

RESEARCH ARTICLE

Parental media monitoring, prosocial violent media exposure, and adolescents' prosocial and aggressive behaviors

Hailey G. Holmgren¹ | Laura M. Padilla-Walker² | Laura A. Stockdale² | Sarah M. Coyne²

¹Department of Family Social Science,
University of Minnesota, St. Paul, Minnesota

²Brigham Young University, Provo, Utah

Correspondence

Hailey G. Holmgren, Department of Family Social Science, University of Minnesota, 290 McNeal Hall, 1985 Buford Avenue, St. Paul, Minnesota 55108.
Email: holmg088@umn.edu

Abstract

Prosocial violent media (e.g., media that combines both violent and prosocial content) is especially popular in entertainment media today. However, it remains unclear how parental media monitoring is associated with exposure to prosocial violent content and adolescent behavior. Accordingly, 1,193 adolescents were asked about parental media monitoring, media content exposure, and behavior. Main findings suggest that autonomy supportive restrictive monitoring was associated with lower levels of exposure to prosocial violent content, but only among older adolescents. Additionally, autonomy supportive restrictive monitoring was the only form of parental media monitoring associated with lower levels of violent content and higher levels of prosocial content, and autonomy supportive active monitoring was the only parental monitoring strategy that promoted prosocial behavior via exposure to prosocial media content. Discussion focuses on the importance of autonomy supportive parental monitoring, as well as the implications of parents encouraging their children to watch media with limited violent content—even if it is prosocial violent content.

KEYWORDS

media use, parental media monitoring, parental mediation, prosocial violence

An expansive literature on parental media monitoring, defined as parental supervision of media time and content including behaviors such as rule setting and discussion, indicate that parents are concerned about their adolescents' digital media use (e.g., Collier et al., 2016). Additionally, much research has found that media content matters when examining viewer outcomes. For example, several studies have found that exposure to media violence is related to subsequent aggressive behavior (e.g., Bushman & Anderson, 2001), while exposure to media depictions of prosocial behavior is related to prosocial behavior (Coyne et al., 2018). Yet, quite a bit of media content combines both aggressive and prosocial content, referred to as *prosocial violent* content in this paper. This is content that is physically aggressive or violent, but where the intent is to help or defend others in need. Traditionally, aggression is defined as behavior that is intended to hurt others, while prosocial behavior is defined as behavior intended to help others. Thus,

prosocial violence is a mix between these definitions, which is behavior intended to help one person by hurting another (e.g., Romeo killing another character to avenge his friend in *Romeo and Juliet*, superhero violence).

While research shows that parental monitoring of both aggressive and prosocial media is associated with lower levels of aggression and higher levels of prosocial behavior respectively (Gentile, Reimer, Nathanson, Walsh, & Eisenmann, 2014; Meeus, Beyens, Geusens, Sodermans, & Beullens, 2018), it remains unclear how parental monitoring of exposure to prosocial violent content is related to both aggressive and prosocial behavior in adolescence. Guided by the General Aggression Model (GAM; Bushman & Anderson, 2002) and General Learning Model (GLM; Buckley & Anderson, 2006), the current study sought to address this limitation in the literature by examining associations between parental monitoring, prosocial violent media content exposure, and prosocial behavior and

aggression in a nationally representative sample of ten to 20-year-old youth.

1 | MEDIA CONTENT AND BEHAVIOR

Research on the effects of exposure to media violence, relational aggression, and prosocial behavior have been studied extensively, guided primarily by the GAM (Bushman & Anderson, 2002) and GLM (Buckley & Anderson, 2006), with both theories suggesting that exposure to media content shapes attitudes and behaviors of viewers. For example, existing research has shown a relation between exposure to physical and relational aggression in media and increased aggressive behavior (Anderson et al., 2010; Coyne, 2016). According to the GAM, exposure to violent content in media is linked with increased aggressive thoughts and behavior via priming and rehearsal of aggressive scripts and desensitization to violence (Bushman & Anderson, 2002). Prosocial behavior, or voluntary behavior performed with the intention to benefit others (Eisenberg, Spinrad, & Knafo-Noam, 2015), also frequently occurs in the media (e.g. TV, video games; Coyne et al., 2018). The GLM informs existing research on exposure to prosocial content in media and prosocial behavior by way of priming and rehearsing scripts for prosocial behavior (Buckley & Anderson, 2006). Research suggests that exposure to prosocial behavior in the media is related to increased levels of prosocial behavior (e.g. Greitemeyer & Osswald, 2010) and lower levels of aggressive behaviors (Coyne et al., 2018).

