | 5.53 | .22/.47 |
| Model | $R = .34, R^2 = .12, F(5,385) = 10.11, p < .001$ | | | $R = .28, R^2 = .08, F(5,376) = 6.49, p < .001$ | | | $R = .39, R^2 = .16, F(6, 384) = 11.77, p < .001$ | | | $R = .46, R^2 = .21, F(6, 375) = 16.73, p < .001$ | | |

Note: * $p < .05$, ** $p < .01$.

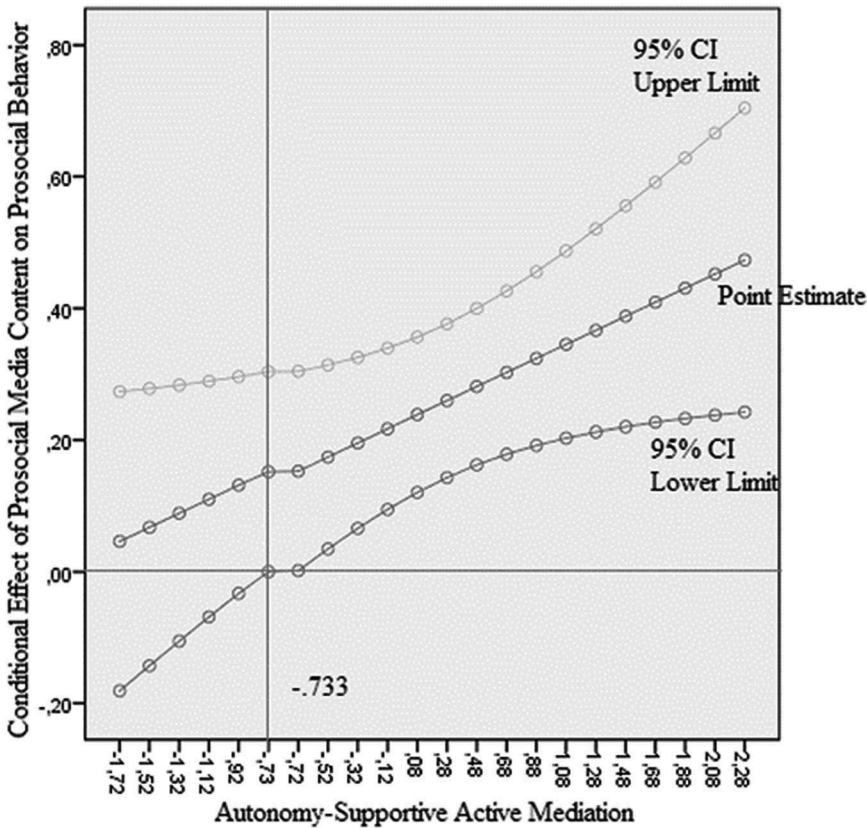


Figure 3. The conditional effect of watching prosocial media content on the performance of prosocial behavior as a function of autonomy-supportive active parental mediation. Age, gender, and controlling active mediation were included as covariates.

As expected, controlling active mediation did *not* significantly moderate the association between prosocial content and prosocial behavior. We can thus accept hypotheses H2a.

Hypothesis H2b predicted that active parental mediation communicated in an autonomy-supportive style would mitigate the association between antisocial media exposure and antisocial

behavior, while a controlling communication style would not. However, the significant relationship between antisocial media exposure and antisocial behavior was not moderated by either of the mediation styles. Hence, the results did not support hypothesis H2b regarding the mitigating potential of autonomy-supportive active parental mediation in the relation between antisocial content and antisocial behavior, although we can confirm our expectations in regard to the ineffectiveness of a controlling style.

