

DOUGLAS A. GENTILE *Iowa State University*

AMY I. NATHANSON AND ERIC E. RASMUSSEN *The Ohio State University**

RACHEL A. REIMER *Des Moines University***

DAVID A. WALSH *Mind Positive Parenting****

Do You See What I See? Parent and Child Reports of Parental Monitoring of Media

Research on parental monitoring of children's media use suggests parents can reduce the negative effects of media exposure on children, although this research is rarely conducted with elementary school children and leaves open questions about whether parents or children are better reporters. Participants were 1,323 children, their parents, and teachers. Parents and children reported on four aspects of monitoring for TV and video games: co-using, limit setting on amount, limit setting on content, and active mediation. Parents gave much higher estimates than did children. Monitoring was moderated by child age, child sex, parent marital status, parent education, and parent income. Although parent- and child-reported monitoring correlated rather poorly, both types were almost equally good predictors of children's screen

time, media violence exposure, and teacher reports of school performance. When there were differences, the child reports tended to be slightly better predictors, demonstrating the validity of child reports of parental monitoring.

Elementary school children spend a sizable portion of their waking hours in front of a screen, either watching TV or playing video games (Rideout, Foehr, & Roberts, 2010). The typical 8- to 10-year-old watches an average of 3 hours and 41 minutes of television and spends over an hour playing video games every day. Despite parents' concerns about their children's media use, the amount of time children spend with screen media continued to increase dramatically over the last decade (Rideout et al., 2010).

The latter part of middle childhood (approximately ages 8–10) is a critical period of child development in which children's selves begin to emerge (Jellinek, Patel, & Froehle, 2002). Children in this developmental stage begin to make independent choices and to develop and express their personalities. Middle childhood also is characterized by a desire to fit into peer groups, which can include pressures to smoke, drink, use drugs, and have the perfect body. As a result, media consumption may have especially important consequences during this developmental period. Televised content may reinforce messages from peers and provide

Department of Psychology, Iowa State University, W112 Lagomarcino Hall, Ames, IA 50011-3180 (dgentile@iastate.edu).

*School of Communication, The Ohio State University, Derby Hall, Columbus, OH 43210.

**Master of Public Health Program, Des Moines University, 3200 Grand Ave., Des Moines, IA 50312.

***Mind Positive Parenting, Walsh Associates, LLC, 3221 E. 24th St., Minneapolis, MN 55406.

Key Words: active mediation, media effects, middle childhood, parental monitoring.

both potentially positive and negative models of behavior. Video game playing may provide an escape or relief from an increasingly complicated social life and may also provide models for behavior. Indeed, some have suggested that the media act as a type of “super peer,” where the media are like powerful best friends who are able to make risky behavior seem normal (Strasburger, Wilson, & Jordan, 2009). Jellinek et al. (2002) have suggested that limits on media violence exposure are especially important during middle childhood because this is a period when norms of behavior are being internalized (see also Gentile & Sesma, 2003). Therefore, parental monitoring of children’s media is of potentially great relevance during this period.

Parent Monitoring of Media

Three primary forms of parental monitoring have been studied: active mediation, restrictive mediation, and coviewing. Although some research has investigated parental monitoring of the Internet (Lee & Chae, 2007; Livingstone & Helsper, 2008), the majority of work to date has focused on parental monitoring of television. Each form is associated with unique sets of predictors and outcomes. Of the three forms, active mediation has been studied the most frequently. Active mediation involves parent-child conversations about the media and its content (Austin, 1993, 2001; Chakroff & Nathanson, 2008; Nathanson, 2001a), and has been referred to as instructive guidance, discussion, and explanation (Bybee, Robinson, & Turow, 1982; Livingstone & Helsper, 2008; van der Voort, Nikken, & van Lil, 1992). Active mediation can involve educating children about the technical aspects of media programming (Nathanson, 2010) or providing children with opinions about content (Nathanson, 2004). Active mediation is linked with many positive outcomes, including enhanced comprehension of and learning from television (Collins, Sobol, & Westby, 1988; Corder-Bolz, 1980; Corder-Bolz & O’Byrant, 1978; Desmond, Singer, Singer, Calam, & Colimore, 1985; Valkenburg, Krumar, & deRoos, 1998), skepticism toward televised news (Austin, 1993), and endorsement of non-traditional gender roles (Corder-Bolz, 1980). In addition, active mediation can reduce negative effects of television on children, including modifying undesirable responses to advertising (Buijzen, 2009; Buijzen & Valkenburg, 2005),

news (Buijzen, Walma van der Molen, & Sondij, 2007), violent programming (Corder-Bolz, 1980; Nathanson, 1999, 2004; Nathanson & Cantor, 2000), and scary content (Cantor, 1994).