Finally, *prosocial violence*, or behaviors that combine aggression and violence with prosocial and helping behaviors, are common in the media (e.g. *Romeo and Juliet*, Superhero media). Both the GAM and GLM have been applied to existing research on prosocial violent content (Coyne et al., 2017). The GAM suggests that viewers may be primed to behave aggressively after exposure to prosocial violent media content, while according to the GLM it is possible that viewers will develop and rehearse scripts for prosocial behavior from viewing the positive and helping acts portrayed in prosocially violent media. Existing research suggests that exposure to prosocially violent media content is associated with increased aggressive behavior and not prosocial behavior 1 year later in children (Coyne et al., 2017). However, past research has failed to address prosocial violence explicitly and it remains unclear how these associations will look during adolescence. Though adolescents have a greater cognitive capacity than children (Ma & Ganea, 2010) for understanding complex behaviors like prosocial violence, it is possible that youth are still not equipped to differentiate the conflicting messages sent by prosocial violent media on their own. Existing research demonstrates the protective role of parental media monitoring on behavioral outcomes associated with exposure to violent content in media (Padilla-Walker, Coyne, Kroff, & Memmott-Elison, 2018). If utilized appropriately, parental monitoring may also protect against negative outcomes associated with exposure to prosocial violent content in the media. However, researchers have not yet examined

how frequently and effectively parents are monitoring exposure to prosocial violent media.

2 | PARENTAL MEDIA MONITORING

The majority of research on parental media monitoring focuses on active and restrictive monitoring. *Active media monitoring* (or active mediation) includes openly discussing media time and content with children and is associated with positive outcomes including increased learning and comprehension from viewing media (Valkenburg, Krcmar, Peeters, & Marseille, 1999), and less viewing of pornographic material on the Internet (Rasmussen, Ortiz, & White, 2015). *Restrictive media monitoring* (or restrictive mediation) includes limiting children's media time and allowed content (Collier et al., 2016), and shows mixed findings as it is associated with lower levels of physical and verbal aggression (Nathanson, 1999) and higher levels of imitative aggressive behavior (Vandewater, Park, Huang, & Wartella, 2005), after viewing violent content. The effectiveness of restrictive monitoring may vary by age, where research demonstrates that younger children are more receptive to restrictive monitoring (Nathanson, 2002), while restrictive monitoring (and other forms of parental control) limit independence and autonomy in adolescence.

An emerging literature focuses on parental media monitoring behaviors in controlling and autonomy supportive climates. Specifically, both active and restrictive monitoring can be combined with autonomy supportive (e.g., parents encouraging children to voice their own opinion) or controlling (e.g., parents valuing their own opinion more than the child's) parenting behaviors. According to the Self-Determination Theory (SDT; Ryan & Deci, 2000), individuals are more likely to behave according to the values they are taught when they maintain autonomy, competence, and relatedness. Existing research has examined parental media monitoring strategies in light of SDT and have indicated that parenting strategies are most effective when delivered in such a way that reinforces the autonomy of the child (Padilla-Walker et al., 2018), and it is likely that similar outcomes will emerge when applied to parental media monitoring behaviors. Additionally, research suggests that autonomy supportive parenting, when combined with both active and restrictive parental media monitoring strategies, is effective in reducing the negative effects of antisocial media consumption (Fikkers, Piotrowski, & Valkenburg, 2017) and in increasing the positive effects of viewing prosocial media (Meeus et al., 2018).

Research in this area examines direct effects between parental media monitoring and adolescent media use (e.g., Gentile, Nathanson, Rasmussen, Reimer, & Walsh, 2012). For example, in a meta-analysis of parental media monitoring and adolescent behavior, researchers found that across 35 studies focused on restrictive parental media monitoring, restrictive monitoring was directly associated with less time spent engaged in media use (Collier et al., 2016). Conversely, some research has examined parental media monitoring behavior as a moderating variable, though at least

one study found that autonomy supportive and controlling active mediation did not moderate associations between media violence exposure and aggressive behavior (Fikkers et al., 2017). Theoretically, both the GAM and GLM might suggest that parents are important factors in determining a child's exposure to and interpretation of various media content. Parents often act as gatekeepers of media content, allowing what children can and cannot view (particularly at young ages). This is represented by the "input" process of both models, which can include "person" variables (e.g., a long history of parental monitoring behaviors) and also "situation" inputs (e.g., a parent discussing media with a child while a child is playing a video game). Both of these would directly influence the way that a child interacts with media in the present time and also the culture surrounding such media as the child develops. Additionally, both the GAM and GLM suggest an "appraisal and decision making" process that determines behavior after media exposure. Parental values as appropriately expressed during parental media monitoring might encourage children to engage in a thoughtful action as opposed to an impulsive one, as they are encouraged to critically think about their media engagement and how it might impact behavior. Guided by the previous research noted above, the current study seeks to examine direct associations between parental media monitoring and adolescent outcomes, mediated by exposure to prosocial violent media content.

3 | THE CURRENT STUDY

The goal of the current study was to understand relations between autonomy supportive and controlling parental media monitoring (both active and restrictive), adolescents' exposure to prosocial violent, violent, and prosocial media content (as well as media time), and outcomes including physical and relational aggression and prosocial behavior in a nationally representative sample of 10–20-year old youth. Control variables include household income, age, and gender. Using the GAM we first hypothesized that autonomy supportive parental monitoring would be associated with lower levels of violent media content exposure (input routes of the GAM) and higher levels of prosocial media content exposure, whereas controlling parental monitoring would be linked with higher levels of exposure to violent media content and lower levels of exposure to prosocial content.