Discussion

This study examined the effectiveness of different communication *styles* of parental mediation in both reducing the potential harmful effects as well as enhancing positive effects of media content on adolescents' behavior. In doing so, the current study contributed to the field by addressing known lacunae in parental mediation research pertaining to (a) *positive* media effects (Clark, 2011), (b) the effectiveness of parental mediation *styles* (c) directed at *adolescents*. On the basis of SDT (Deci & Ryan, 1985; Valkenburg et al., 2013), we expected that autonomy-supportive *restrictive* mediation would be related to prosocial behavior through increased prosocial media content exposure, and to less antisocial behavior through decreased antisocial content exposure. Moreover, we expected autonomy-supportive *active* mediation to act as an effective moderator in the relation between content exposure and behavioral outcomes. Conversely, in line with the outlined theoretical framework, we predicted that inconsistent and controlling communication styles would not moderate this relationship, and would not succeed in lowering content exposure. Specifically, following Valkenburg et al. (2013), we theorized that these communication styles increase the chances of psychological reactance (Brehm & Brehm, 1981) and impede the internalization process, thus resulting in ineffective parental mediation.

Prosocial content

In the case of prosocial content, the results of this study support the outlined theoretical framework and hypotheses. First, an autonomy-supportive *restrictive* mediation style (i.e., parents regulating their children's media behavior with respect for their autonomy) was significantly linked to prosocial behavior through an increase in exposure to prosocial media content, while controlling and inconsistent restrictive mediation styles were not. These results suggest that parents' perspectives on media content are more likely to be successfully internalized when communicated in an autonomy-supportive way, consequently increasing the appeal of prosocial content to adolescents. As parents clarify their motives behind the imposed restrictions, they encourage children to critically consider media content, which is reflected in a preference for more prosocial content.

Interestingly, inconsistent restrictive mediation was also (directly) related to decreased prosocial behavior and (indirectly) related to increased antisocial behavior. This finding is consistent with research linking inconsistent mediation to children's problematic behavior (e.g., Nikkelen et al., 2016) and underlines the potential adverse consequences of using an inconsistent mediation style.

Second, our results indicate that autonomy-supportive *active* mediation enhances the positive association between exposure to prosocial media content and the performance of prosocial behavior. A controlling style did not moderate this relation. Although active mediation has been more consistently linked to positive child outcomes overall (Ruh Linder & Werner, 2012), our study adds weight to the notion that this may not always be the case, namely when active mediation is communicated in a controlling way (Valkenburg et al., 2013).

Together, our findings thus corroborate the effectiveness of using an autonomy-supportive style and support the general idea that parental mediation research should include the way these styles are communicated toward children. Moreover, the current study underlines the importance of parental mediation in the context of prosocial media content effects, which constitutes a fruitful area of investigation for future research.

Antisocial content

When examining the effectiveness of using parental mediation styles to manage antisocial content, our results showed that autonomy-supportive *restrictive* mediation was negatively associated with antisocial behavior through decreased antisocial content exposure. Controlling restrictive mediation on the other hand, was not associated with antisocial content or behavior. These results add further support to the notion that the style in which parental mediation is communicated can be decisive in determining its effectiveness.

Notably, *inconsistent* restrictive mediation was indirectly and positively related to antisocial behavior through increased exposure to antisocial media. These findings provide evidence for the so-called “forbidden fruit” or “boomerang” effect, as observed by earlier studies (Fikkers et al., 2017; Nathanson, 2002; Padilla-Walker et al., 2016). When parents apply restrictive mediation in an inconsistent way, internalization of regulations may be hindered and children may feel less intrinsically motivated to comply to their requests, generating more problematic outcomes in the long run (Helwig, 2005; Valkenburg et al., 2013). This notion is further supported by our finding that inconsistent restrictive mediation also leads to a decrease in the performance of prosocial behavior. Moreover, because parents fail to communicate their mediation with respect for the autonomy of the child, the likelihood of psychological reactance might increase, and might prompt children to restore their freedom through watching the forbidden content (Brehm & Brehm, 1981; Valkenburg et al., 2013). This may especially be true for adolescents, who are in pursuit of greater autonomy (Padilla-Walker et al., 2016).