Restrictive mediation refers to parents’ setting rules or limits on children’s media exposure (Chakroff & Nathanson, 2008; Gentile & Walsh, 2002). Restrictive mediation can take two forms: limit setting on the amount of media viewed and limit setting on the content of media viewed. Restrictive mediation can include rules about when or how long children can watch TV and whether or not viewing is used as a reward or punishment (Nathanson, 2001a; Rosaen & Sherry, 2007). Restricting amount or content can have different impacts, as the effects of amount and content of media seem to be different (Gentile, 2011). Children whose parents restrict the amount of media use usually view less television (Atkin, Greenberg, & Baldwin, 1991; Corder-Bolz, 1980), experience more success in school (Roberts, Bachen, Horby, & Hernandez-Ramos, 1984), and endorse less stereotypical gender roles and fears of becoming victimized (Rothschild & Morgan, 1987). In contrast, restricting violent content can result in fewer aggressive tendencies than in other children (McLeod, Atkin, & Chaffee, 1972; Nathanson, 1999).

Coviewing of television is the simple act of a parent watching television with a child (Nathanson, 2001a). Parents may coview television deliberately to allow opportunities for conversation about objectionable content (An & Lee, 2010). If parents simply coview and do not discuss content, however, children may assume that their parents endorse the coviewed material (Nathanson, 2001b).

Fewer studies have examined the effects of coviewing, but they suggest that coviewing enhances television’s effects. For example, children whose parents coview educational television learn more from the material than do other children (Salomon, 1977). At the same time, coviewing can increase learning from undesirable content, such as violent television, and result in increased aggression among children (Nathanson & Cantor, 2000). In general, coviewing, by either parents or siblings, is related to enhanced enjoyment of the coviewed material (Salomon, 1977; Wilson & Weiss, 1993).

Relatively little work has examined parental monitoring of video games. This is surprising, as video games have become an important aspect of children’s media diets (Rideout et al., 2010).

This is particularly true in middle childhood. During this developmental period, media use behaviors begin to change, as children spend less time viewing television and more time with other media forms, such as video games (Rideout et al., 2010). In addition, outside influences beyond the family begin to take on special significance, with media serving somewhat of a peer function (Strasburger et al., 2009). Video games, because they become a more stable part of the media repertoire in middle childhood, may take on special significance during this time period, which may lead to distinct patterns of parental monitoring. In addition, parents may have different attitudes about their children's video game use compared to other media (Rideout & Hamel, 2006) that may translate into different monitoring practices.

The research that has been done has mostly focused on the predictors of video game monitoring and has revealed that parents who believe that video games have negative effects use active mediation and restrictive mediation more than other parents (Nikken & Jansz, 2006; Nikken, Jansz, & Schouwstra, 2007). Coplaying video games, however, is done more by parents who themselves play video games and believe that playing can have beneficial effects (Nikken & Jansz, 2006). As a result, coplaying does not appear to be motivated by a desire to help children avoid negative effects of video games. Some of the few studies on the effects of parental monitoring of video games suggested that parents who use the ratings to decide on what games children may play (restricting content) can reduce their risk of physical fights, although it was not specifically tested whether the restriction predicted lower media violence exposure (Gentile, Lynch, Linder, & Walsh, 2004). Similarly, in a sample of elementary school children, higher parental monitoring of multiple media predicted lower overall screen time, which predicted better school performance, although the mediated path was not directly tested (Gentile, Coyne, & Walsh, 2011).

Parent Versus Child Reports of Media Monitoring

One of the ongoing controversies in the parental monitoring literature is whether to gather reports of parental monitoring from parents or children (Buijzen, Rozendaal, Moorman, & Tanis, 2008). The main concern regarding parent reports

of parental monitoring involves the tendency among parents to provide socially desirable responses to questions about their own parenting practices (Maccoby & Martin, 1983). Social desirability bias among mothers appears to manifest itself as early as the pregnancy state of the mother-child relationship (van Bussel, Spitz, & Demyttenaere, 2010) and continues to influence mothers' reporting throughout their children's development and across a wide range of topics (Nederhof, 1985). Hoffman and Lippitt (1960) suggested that the need to present a desirable impression to others is especially pronounced when dealing with matters related to the family. Therefore, parental self-reports of parenting behavior may tell us more about currently accepted parenting behaviors than what parents actually do on a regular basis (Becker & Krug, 1965). At a minimum, parental reports and actual parenting behavior are not always the same thing (Verhoeven, Junger, Van Aken, Dekovic, & Van Aken, 2007). Although there is evidence that parental reports are valid (Marachi, McMahon, Spieker, & Munson, 1999), it is important to consider the implications of social desirability bias when interpreting the results from this source.