It was difficult to make specific hypotheses regarding exposure to prosocial violent media content due to a paucity of existing research, but we explored the possibility that parental media monitoring might be differentially associated with exposure to prosocial violent media content (compared to violent or prosocial) because of the relative ambiguity of such content, as well as the popularity and pervasiveness of prosocial violent media among teens. In turn, based on existing research (Bushman & Anderson, 2001; Coyne et al., 2018) and the GAM we expected that exposure to prosocial violent and violent content would be associated with higher levels of aggression and lower levels of prosocial behavior through the rehearsal and

priming of aggression related scripts and constructs; while exposure to prosocial content would be associated with higher levels of prosocial behavior and lower levels of aggression.

Finally, given sex differences in exposure to media content (Greenberg, Sherry, Lachlan, Lucas, & Holmstrom, 2010), age differences in the effectiveness of media monitoring strategies (e.g., Nathanson, 2002), and the increasing desire for autonomy in later adolescence, we explored both biological sex of the child and age as potential moderators of these relations. We did not have specific hypotheses in this regard given the relatively exploratory nature of our research question.

4 | METHOD

4.1 | Participants and procedure

A national quota sample of 1,193 adolescents, ages 10 through 20 was collected to match demographics of the United States population in terms of race/ethnicity and household income (M age = 14.95, SD = 3.17). The sample included 53% males and 48% females, with an approximately equal number of participants from each age. The ethnic-racial makeup was 68% White, 13% Black or African American, 11% Latino or Hispanic, 4.5% Asian, 2.5% Biracial or Multiracial, and 1% other. Data were collected using a self-administered online questionnaire via Web-assisted survey software (Qualtrics). Surveys averaged 20 min to complete and were conducted between March and April 2016. All study procedures were approved by the university Internal Review Board and all participants provided online consent.

5 | MEASURES

5.1 | Parental media monitoring

Parental media monitoring was assessed using a modified version of the Perceived Parental Media Mediation Scale (Valkenburg, Piotrowski, Hermanns, & De Leeuw, 2013). For this study the measure was reduced in length to accommodate survey length requirements, and only abbreviated active and restrictive subscales were included. Adolescents were asked two questions involving restrictive media monitoring (e.g., "How often do your parents forbid you from watching television shows or movies because they have too much violence in them?") on a five-point Likert scale from 1 (*never*) to 5 (*very often*). Adolescents were also asked two questions regarding active monitoring (e.g., "How often do your parents talk to you about what you see in the media (e.g., violence, sex)") on a 5-point Likert scale from 1 (*never*) to 5 (*very often*).

Directly after each item, adolescents were presented with two follow-up items designed to measure whether parents were using controlling or autonomy supportive tactics in their media monitoring. For example, after answering a restrictive monitoring question, adolescents were asked "If your parents tell you this, how would they do this?" With options such as "They would...get angry if I still want to

play these games." Participants were also asked autonomy supporting follow-up questions. For example, after answering an active monitoring question, adolescents were asked how parents did this with options such as, "They would explain to me why it's better to not play those games." Questions were asked on a five-point Likert scale from 1 (*not at all true*) to 5 (*completely true*). Items were averaged for controlling and autonomy supporting. A confirmatory factor analysis was conducted to determine that the factor structure of the shortened scale matched that of the full scale (Valkenburg et al., 2013), and four factors were confirmed, each with two items loading $> .50$. Full measures are available in supplementary materials.

5.2 | Exposure to media content and time

The content of television programs watched and video games played was measured using a modified version of the Violent Media Exposure Index (VMI; Warburton, Gilmour, & Lackowski, 2008), by asking participants how often in the last month they watched/played programs that contained violent or very violent themes (four items; "e.g., rated TV-M or rated R movies with strong, bloody violence"), prosocial violence (two items; "people/characters help each other BY HURTING SOMEONE ELSE e.g., helping someone by hurting/killing the enemy such as superhero behavior, defending, rescuing, etc."), and prosocial content (two items; "in which people/characters help each other or are kind to one another WITHOUT hurting someone else"). Responses were recorded on a six-point scale from 1 (*never*) to 6 (*more than once a day*). Overall time spent watching television and playing video games was measured by asking participants to rate how frequently they use each type of media on a typical day on a scale ranging from 1 (*never*) to 3 (*31–50 min per day*) to 6 (*3–4 hr per day*) to 9 (*nine or more hours per day*).

5.3 | Prosocial behavior

Prosocial behavior was assessed toward two targets, family members and strangers, using an adapted version of the Kindness/Generosity subscale (Peterson & Seligman, 2004). Each scale contained three items on a scale from 1 (*never*) to 5 (*always*). Example items for the target of families are "I help my family even if it's not easy for me" and "I do small favors for my family." Example items for the target of strangers are "I voluntarily help others, even if I do not know them" and "I do small favors for people I do not know." Both scales had acceptable reliability (both targets $\alpha = .88$).

5.4 | Aggression

Physical and relational aggression were measured using three items each asking participants to rate how frequently they engaged in behaviors when angry from 1 (*never*) to 5 (*very often*). Example items for physical aggression include "pushed, grabbed, or shoved them" and "threw something at them." Example items for relational aggression include "called them names behind their back" and "spread rumors about them." Relational and physical aggression

scales were shown to be internally reliable (relational aggression $\alpha = .84$; physical aggression $\alpha = .89$). Items were modified from other assessments of relational aggression and physical aggression (e.g., Morales & Crick, 1998) that were focused on a younger, pre-adolescent population.