However, while one could expect the same response in adolescents who received more controlling mediation, this type of style was not related to an increase in antisocial media exposure in our study. Similar results have been obtained by other authors investigating parental mediation styles (i.e., Fikkers et al., 2017; Nikkelen et al., 2016). These findings are puzzling in light of the found relationships regarding inconsistent mediation, and warrant future research. Following Fikkers et al. (2017), one explanation for why there was no boomerang effect for controlling styles might be that parents who use such mediation styles simply do not leave their children any options to rebel against set regulations, thus preventing an increase in exposure. However, one may wonder whether this argument continues to hold in the present mobile media landscape in which children can easily bypass parental regulations. Future research should, therefore, further explore these relationships and examine why boomerang effects are only observed in the case of inconsistent, but not controlling, parental mediation styles.

When *active* mediation was communicated in an autonomy-supportive way, however, there was no decrease in the relation between exposure to antisocial media content and the performance of antisocial behavior. This is somewhat surprising, as we expected this strategy to influence what adolescents take away from media, making them less vulnerable to antisocial content. Nonetheless, recent studies on parental mediation styles have obtained similar results regarding the ineffectiveness of autonomy-supportive active mediation in the context of adverse media effects on behavior (e.g., Fikkers et al., 2017; Nikkelen et al., 2016). It may be that, despite its theoretical assertion, active mediation is less effective at reducing the effects of antisocial media content than restrictive mediation. One possible explanation for this difference is that the information active mediation conveys about the value of antisocial content is less evident to adolescents (Nathanson, 1999). By actively discussing the undesirability of such content, but not restricting their access, parents may still affirm that antisocial content is worthy of children’s cognitive involvement. In this vein, Byrne (2009) found that media literacy interventions designed to reduce the negative effects of media violence actually led to an *increase* in children’s willingness to use aggression when they did not participate in a cognitive activity (i.e., writing a paragraph about what they learned). The author attributed this finding to children’s increased attention to the violent movie clips that were used as examples, while their attention to the actual critical content of the lesson was lacking. A possible explanation for the absence of an interaction in the current study could therefore lie in our

measurement of active mediation, as we could not gauge all media-related parenting behaviors, and children's cognitive processing of the conveyed messages was not assessed.

Likewise, it is also important to note that because we used the relatively short PPMM scale by Valkenburg et al. (2013) to measure parental mediation, only overt forms of parental control were included in the conceptualization of controlling restrictive mediation styles. Future studies could address these issues by using a more differentiated measurement of parental mediation.

Other limitations of this study include the cross-sectional nature of the data, which precludes our ability to make inferences regarding the causality of the associations. It cannot be ruled out that parents' mediation strategies are a consequence of children's (media) behavior and not vice versa. Furthermore, descriptive analyses showed relatively low average scores for the parental mediation measurements. These findings are fairly consistent with the study results by Fikkers et al. (2017) who used the same scale, and are in line with research reporting a negative relationship between parental mediation and children's age (e.g., Eastin et al., 2006; Shin & Huh, 2011). The relatively low levels of parental mediation reported in the current study might therefore be explained by our focus on adolescents. This study also relied on a self-reported measurement of children's perceived parental mediation without assessing actual behavior. Although research has indicated that parents and children report congruent views of the prevalence and nature of parental mediation (Nikken & Jansz, 2006), there could be a discrepancy between the frequency of mediation the children reported and the actual amount of mediation that they received. To address this limitation, future research could incorporate parent-child dyads. Another limitation of the current study is that participation was completely voluntary, resulting in a convenience sample and thus limiting the generalizability of the findings.