Prior work has found sizable disagreements between parent and child reports of parental monitoring (Fujioka & Austin, 2002; Nathanson, 2001a; Rossiter & Robertson, 1975). This work, however, has had a relatively narrow focus of studying television only or specific types of televised content, such as television advertising (Buijzen et al., 2008; Fujioka & Austin, 2002) or television violence (Nathanson, 2001a). As a result, we do not know whether and how parent and child reports differ when it comes to both general television viewing and video game playing, and we do not have good evidence about whether data from children and parents are equally valid.

The discrepancies in parent and child reports of monitoring have led scholars to speculate on the potential reasons for these discrepancies. Some scholars attribute the discrepancy to perceptual differences (Austin, 1992; Buijzen et al., 2008; Ritchie, 1991; Ritchie & Fitzpatrick, 1990), whereas others suggest that the weak correlations between parent and child reports are because of systematic reporting differences, as parents report higher levels of interaction than children do (Rossiter & Robertson, 1975). Other scholars have found evidence that certain

family characteristics (e.g., families with low levels of communication, families with sons) may increase the potential for parents to inflate their reports of monitoring (Buijzen et al., 2008). At the same time, others have found either no evidence of social desirability among parental self-reports (Vereijken, Hanta, & van Lieshout, 1997) or have argued that there is no difference in the reliability between parent and child reports of parental monitoring (Nathanson, 2001c; Van der Voort, Van Lil, & Peeters, 1998). Some researchers claim that parent reports are not only without substantial problems, but that they are particularly good indicators of parents' behaviors (Chakroff & Nathanson, 2008; Johnston, Scoular, & Ohan, 2004; Vereijken et al., 1997).

Because of the potential for social desirability bias, some have claimed that child reports of parental monitoring are more reliable indicators (Liau, Khoo, & Ang, 2005; Van den Bulck & van den Berg, 2000). Van den Bulck and van den Bergh also reasoned that it is important to pay attention to child reports because (a) children are active participants, or recipients, of the parent-child communication and (2) children are influenced not only by actual parent communication but by what they perceive to be their parent's intentions.

Buijzen et al. (2008) predicted that older children's reports of parental monitoring of advertising provided a better match to parent reports, perhaps because of the increased cognitive abilities of more mature children. But they did not find support for this in their study of 8–12-year-olds. What remains to be understood, however, is whether there are differences in validity between reporters over and above how well child and parent reports agree.

Child Characteristics as Predictors of Media Monitoring

Previous research has explored whether parental monitoring varies according to the characteristics of the child. This body of work has sought to understand these variations, in part, to improve the accuracy of predictions concerning the outcomes of parental monitoring. Although a variety of child characteristics have been studied, including child giftedness (Abelman & Pettey, 1989), the majority of work has focused on demographic variables, especially child age and child sex.

Child age. Parents often believe that their younger children are in need of more protection than are their older children. When it comes to media, parents are more concerned about their younger children's exposure to inappropriate media content and may feel more capable of monitoring their younger children's media use than their older children's use. Not surprisingly, research consistently shows that parents monitor television and video games with younger children more than with older children (Bybee et al., 1982; Hoffner & Buchanan, 2002; Nikken & Jansz, 2006). More specifically, younger children are more likely to receive both active mediation (Barkin et al., 2006; Mohr, 1979) and restrictive mediation (Atkin et al., 1991; Austin, Bolls, Fujioka, & Engelbertson, 1999; Brown, Childer, Bauman, & Koch, 1990; Desmond, Hirsch, Singer, & Singer, 1987; Fry & McCain, 1980; Mohr, 1979; Valkenburg, Krcmar, Peeters, & Marseille, 1999; Warren, 2001). Some work shows that coviewing is negatively correlated with child age (Austin et al., 1999; St. Peters, Fitch, Huston, Wright, & Eakins, 1991), but Dorr, Kovaric, and Doubleday (1989) found that it was positively correlated with age, perhaps because of increasing similarity between parent and child program preferences.