6 | RESULTS

6.1 | Descriptive statistics and preliminary results

First, data were explored for outliers or variables with extreme skew or kurtosis, and no problematic patterns were discovered. There were also very few instances of missing data ($< 2\%$), but the minimal missing data were handled using the Full Information Maximum likelihood feature of AMOS when conducting path analysis.

In an attempt to establish that violent, prosocial, and prosocial violent media content were distinct constructs, we conducted an initial confirmatory factor analysis exploring these three variables and the correlations between them ($\chi^2(7) = 12.53$, $p = .085$, CFI = .996, RMSEA = .026). For all three constructs, items loaded above 0.40 and there were no cross-loadings (suggested by exploration of modification indices). Correlations between constructs suggested that prosocial violent media was positively associated with both violent ($r = .76$, $p < .001$) and prosocial ($r = .32$, $p < .001$) content. Though these are strong and significant correlations, and there is clearly significant overlap between violent and prosocial violent content, we felt these three constructs were distinct enough to move forward with our hypothesized model.

Means, standard deviations, and correlations between all study variables are presented in Table 1. It is of note that autonomy supportive restrictive media monitoring was negatively associated with exposure to violent ($r = -.14$, $p < .001$), prosocial violent content ($r = -.08$, $p < .02$), and positively associated with exposure to prosocial content ($r = .11$, $p < .001$). Autonomy supportive active media monitoring was positively associated with exposure to prosocial content ($r = .12$, $p < .001$), and controlling active monitoring was positively associated with exposure to prosocial violent content ($r = .09$, $p = .003$) and violent content ($r = .10$, $p = .001$). Additionally, exposure to prosocial violent content was positively associated with physical ($r = .18$, $p < .001$) and relational aggression ($r = .17$, $p < .001$), and exposure to violent content was positively associated with physical ($r = .19$, $p < .001$) and relational aggression ($r = .17$, $p < .001$). Exposure to prosocial content was positively associated with prosocial behavior toward strangers ($r = .13$, $p < .001$) and family members ($r = .17$, $p < .001$), and not significantly associated with physical or relational aggression.

6.2 | Associations between parental media monitoring, media content exposure, and adolescent behavior

We used path analysis to explore associations between parental media monitoring (autonomy supportive active and restrictive

TABLE 1 Correlations between study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Supportive restrictive	-														
2. Supportive active	.34**	-													
3. Controlling restrictive	.22***	-.08*	-												
4. Controlling active	-.08*	-.47***	.28***	-											
5. Prosocial violent content	-.08*	-.02	-.00	.09**	-										
6. Violent content	-.14***	-.02	.01	.10**	.80***	-									
7. Prosocial content	.11**	.12***	.03	-.03	.35***	.22***	-								
8. Prosocial behavior str	.09**	.08**	.03	-.01	.08**	.07*	.13***	(.88)							
9. Prosocial behavior fam	.13**	.14***	-.00	-.07*	.04	.01	.17***	.48***	(.88)						
10. Physical aggression	-.01	-.04	.10**	.15***	.18***	.19***	.04	.02	-.09**	(.89)					
11. Relational aggression	-.06	-.17**	.14**	.22***	.17***	.17***	-.00	.03	-.07*	.49**	(.84)				
12. Media time	-.07*	.08*	.06	.07*	.37*	.41**	.33**	.01	.05	.12**	.05	-			
13. Age	-.31***	.23***	-.09**	.14***	.17***	.23***	-.10**	.11***	.90**	-.14***	.04	.044	-		
14. Gender	.02	-.04	.04	-.02	-.34***	-.38***	-.03	.02	.04	-.09**	.07*	-.26***	.02	-	
15. Income	.23***	.23***	.09**	-.10**	-.11***	-.13***	.04	-.04	-.08**	.06*	.02	-.04	-.64***	-.04	-
Mean (SD)	3.79 (.94)	3.87 (.83)	3.25 (1.01)	2.80 (.98)	3.11 (1.28)	3.12 (1.31)	3.52 (1.16)	3.07 (.88)	3.68 (.89)	1.74 (.84)	1.90 (.89)	4.17 (3.04)	15.00 (3.16)	1.52 (.50)	4.83 (3.04)
Items	2	2	2	2	5	4	2	3	3	3	3	1	1	1	1

Note: * $p < .05$, ** $p < .01$, *** $p < .001$; scale ranges: parental media monitoring scales: (1–5), media exposure scales: (1–6), aggressive and prosocial behavior: (1–5), media time: (1–9), gender: (1–2), income: (1–8).

monitoring, controlling active and restrictive monitoring) and exposure to media content (violent, prosocial, prosocial violent), media time, and prosocial (toward family and strangers) and aggressive (physical and relational) behaviors. We also explored interactions between exposure to media content and time, but none were statistically significant, so these interactions were dropped from future analyses. We explored indirect effects of media monitoring on adolescent behavior via media content exposure. Because it is optimal to have at least three indicators for a latent variable, only adolescent behaviors were latent in analyses below. Household income, child gender, age, and media time were used as controls, and child gender and age were explored as potential moderators of these relations.