Finally, we did not discriminate between mothers and fathers in our measurement of parental mediation but rather treated parents as a single unit. Participants' responses may reflect one parent's mediation behaviors, whose mediation strategies potentially differ from the other parent's and may thus not reflect the full amount and nature of mediation received. Although a recent study comparing mothers' and fathers' parental mediation only found few and small gender differences (Warren, 2017), other studies indicate that those differences may nonetheless affect the outcomes of parental mediation. For instance, Mares and colleagues found that disparities between parents in regard to media restrictions positively predicted their child's exposure to media violence, suggesting that communication between parents may also be an important factor to consider when investigating the effectiveness of parental communication (Mares, Stephenson, Martins, & Nathanson, 2018).

Conclusion

The results of this study indicate that autonomy-supportive restrictive mediation has the potential to increase adolescents' prosocial behavior and decrease their antisocial behavior, through increasing adolescents' exposure to prosocial content and reducing their exposure to antisocial content, respectively. Furthermore, autonomy-supportive active mediation strengthened the positive relation between exposure to prosocial media content and the performance of prosocial behavior. However, autonomy-supportive active mediation did not significantly decrease the strength of the association between exposure to antisocial media content and the performance of antisocial behavior. These results indicate that autonomy-supportive mediation styles are most effective, but that antisocial media content may warrant a more restrictive approach.

Acknowledgments

The authors would like to thank Tessa Claes and Arne Caluwé for their assistance in collecting the data used in this study.