Although the age range of the children in our study was restricted, we nevertheless explored the relation between child age and parental media monitoring. In middle childhood, children are just beginning to experience some independence from parents, and the peer group, especially a same-sex peer group, becomes more important as children move toward adolescence (Buhrmester, 1992; Gavin & Furman, 1989). Likewise, parents may become less restrictive and more open in their communication styles, allowing children to express independent ideas as they mature (Meadowcroft, 1986; Saphir & Chaffee, 2002). As a result, it seems likely that that we would observe a trend toward decreasing parental media monitoring as children progress through middle childhood.

Child sex. Prior work also has studied whether parental monitoring varies according to the sex of the child. Warren (2003), Weaver and Barbour (1992), and Gross and Walsh (1980) found that parents were more restrictive with girls' television viewing than with boys' television viewing. This finding was replicated in a study

of monitoring of video games, as Nikken and Jansz (2006) found that parents restricted girls' video game playing more than boys' playing. It could be that parents are more protective of girls in general and that this heightened vigilance extends to their rules surrounding media.

Hoffner and Buchanan (2002) found that parents monitored boys' television more than they did for girls, probably because parents worried more about the effect that television violence on their sons compared to their daughters. Parents also reported more rules for VCR use for boys than for girls (Lin & Atkin, 1989). Still other studies have found no difference in monitoring (Van der Voort et al., 1992; Warren, 2001).

In middle childhood, parents may feel especially protective of their daughters, who they may believe are especially susceptible at this time to media messages surrounding attractiveness, body image, and sex. Pluhar, DiIorio, and McCarty (2010), for example, found that parents initiate conversations about sex with their daughters more often than with sons and especially as their daughters progress toward puberty. As a result, given our focus on middle childhood, we may see more parental monitoring of media among daughters than sons.

Parent Characteristics as Predictors of Media Monitoring

Previous research also has explored whether parental monitoring varies according to the characteristics of the parent. Several parent characteristics have been studied, with much of the work focused on demographic variables, especially parents' marital status, education, and income.

Marital status. Research has found that marital status is related to parental monitoring, with two-parent families more likely to engage in active mediation than single-parent families (Austin et al., 1999; Barkin et al., 2006). Marital status may be a surrogate measure for the amount of time or the opportunities available for media monitoring to occur. That is, there are simply more opportunities to monitor media when two adults are present compared with one. Austin et al. (1999) also found that the relation between marital status and mediation depended on the number of children in the house, such that two-parent households with more children were

more likely than two-parent households with fewer children to make negative comments about television. In addition, they found that when single parents do discuss television with their children, they tend to reinforce or praise television content.

Other work has explored whether the presence or absence of fathers or mothers is related to parental monitoring practices. Brown et al. (1990) found that homes with no father were less likely to have rules about television. This finding may again reflect the reality that two parents are better able to regulate media use than one parent.

Education and income. The literature remains unclear about whether or not parents' education and income level are related to the type and amount of parental mediation. Several studies failed to find a significant relation between either income or educational level and monitoring (Gross & Walsh, 1980; Hoffner & Buchanan, 2002; Lin & Atkin, 1989). Austin et al. (1999) also found no relations between active mediation and either education or income.

Research on family communication patterns suggests that families with higher education and income are most likely to use a more active, involved communication style and that families with lower socioeconomic status (SES) typically rely on rule setting and efforts to establish harmony and conformity within the group (Fujioka & Austin, 2002). Some of the research on parental media monitoring supports this general pattern. For example, parents' education level is positively associated with active mediation of television (Valkenburg et al., 1999) and video games (Nikken & Jansz, 2006). Although restrictive mediation is also positively related to education (Brown et al., 1990; Valkenburg et al., 1999), it is the preferred monitoring choice among low-income parents (Nikken & Jansz, 2006; Warren, 2005). When lower SES parents do engage in other forms of monitoring, they tend to make positive comments about television (Austin et al., 1999). Likewise, television coviewing is more likely among less educated parents (Austin et al., 1999; Warren, 2001), although the research support for this is mixed (Valkenburg et al., 1999).