The initial full model had good model fit ($X^2(142) = 611.38$, $p < .001$; CFI = .96, RMSEA = .05), see Figure 1. Results suggested that there were direct links between parental media monitoring and adolescent behavior. Notably, autonomy supportive restrictive and active monitoring were associated with higher levels of prosocial

behavior toward both strangers ($\beta = .11$, $p = .007$; $\beta = .08$, $p = .034$) and family members ($\beta = .14$, $p < .001$; $\beta = .13$, $p < .001$), and autonomy supportive active monitoring was also associated with lower levels of relational aggression ($\beta = -.10$, $p = .014$). In contrast, controlling restrictive monitoring was associated with higher levels of relational aggression ($\beta = .10$, $p = .009$) and controlling active monitoring was associated with higher levels of both physical ($\beta = .14$, $p < .001$) and relational ($\beta = .14$, $p < .001$) aggression.

Results also suggested that the only negative association between parental media monitoring and media content was that autonomy supportive restrictive monitoring was negatively associated with exposure to violent media content ($\beta = -.10$, $p = .005$), but not with exposure to prosocial violent content. Autonomy supportive active monitoring was associated with higher levels of exposure to violent ($\beta = .11$, $p < .001$) and prosocial content ($\beta = .10$, $p = .007$), but was not associated with exposure to prosocial violent content. The only parental monitoring associated with prosocial violent media was parental use of controlling active monitoring was associated

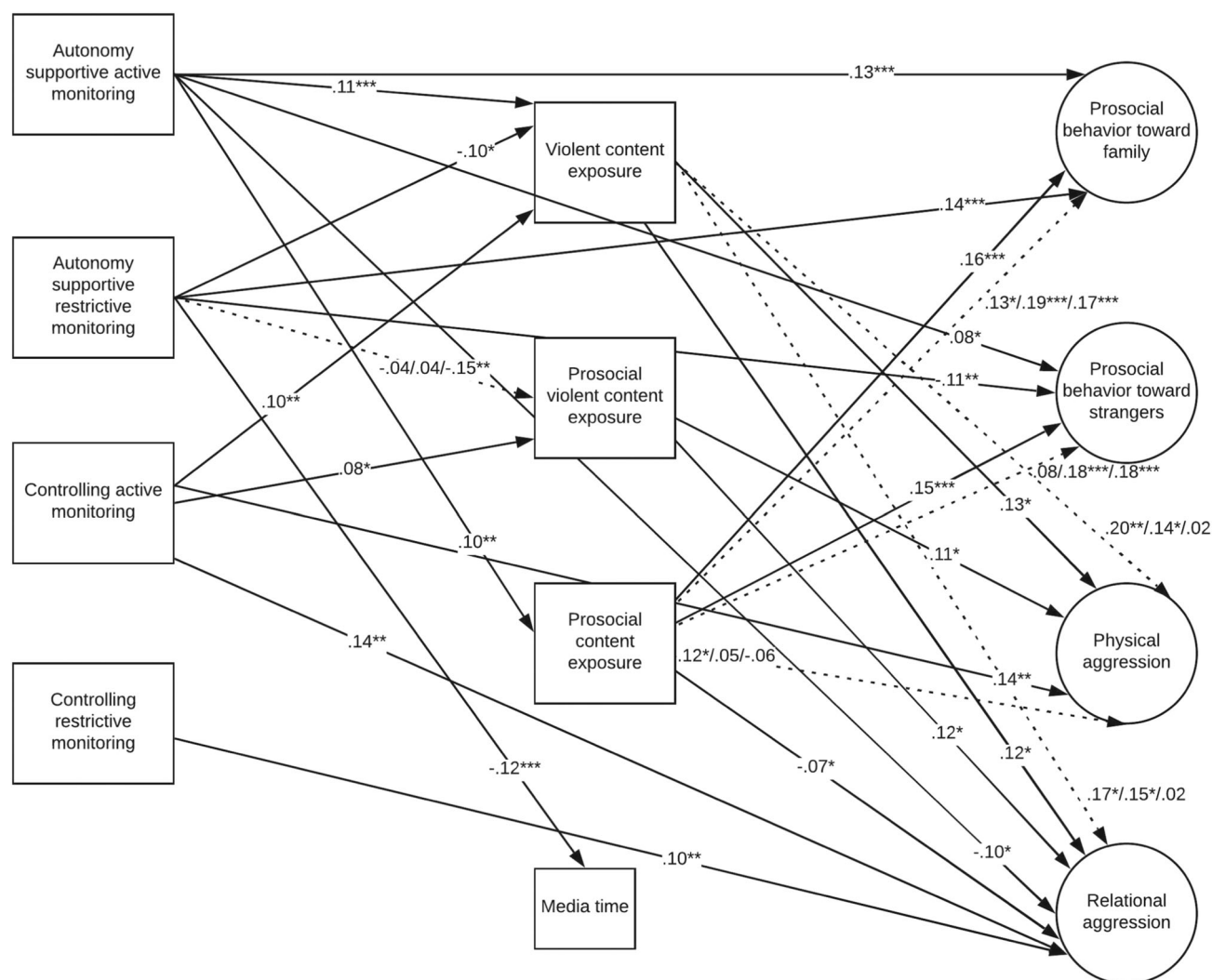


FIGURE 1 Relations between parental media monitoring, media content exposure, and adolescent behavior. Note: Only significant pathways are drawn for parsimony. Age and gender were included in the model but neither produced a main effect. Dotted lines show pathways moderated by age (early/middle/late adolescence); * $p < .05$, ** $p < .01$, *** $p < .001$

with higher levels of exposure to prosocial violent content ($\beta = .08, p = .013$) and violent content ($\beta = .10, p = .003$), and controlling restrictive monitoring was not associated with any aspect of media content.