References

- Austin, E. W., Pinkleton, B. E., & Fujioka, Y. (2000). The role of interpretation processes and parental discussion in the media's effects on adolescents' use of alcohol. *Pediatrics*, *105*, 343–349. doi:10.1542/peds.105.2.343
- Beyens, I., & Beullens, K. (2017). Parent–Child conflict about children's tablet use: The role of parental mediation. *New Media & Society*, *19*, 2075–2093. doi:10.1177/1461444816655099
- Björkqvist, K., Lagerspetz, K. M. J., & Kaukiainen, A. (1992). Do girls manipulate and boys fight? Developmental trends in regard to direct and indirect aggression. *Aggressive Behavior*, *18*, 117–127. doi:10.1002/1098-2337(1992)18:2<117::AID-AB2480180205>3.0.CO;2-3
- Brehm, J. W. (1966). *A theory of psychological reactance*. Oxford, England: Academic Press.
- Brehm, S. S., & Brehm, J. W. (1981). *Psychological reactance: A theory of freedom and control*. New York, NY: Academic Press
- Buijzen, M., van der Molen, J. H. W., & Sondij, P. (2007). Parental mediation of children's emotional responses to a violent news event. *Communication Research*, *34*, 212–230. doi:10.1177/0093650206298070
- Byrne, S. (2009). Media literacy interventions: What makes them boom or boomerang?. *Communication Education*, *58*, 1–14. doi:10.1080/03634520802226444
- Calvert, S. (1999). *Children's journeys through the information age*. Boston, MA: McGraw-Hill.
- Carlo, G., Eisenberg, N., & Knight, G. P. (1992). An objective measure of adolescents' prosocial moral reasoning. *Journal of Research on Adolescence*, *2*, 331–349. doi:10.1207/s15327795jra0204_3
- Clark, L. S. (2011). Parental mediation theory for the digital age. *Communication Theory*, *21*, 323–343. doi:10.1111/j.1468-2885.2011.01391.x
- Collier, K. M., Coyne, S. M., Rasmussen, E. E., Hawkins, A. J., Padilla-Walker, L. M., Erickson, S. E., & Memmott-Elison, M. K. (2016). Does parental mediation of media influence child outcomes? A meta-analysis on media time, aggression, substance use, and sexual behavior. *Developmental Psychology*, *52*, 798–812. doi:10.1037/dev0000108
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum.
- Den Hamer, A. H., & Konijn, E. A. (2015). Adolescents' media exposure may increase their cyberbullying behavior: A longitudinal study. *Journal of Adolescent Health*, *56*, 203–208. doi:10.1016/j.jadohealth.2014.09.016
- Den Hamer, A. H., Konijn, E. A., & Keijer, M. G. (2014). Cyberbullying behavior and adolescents' use of media with antisocial content: A cyclic process model. *Cyberpsychology, Behavior, and Social Networking*, *17*, 74–81. doi:10.1089/cyber.2012.0307
- Den Hamer, A. H., Konijn, E. A., Plaisier, X. S., Keijer, M. G., Krabbendam, L. C., & Bushman, B. J. (2017). The content-based media exposure scale (C-ME): Development and validation. *Computers in Human Behavior*, *72*, 549–557. doi:10.1016/j.chb.2017.02.050
- Eastin, M. S., Greenberg, B. S., & Hofschire, L. (2006). Parenting the internet. *Journal of Communication*, *56*, 486–504. doi:10.1111/j.1460-2466.2006.00297.x
- Efron, B., & Tibshirani, R. (1986). Bootstrap methods for standard errors, confidence intervals, and other measures of statistical accuracy. *Statistical Science*, *1*, 54–75. doi:10.1214/ss/1177013815
- Fikkers, K. M., Piotrowski, J. T., & Valkenburg, P. M. (2017). A matter of style? Exploring the effects of parental mediation styles on early adolescents' media violence exposure and aggression. *Computers in Human Behavior*, *70*, 407–415. doi:10.1016/j.chb.2017.01.029
- Fikkers, K. M., Piotrowski, J. T., Weeda, W. D., Vossen, H. G., & Valkenburg, P. M. (2013). Double dose: High family conflict enhances the effect of media violence exposure on adolescents' aggression. *Societies*, *3*, 280–292. doi:10.3390/soc3030280
- Fisher, D. A., Hill, D. L., Grube, J. W., Bersamin, M. M., Walker, S., & Gruber, E. L. (2009). Televised sexual content and parental mediation: Influences on adolescent sexuality. *Media Psychology*, *12*, 121–147. doi:10.1080/15213260902849901
- Fletcher, A. C., & Blair, B. L. (2016). Implications of the family expert role for parental rules regarding adolescent use of social technologies. *New Media & Society*, *18*, 239–256. doi:10.1177/1461444814538922
- Frandsen, M., Walters, J., & Ferguson, S. G. (2013). Exploring the viability of using online social media advertising as a recruitment method for smoking cessation clinical trials. *Nicotine & Tobacco Research*, *16*, 247–251. doi:10.1093/ntr/ntt157
- Fujioka, Y., & Austin, E. W. (2002). The relationship of family communication patterns to parental mediation styles. *Communication Research*, *29*, 642–665. doi:10.1177/009365002237830
- Gentile, D. A. (2011). The multiple dimensions of video game effects. *Child Development Perspectives*, *5*, 75–81. doi:10.1111/j.1750-8606.2011.00159.x
- Gentile, D. A., Anderson, C. A., Yukawa, S., Ichori, N., Saleem, M., Ming, L. K., ... Rowell Huesmann, L. (2009). The effects of prosocial video games on prosocial behaviors: International evidence from correlational, longitudinal, and experimental studies. *Personality and Social Psychology Bulletin*, *35*, 752–763. doi:10.1177/0146167209333045
- Gentile, D. A., Reimer, R. A., Nathanson, A. I., Walsh, D. A., & Eisenmann, J. C. (2014). Protective effects of parental monitoring of children's media use: A prospective study. *JAMA Pediatrics*, *168*, 479–484. doi:10.1001/jamapediatrics.2014.146