Current Study

Research on parental monitoring of media suggests that parents can reduce the negative

effects of media exposure on children (Austin, 2001; Nathanson, 2001a). Although promising, this literature has left a number of questions unanswered. First, research has not focused on middle childhood, but has instead studied young children (Desmond et al., 1985; Warren, 2005) and adolescents (Austin, 1993; Lin & Atkin, 1989) or children across many developmental periods (Bybee et al., 1982; Dorr et al., 1989; Nikken et al., 2007; Valkenburg et al., 1999). Although some prior work has included children from middle childhood in their samples (e.g., Buijzen & Valkenburg, 2005; Buijzen et al., 2007; Lee & Chae, 2007) no research has focused exclusively on this developmental period and articulated why understanding media use and parental media monitoring during this time frame is important. Because of the social, emotional, physical, and cognitive changes that take place during middle childhood, parental monitoring may be especially critical in the healthy development of children. Second, prior work has relied on relatively small samples (Austin et al., 1999; Warren, 2003), thereby limiting the ability to generalize results. Third, most previous research has studied parental monitoring of one type of media (usually television) or advertising specifically (e.g., Buijzen et al., 2008), rather than studying how parents engage in monitoring of multiple forms of media simultaneously (An & Lee, 2010; Austin, 1992, 1993, 2001; Austin et al., 1999; Desmond et al., 1987; Gross & Walsh, 1980; Mohr, 1979; Nathanson, 2001a, 2004; Valkenburg et al., 1999). In particular, video games become important for children in middle childhood (Rideout et al., 2010); as a result, more research in parental monitoring of this medium is needed. Finally, most prior work has relied on reports of parental monitoring from either parents or children alone (Barkin et al., 2006; Buijzen, 2009; Bybee et al., 1982; Hoffner & Buchanan, 2002; Lin & Atkin, 1989; Nathanson, 2004). As a result, the literature is difficult to synthesize and leaves readers unsure as to which type of reports are most valid.

The purpose of this study was to address these limitations. Using a large sample of third through fifth graders and their parents, we examined in detail several important sociodemographic factors as predictors of parental monitoring of both television and video games during middle childhood. As a result, we sought to replicate

(by studying the same predictors) and extend (by studying both television and video game monitoring in a large sample of parents and children in middle childhood) prior work in this area. Our assumption, like the assumptions of prior work on the predictors of parental monitoring, is that monitoring behaviors vary according to some stable demographic characteristics of both the giver and receiver of the behaviors. These demographic factors may be surrogates for broader cultural or environmental differences (Austin, Knaus, & Meneguelli, 1997).

In addition, we conducted a comparison of parent and child reports of monitoring activities in order to better understand the extent of the discrepancies. Part of this comparison involved observing the relations between each type of report and children's screen time, media violence exposure, and school performance, outcomes that should be related to parental monitoring (Corder-Bolz, 1980; Gentile et al., 2004; Hicks, 1968; Horton & Santogrossi, 1978; Nathanson, 1999). By conducting these analyses, we sought to test the relative validity of reports from each source. These types of analyses have not been performed in prior work and therefore can provide much needed answers to an important lingering methodological question in the parental monitoring literature.

In the present study, we expected to see evidence of the social desirability bias. We therefore predicted that parents would report more frequent parental monitoring of children's media use than would children. We also expected that family characteristics would be systematically related to monitoring, such that parents would monitor younger children's media more, and married parents would monitor more than single or divorced parents. We also anticipated that higher income and education levels would be related to greater active and restrictive mediation, but to lower co-use of media. Finally, we expected that parental monitoring should predict a decreased amount of screen time and media violence exposure.

METHOD

Participants

A sample of 1,323 third- ($n = 430$), fourth- ($n = 446$), and fifth- ($n = 423$) grade children and their parents participated (65% response rate) in

this study. Participants (47% male, 90% White) were recruited from 10 elementary schools in Minnesota and Iowa. Participants were part of an obesity prevention and intervention program; recruitment details are described elsewhere (Eisenmann et al., 2008; Gentile et al., 2009). Children completed surveys in their classrooms supervised by research personnel, and parents completed surveys mailed to their homes. The study was approved by the University of Minnesota Institutional Review Board in accordance with the Declaration of Helsinki and the "Ethical Principles of Psychologists and Code of Conduct" (American Psychological Association, 2002).

Measures

Screen time. Time spent viewing TV and playing video games was assessed (independently) by both parents and children by asking for the amount of time each was viewed during different times of the day, separately for weekdays and weekends. This approach has been used reliably with parents (Gentile & Walsh, 2002) and children (Anderson, Gentile, & Buckley, 2007). Time spent with TV and video games was summed to create weekly screen time (ST).