In terms of links between media content and adolescent behaviors, exposure to prosocial violent content was associated with higher levels of both physical ($\beta = .11, p = .029$) and relational ($\beta = .16, p = .001$) aggression, but was not associated with prosocial behavior. Exposure to violent content was also associated with higher levels of both physical ($\beta = .13, p = .010$) and relational ($\beta = .12, p = .020$) aggression and prosocial content was associated with more prosocial behavior toward both strangers ($\beta = .15, p < .001$) and family members ($\beta = .16, p < .001$), and lower levels of relational aggression ($\beta = -.07, p = .025$).

In terms of controls, household income was not associated with media content or time, but was positively associated with adolescents' relational aggression ($\beta = .08, p = .048$). Being female was associated with lower levels of prosocial violent ($\beta = -.34, p < .001$) and violent media content ($\beta = -.38, p < .001$), media time ($\beta = -.26, p < .001$), and with higher levels of relational aggression ($\beta = .17, p < .001$). Age was associated with higher levels of exposure to prosocial violent ($\beta = .17, p < .001$) and violent ($\beta = .24, p < .001$) content, and less prosocial ($\beta = -.09, p < .029$) content and with higher levels of prosocial behavior toward strangers ($\beta = .21, p < .001$) and family ($\beta = .15, p < .001$), and lower levels of physical aggression ($\beta = -.27, p < .001$).

We next explored indirect effects using 2000 bootstrap samples and 95% confidence intervals. Analyses revealed that controlling active monitoring was associated indirectly with higher levels of physical (indirect effect = .025 [.010 – .050], $p = .028$) and relational (indirect effect = .028 [.011 – .053], $p = .025$) aggression via higher levels of prosocial violent media content. Analyses also revealed that autonomy supportive restrictive monitoring was indirectly associated with lower levels of relational (indirect effect = -.032 [–.053 to –.017], $p < .001$), and physical (indirect effect = -.035 [–.059 to –.019], $p < .001$) aggression via lower levels of exposure to violent media content. Both autonomy supportive active and controlling active monitoring were associated indirectly with higher levels of relational (indirect effect = .02 [.006 – .041], $p = .003$; indirect effect = .029 [.013 – .055], $p = .003$) and physical (indirect effect = .02 [.006 – .044], $p = .001$; indirect effect = .032 [.015 – .058], $p = .001$) aggression via higher levels of exposure to violent media content. Analyses also revealed that autonomy supportive active monitoring was associated with higher levels of prosocial behavior toward family (indirect effect = .025 [.010 – .046], $p = .002$) and strangers (indirect effect = .021 [.008 – .044], $p = .001$) via higher levels of exposure to prosocial media content.

6.3 | Alternative models

Given the cross-sectional nature of our data, we opted to conduct two alternative SEM models in an attempt to provide some additional confidence in the hypothesized model. The first alternative model

was identical to the hypothesized model (in terms of controls), but explored content and time as predictors of parental media monitoring, which in turn predicted adolescents' behavior. This model fit the data adequately ($X^2(164) = 839.20, p < .001$; CFI = .94, RMSEA = .06), but a X^2 difference test suggested that it did not fit the data as well as the hypothesized model ($X^2 \text{ difference}(22) = 227.82, p < .001$). The second alternative model explored adolescents' behavior as predictors of media monitoring, which in turn predicted media content and time. This model had borderline model fit ($X^2(159) = 933.06, p < .001$; CFI = .93, RMSEA = .06, and did not fit the data as well as the hypothesized model ($X^2 \text{ difference}(17) = 321.68, p < .001$). Taken together, these analyses lend some confidence to the hypothesized direction of effects.

Given research that occasionally conceptualizes media monitoring as a moderator or buffer in the relations between media content and behavioral outcomes (e.g., Fikkers et al., 2017), we also conducted four hierarchical regression analyses to test this possibility. In the first step we included controls (age, gender, income, and media time), in the second step we included the main effects of the four types of media monitoring and the three types of content, and in the third step we included the 12 interactions between media monitoring and content. In total this represented 48 interactions that were explored (12 across four outcomes), and results revealed that only two interactions were statistically significant. For one of those two, the step with the interactions did not account for a significant change in the R^2 , resulting in only 1 out of 48 interactions that were statistically significant. Thus, we felt confident that a model exploring direct effects was a more accurate fit to our data.

6.4 | Moderation as a function of child sex

To explore whether the hypothesized model functioned differently for boys and girls, we conducted multiple group analyses, which suggested that constraining all structural paths to be equal as a function of adolescent sex resulted in a decrease in model fit as indicated by a decrease in CFI > .01 (Little, 2013; decreased from .959 to .927). As a result, we proceeded to constrain each of the 64 structural paths to determine which paths were contributing to the decrease in model fit. Analyses revealed that the only substantive paths that could not be constrained to be equal as a function of adolescent sex were control variables, but that paths between parental media monitoring, media content, and adolescent behaviors functioned similarly for boys and girls [when considering only these paths, CFI = .951]. Thus, we concluded that the overall model was not moderated by child sex.