- Gentile, D. A., & Walsh, D. A. (2002). A normative study of family media habits. *Journal of Applied Developmental Psychology, 23*, 157–178. doi:10.1016/S0193-3973(02)00102-8
- Greitemeyer, T. (2009). Effects of songs with prosocial lyrics on prosocial thoughts, affect, and behavior. *Journal of Experimental Social Psychology, 45*, 186–190. doi:10.1016/j.jesp.2008.08.003
- Grolnick, W. S., Price, C. E., Beiswenger, K. L., & Sauck, C. C. (2007). Evaluative pressure in mothers: Effects of situation, maternal, and child characteristics on autonomy supportive versus controlling behavior. *Developmental Psychology, 43*, 991–1002. doi:10.1037/0012-1649.43.4.991
- Gurland, S. T., & Grolnick, W. S. (2005). Perceived threat, controlling parenting, and children's achievement orientations. *Motivation and Emotion, 29*, 103–121. doi:10.1007/s11031-005-7956-2
- Hayes, A. F. (2013). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. New York, NY: Guilford Press.
- Helwig, C. C. (2005). Rights, civil liberties, and democracy across cultures. In M. Killen & J. Smetana (Eds.), *Handbook of moral development* (pp. 185–210). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Huston, A., & Wright, J. C. (1994). Educating children with television: The forms of the medium. In D. Zillmann, J. Bryant, & A. C. Huston (Eds.), *Media, children, and the family: Social scientific, psychodynamic, and clinical perspectives* (pp. 73–84). Hillsdale, NJ: Lawrence Erlbaum Associates Publishers.
- Joussemet, M., Landry, R., & Koestner, R. (2008a). A self-determination theory perspective on parenting. *Canadian Psychology/Psychologie Canadienne, 49*, 194–200. doi:10.1037/a0012754
- Joussemet, M., Vitaro, F., Barker, E. D., Côté, S., Zoccolillo, M., Nagin, D. S., & Tremblay, R. E. (2008b). Controlling parenting and physical aggression during elementary school. *Child Development, 79*, 411–425. doi:10.1111/j.1467-8624.2007.01133.x
- Khatri, C., Chapman, S. J., Glasbey, J., Kelly, M., Nepogodiev, D., Bhangu, A., ... Committee, S. (2015). Social media and internet driven study recruitment: Evaluating a new model for promoting collaborator engagement and participation. *PLoS One, 10*, e0118899. doi:10.1371/journal.pone.0118899
- Krcmar, M. (1996). Family communication patterns, discourse behavior, and child television viewing. *Human Communication Research, 23*, 251–277. doi:10.1111/j.1468-2958.1996.tb00394.x
- Laupa, M., & Turiel, E. (1993). Children's concepts of authority and social contexts. *Journal of Educational Psychology, 85*, 191–197. doi:10.1037/0022-0663.85.1.191
- Lee, S.-J. (2013). Parental restrictive mediation of children's internet use: Effective for what and for whom? *New Media & Society, 15*, 466–481. doi:10.1177/1461444812452412
- Mares, M. L., Stephenson, L., Martins, N., & Nathanson, A. I. (2018). A house divided: Parental disparity and conflict over media rules predict children's outcomes. *Computers in Human Behavior, 81*, 177–188. doi:10.1016/j.chb.2017.12.009
- Mares, M. L., & Woodard, E. (2005). Positive effects of television on children's social interactions: A meta-analysis. *Media Psychology, 7*, 301–322. doi:10.1207/S1532785XMEP0703_4
- Mesch, G. S. (2009). Parental mediation, online activities, and cyberbullying. *CyberPsychology & Behavior, 12*, 387–393. doi:10.1089/cpb.2009.0068
- Nathanson, A. I. (1999). Identifying and explaining the relationship between parental mediation and children's aggression. *Communication Research, 26*, 124–143. doi:10.1177/009365099026002002
- Nathanson, A. I. (2001). Mediation of children's television viewing: Working toward conceptual clarity and common understanding. *Annals of the International Communication Association, 25*, 115–151. doi:10.1080/23808985.2001.11679002
- Nathanson, A. I. (2002). The unintended effects of parental mediation of television on adolescents. *Media Psychology, 4*, 207–230. doi:10.1207/S1532785XMEP0403_01
- Nikkelen, S., Vossen, H., Piotrowski, J., & Valkenburg, P. (2016). Media violence and adolescents' ADHD-related behaviors: The role of parental mediation. *Journal of Broadcasting & Electronic Media, 60*, 657–675. doi:10.1080/08838151.2016.1234476
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York, NY: McGraw-Hill.
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.
- O'Keefe, G. S., & Clarke-Pearson, K.; Council on Communications and Media. (2011). The impact of social media on children, adolescents, and families. *American Academy of Pediatrics, 127*, 800–804. doi:10.1542/peds.2011-0054
- Padilla-Walker, L. M., & Coyne, S. M. (2011). "Turn that thing off!" parent and adolescent predictors of proactive media monitoring. *Journal of Adolescence, 34*, 705–715. doi:10.1016/j.adolescence.2010.09.002
- Padilla-Walker, L. M., Coyne, S. M., & Collier, K. M. (2016). Longitudinal relations between parental media monitoring and adolescent aggression, prosocial behavior, and externalizing problems. *Journal of Adolescence, 46*, 86–97. doi:10.1016/j.adolescence.2015.11.002
- Rosen, L. D., Cheever, N. A., & Carrier, L. M. (2008). The association of parenting style and child age with parental limit setting and adolescent MySpace behavior. *Journal of Applied Developmental Psychology, 29*, 459–471. doi:10.1016/j.appdev.2008.07.005
- Ruh Linder, J., & Werner, N. E. (2012). Relationally aggressive media exposure and children's normative beliefs: Does parental mediation matter? *Family Relations, 61*, 488–500. doi:10.1111/j.1741-3729.2012.00707.x