Parent monitoring of media. The Adult Involvement in Media Scale (AIM; Anderson et al., 2007; Gentile et al., 2004) was used to measure parental monitoring of children's TV and videogame habits. The version used here measures four aspects of parental monitoring, with items shown in Table 2, below: coviewing (two items), limit setting on amount (five items), limit setting on content (four items), and active discussion about media (two items). These were asked of both parents and children for television and video games separately. Most of the items for children were on a 4-point scale with choices of *never*, *a little*, *often*, or *always*. Most of the items for parents were on a 5-point scale, with choices of *never*, *rarely*, *sometimes*, *often*, or *always*. The scale as a whole showed sufficient reliability (Cronbach's $\alpha = .85$ and $.82$ for child and parent report, respectively).

Media violence exposure. Children named their three favorite TV shows and three favorite video games. For each, they reported how violent it was on a 4-point scale (*Not at all violent* to *Very violent*) and how frequently they watched or

played it on a 5-point scale (*I almost never watch this show* to *Almost every day*). The violence and frequency ratings were multiplied and averaged across the six products to generate a media violence exposure value. This approach has been used validly with children in several studies (Anderson et al., 2007; Gentile et al., 2004, 2011).

Teacher reports of school performance. Children's classroom teachers reported on the average grade for each child on a 13-point scale, ranging from A to F (Gentile et al., 2011).

RESULTS

Differences Between Child Report and Parent Report

Table 1 displays overall descriptive statistics, and Table 2 displays the results comparing child- and parent-reported parental monitoring for each aspect measured. Although the scale as a whole has acceptable reliability for both children and parents, we report results by individual items here because it is valuable to see precisely where children and parents agree or disagree (e.g., perceptions may be very different for TV or video games). Because the child-report version included one less option to make it more age appropriate for elementary school children, the responses have been centered to make mean scores comparable. Although every pair of items is significantly correlated (all $r_s p < .001$), the correlations between parents and children are much smaller than one might expect, generally falling into the small to moderate range ($r_s = .11$ to $.42$). Therefore, children and parents do not always agree. When one examines the mean scores in Table 2, parents report significantly more monitoring than children do for all aspects measured (as tested with paired-samples t tests), with the exception of playing video games together (parents report significantly less coplaying). This pattern is seen clearly when one examines the percentage of children and parents who say the parent "always" or "often" does each: Again with the exception of coviewing, a much higher percentage of parents report that they always or often monitor (approximately twice as many). This result exists despite the fact that children had one fewer response options, which should have artificially increased the percentage of children answering "always" or "often."

Table 1. Descriptive Statistics

	Mean	SD	Range			
Child age	9.21	0.94	6–12			
Parental education level	4.33	1.23	1–6			
Income level	4.87	1.21	1–6			
Child-reported media violence exposure	1.95	2.30	0–15			
Teacher-reported school performance	4.33	2.45	1–13			
	Child Report			Parent Report		
	Mean	SD	Range	Mean	SD	Range
Total weekly screen time	29.95	24.63	0–148.5	22.85	12.90	0–116.5
Weekly TV time	20.46	15.97	0–81	17.61	9.37	0–65.5
Weekly video game time	9.38	12.33	0–94	5.24	6.17	0–57
Overall parental monitoring	2.10	0.54	1–3.54	3.15	0.54	1.31–4.43

Family Context: Child Sex

Coviewing. Girls reported statistically significantly higher coviewing of television than did boys ($t = 2.47, df = 1,186, p < .05$), but this difference is not replicated by parent report. Neither children nor parents report any differences in coplaying video games by sex of child.

Limits on amount. Girls reported that parents set limits on the amount of time they may watch TV ($t = 2.64, df = 1,174, p < .01$), that the family has rules about both how much ($t = 2.20, df = 1,043, p < .05$) and when ($t = 3.13, df = 1,086, p < .01$) TV may be watched more frequently than boys. There were not, however, any differences on limiting amount of video game play by child report. In contrast, parents did not report different limits on amount of TV by sex of child, but did report different limits on amount of video games. Parents reported greater limits for boys than girls on the amount of time children may play video games ($t = 3.29, df = 851, p < .001$) and on family rules for how much boys may play ($t = 2.86, df = 861, p < .01$).