6.5 | Moderation as a function of child age

To explore whether the model functioned differently for early [13–14], middle [15–16], and late adolescents [17–20], we conducted multiple group analyses which suggested that constraining all structural paths to be equal as a function of adolescent age resulted in a decrease in model fit indicated by a decrease in CFI > .01

(decreased from .954 to .893). As a result, we proceeded to constrain each path one at a time to determine which paths were contributing to the decrease in model fit. It was determined that 6 of the 64 paths could not be constrained as a function of adolescent age, so those paths were left free to vary, with all other paths constrained to be equal as a function of adolescent age (CFI in unconstrained model .954, CFI in final constrained model .948). The first path that could not be constrained by age was from autonomy supportive restrictive monitoring to prosocial violent media content. When left free to vary, it was determined that autonomy supportive restrictive monitoring was not associated with lower levels of prosocial violent content for early ($\beta = -.04$, $p = .427$) or middle ($\beta = .04$, $p = .456$) adolescents, but it was for late ($\beta = -.15$, $p = .006$) adolescents. There were no differences in relations between prosocial violent content and behaviors by age, but prosocial content during early adolescence was associated with more prosocial behavior toward family ($\beta = .13$, $p = .035$) and less physical aggression ($\beta = -.12$, $p = .030$); and during middle and late adolescence (which did not differ from one another) with more prosocial behavior toward strangers ($\beta = .18$, $p = .002$; $\beta = .18$, $p < .001$) and family ($\beta = .19$, $p = .001$; $\beta = .17$, $p < .001$). Finally, violent content was associated with more physical and relational aggression during early ($\beta = .20$, $p = .005$; $\beta = .17$, $p = .024$) and middle adolescence ($\beta = .14$, $p = .034$; $\beta = .15$, $p = .026$), but not during late adolescence ($\beta = .02$, $p = .787$; $\beta = .02$, $p = .825$). These findings suggest that while prosocial violent content is linked to aggression at all ages, prosocial content has more of a positive impact as children get older, and violent content has less of a negative impact as children get older.

Given the differences in parental media monitoring as a function of age, we explored indirect effects from autonomy supportive restrictive monitoring to adolescent behaviors via prosocial violent content. Analyses revealed that there were no indirect effects for early or middle adolescence, but for late adolescents autonomy supportive restrictive monitoring was indirectly associated with lower levels of both relational (indirect effect = $-.019$ [$-.06$ to $-.001$], $p = .04$) and physical (indirect effect = $-.020$ [$-.07$ to $-.001$], $p = .04$) aggression via lower levels of exposure to prosocial violent content.

7 | DISCUSSION

The goal of the current study was to explore relations between controlling and autonomy supportive media monitoring and prosocial violent media content exposure, as well as prosocial and aggressive behavior. Main findings suggested that autonomy supportive restrictive monitoring was associated with lower levels of viewing prosocial violent content, but only among older adolescents. Additionally, autonomy supportive restrictive monitoring was the only form of parental media monitoring associated with lower levels of violent content and higher levels of prosocial content, and autonomy supportive active monitoring was the only aspect of

monitoring that promoted prosocial behavior via prosocial media content.

7.1 | Prosocial violent media content

Exposure to prosocial content in the media was related to increased prosocial behavior with strangers and family members. The current study supports previous research that shows exposure to prosocial content in the media is related to increased prosocial behavior in adolescence (Padilla-Walker, Coyne, Collier, & Nielson, 2015). On the other hand, viewing prosocial violent content was related to increased aggressive behaviors. According to the GAM, exposure to media content activates constructs and scripts related to that behavior and primes individuals to behave in accordance with the activated scripts in social situations and encounters in the short-term. Over time as these scripts and schemes are activated and reinforced through repeated exposure in the media, individuals can develop personalities and physiological tendencies towards these behaviors making them increasingly likely across time. The current study supports the GAM, suggesting that exposure to media content may alter aggressive and prosocial behaviors. In regard to prosocial violence, some researchers suggest that viewing prosocial violent media is effective in teaching children about defending and helping others in bullying situations (Johansson & Hannula, 2012), while others connect prosocial violent content with increased physical and relationally aggressive behaviors (Coyne et al., 2017). The current study reaffirms the relationship between exposure to violence in the media and associations with physical and relational aggression but is one of the first studies to explicitly examine the effect of exposure to prosocial violence in adolescence. Accordingly, the findings suggest that in terms of behavioral correlates prosocial violent content is more similar to violent content than prosocial content. It is possible that when violent and prosocial media content co-occur, the violence is portrayed in ways that increase the likelihood of repetition (e.g., morally justified), or perhaps the aggressive content in prosocial violent media is more graphic and realistic than the prosocial content, thus making it more likely to be internalized and reinforced by the viewer (Barlett & Rodeheffer, 2009).