- Ryan, M. R., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 25*, 54–67. doi:10.1006/ceps.1999.1020
- Shin, W., & Huh, J. (2011). Parental mediation of teenagers' video game playing: Antecedents and consequences. *New Media & Society, 13*, 945–962. doi:10.1177/1461444810388025
- Singer, J. L., Singer, D. G., Desmond, R., Hirsch, B., & Nicol, A. (1988). Family mediation and children's cognition, aggression, and comprehension of television: A longitudinal study. *Journal of Applied Developmental Psychology, 9*, 329–347. doi:10.1016/0193-3973(88)90034-2
- Valkenburg, P. M., Krcmar, M., Peeters, A. L., & Marseille, N. M. (1999). Developing a scale to assess three styles of television mediation: "Instructive mediation," "restrictive mediation," and "social covieing." *Journal of Broadcasting & Electronic Media, 43*, 52–66. doi:10.1080/08838159909364474
- Valkenburg, P. M., Piotrowski, J. T., Hermanns, J., & De Leeuw, R. (2013). Developing and validating the perceived parental media mediation scale: A self-determination perspective. *Human Communication Research, 39*, 445–469. doi:10.1111/hcre.12010
- Van Petegem, S., Soenens, B., Vansteenkiste, M., & Beyers, W. (2015). Rebels with a cause? Adolescent defiance from the perspective of reactance theory and self-determination theory. *Child Development, 86*, 903–918. doi:10.1111/cdev.12355
- Van Widenfelt, B. M., Goedhart, A. W., Treffers, P. D. A., & Goodman, R. (2003). Dutch version of the strengths and difficulties questionnaires (SDQ). *European Child & Adolescent Psychiatry, 12*, 281–289. doi:10.1007/s00787-003-0341-3
- Vanwesenbeeck, I., Walrave, M., & Ponnet, K. (2016). Young adolescents and advertising on social network games: A structural equation model of perceived parental media mediation, advertising literacy, and behavioral intention. *Journal of Advertising, 45*, 183–197. doi:10.1080/00913367.2015.1123125
- Villani, S. (2001). Impact of media on children and adolescents: A 10-year review of the research. *Journal of the American Academy of Child & Adolescent Psychiatry, 40*, 392–401. doi:10.1097/00004583-200104000-00007
- Warren, R. (2017). Multi-platform mediation: US mothers' and fathers' mediation of teens' media use. *Journal of Children and Media, 11*, 485–500. doi:10.1080/17482798.2017.1349685