7.2 | Parental media monitoring

The GAM suggests that media content influences behavior, yet past research suggests that parents can play an important role in the content of the media their children are exposed to (input routes) and how this content is internalized and processed (scripts and schemes related to aggression and prosocial behavior). Past researchers have treated parenting behaviors as moderators and predictors of adolescent media content consumption, generally split between media effects researchers and parenting researchers. The current study found support for the direct role of parenting practices on adolescents' exposure to media content and how media content then influences adolescent behavior. The current study suggests that the only type of media monitoring

associated with exposure to prosocial violent content was controlling active monitoring, which was associated with *higher* levels of prosocial violent content. It is interesting that no forms of parental media monitoring were associated with lower levels of exposure to prosocial violent content (when not moderating for adolescent age), especially considering autonomy supportive restrictive monitoring was associated with lower levels of violent content exposure. This finding provides some initial evidence that perhaps prosocial violent media is meaningfully different than violent media content, especially when it comes to parental monitoring. One study on prosocial violent superhero media in young children discussed the possibility of parents not knowing how to handle prosocial violent content (Coyne et al., 2017). On one hand, prosocial violent media sends positive messages about defending behaviors and helping others, while at the same time portraying aggressive behavior (Martin, 2007). It is possible that parents do not understand the effect that prosocial violent media exposure can have on adolescents in terms of aggressive behaviors, because of the morally justified nature of the violence. Because of this, parents may not monitor this type of media as effectively, or do not know how to limit or monitor this type of media.

That being said, age significantly moderated the association between autonomy supportive restrictive monitoring and lower levels of exposure to prosocial violent content, which was only effective among older adolescents (not early and middle adolescents). Previous research has noted that restrictive monitoring is least effective for older adolescents because youth desire to make decisions for themselves (Nathanson, 2002), but results of this study show that in terms of prosocial violent content, autonomy supportive restrictive monitoring is the only effective form of parental media monitoring and only for older adolescents. It is possible that a cumulative effect exists for autonomy supportive restrictive media monitoring, so that the effect of utilizing this form of media monitoring through early and middle adolescence builds and is associated with less prosocial violent content exposure in late adolescence. It is also possible that the complexity of prosocial violent content is not fully understood by early and middle adolescents, so parental media monitoring efforts may be less effective at younger ages.

Findings from the current study also suggested controlling styles of parental media monitoring, might actually lead to higher levels of exposure to negative content, while autonomy supportive styles are associated with viewing more prosocial content. Specifically, controlling active monitoring was indirectly associated with higher levels of physical and relational aggression via higher levels of exposure to prosocial violent and violent media content. That being said, autonomy supportive active monitoring was the only parental monitoring behavior associated with higher levels of prosocial behavior via increased prosocial content. Though this study is the first to our knowledge to examine the influence of controlling parenting behaviors on adolescent exposure to media content, an existing literature suggests that

parental control may not result in desired outcomes. For example, controlling parenting behaviors have been associated with adolescent media dependencies use (Li, Li, & Newman, 2013) and with adolescent behavioral problems such as cyberbullying (Kokkinos, Antoniadou, Asdre, & Voulgaridou, 2016).

Taken together, the results on parental media monitoring suggest that autonomy supportive parenting may be the most effective way to influence child behavior, but when exposure to negative content is a part of the discussion, restriction seems to be necessary for decreasing negative effects and behavioral outcomes (Meeus et al., 2018). These associations are well supported by the SDT (Ryan & Deci, 2000), and by the parenting styles literature noting that authoritative parents who set high expectations and rules for children in an atmosphere of open communication and acceptance have the most favorable outcomes (Pinquart, 2017). These findings also point to the importance of future research on parental media monitoring considering not just the type of media monitoring (restrictive vs. active), but also the style (autonomy supportive vs. controlling), as this distinction is key.

7.3 | Limitations and conclusions

The current study is not without limitations. While based on a nationally representative sample of American youth, the current study was cross-sectional and future research should examine these relations longitudinally and experimentally to have a better understanding of the short- and long-term effects of parental media monitoring, prosocial violent media content, and adolescent behavior. The current study also employed only self-report measures of adolescent behaviors. These self-report measures are an important first step, but they are not without bias and future research should consider multiple reporters. Next, it is important to note that many of the key measures are based on few items, which can lead to small effect sizes. Future research should examine all constructs using more robust measures of media content exposure and behavior. Finally, we are aware that testing for mediation and moderation using cross-sectional data is problematic, and in an effort to increase confidence in the hypothesized model we have analyzed alternative models that did not fit the data as well as the hypothesized model, but future researchers should examine these associations longitudinally.

Despite these limitations, the current study added meaningfully to research by finding that prosocial violent content resulted in similar relations to adolescent behavioral outcomes as did violent content in terms of physical and relational aggression. However, it is important to note that the links from parental monitoring behaviors to media content did not function the same for prosocial violent media and violent media. Parents should use caution and encourage their children to watch media that has limited aggressive and violent content—even if the aggression and violence are prosocial, and should utilize autonomy supportive parenting behaviors to most effectively shape adolescent behavior.

ORCID

Hailey G. Holmgren  <http://orcid.org/0000-0002-5291-5013>

Sarah M. Coyne  <http://orcid.org/0000-0002-1403-8726>

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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