Limits on content. Girls reported that parents require permission for them to watch TV or DVDs more frequently than did boys ($t = 2.28, df = 1,177, p < .05$) or play video games ($t = 2.66, df = 1,061, p < .01$), but there are no differences in frequency of parents helping to select appropriate media by child report. Parents reported no significant differences in limiting content by sex of child on these questions, but

when asked whether they have ever kept a child from getting a video game because of its rating, parents were significantly more likely to have stopped a girl from getting a game ($t = 4.77, df = 831, p < .001$).

Active mediation. Neither children nor parents reported differences in discussions about television or movies, but both reported that parents talk more frequently to boys about the video games they play ($t = 2.98, df = 1,065, p < .01$, and $t = 3.39, df = 862, p < .001$ for child and parent reports, respectively).

Family Context: Child Age

Although the age distribution of our sample was limited, we found that parents were more likely to play video games together with younger children (by parent report; child report not significant). Additionally, limits on content showed differences in this age range, with parents more likely to help choose TV programs to watch (parent report only) or video games to play (parent report only) and to require permission before watching movies or playing video games (child and parent report). Parents reported being more likely to have kept a younger child from getting a video game because of its rating.

Family Context: Marital Status

When we compared married, single or widowed, and divorced or separated families, there were no differences on coviewing or active mediation,

Table 2. Correlations Between Child and Parent Reports of Parental Monitoring of Media, Including Paired *t* Tests of Differences

Item ^a	<i>r</i> (<i>N</i>)	Child Report		Parent Report	
		% Always/ Often or Yes	Mean (<i>SD</i>)	% Always/ Often or Yes	Mean (<i>SD</i>)
Coviewing					
How often do you watch TV together with a parent?	.26 (920)	44.7%	-0.03 (0.68)	38.1%	0.31** (0.68)
How often does a parent play computer or video games with you?	.24 (766)	12.0%	-0.79 (0.72)	2.7%	-0.89** (0.82)
Limits on amount					
How often does a parent put limits on how much time you may watch TV?	.33 (908)	35.8%	-0.30 (1.08)	59.7%	0.64** (1.07)
Does your family have rules about how much TV may be watched? (N/S/Y)	.30 (805)	28.3%	2.01 (0.77)	51.3%	2.24** (0.87)
Does your family have rules about when TV may be watched? (N/S/Y)	.14 (843)	37.5%	2.04 (0.86)	70.2%	2.54** (0.75)
Does your family have rules about how much you may play video games? (N/S/Y)	.23 (694)	35.7%	2.03 (0.84)	61.5%	2.39** (0.84)
Does your family have rules about when you may play video games? (N/S/Y)	.19 (711)	36.1%	1.97 (0.86)	67.7%	2.46** (0.82)
Limits on content					
How often does your parent help you decide what programs to watch?	.16 (903)	22.7%	-0.60 (0.94)	65.8%	0.83** (0.99)
How often do you have to ask permission before watching a movie or DVD on TV?	.37 (909)	45.1%	-0.04 (1.13)	61.1%	0.72** (1.25)
How often does a parent help decide what video games you may buy or rent?	.15 (714)	45.3%	0.05 (1.15)	90.7%	1.59** (0.81)
How often do you have to ask permission before playing video games?	.42 (758)	39.2%	-0.21 (1.21)	53.1%	0.49** (1.34)
Active mediation					
How often does a parent talk to you about the TV and movies you watch?	.11 (910)	21.2%	-9.54 (9.86)	53.0%	0.53** (0.79)
How often does a parent talk to you about the video games you play?	.15 (763)	15.6%	-0.77 (0.86)	34.5%	0.13** (0.97)

Note: Means reported are centered when child and parent reports are on different frequency scales. Frequency scale items are centered at 0 around the midpoint of each scale to make child and parent report means comparable. N/S/Y (*No, Sometimes, or Yes*) scales are scored as 1, 2, and 3, with "Yes" highest.

^aChild version is displayed; parent versions ask about "you" and "your child."

***p* < .001.

but there are on both types of limit setting. As shown in Table 3, married parents are more likely to set limits on both the amount and content of media (by both child and parent reports) than are divorced or single parents.

Family Context: Parental Education and Income Levels

We tested whether parental monitoring differed by education and income levels with an analysis of variance and also by correlating

Table 3. *Uncentered Means of Parental Monitoring by Marital Status*

Item ^a	Married	Divorced/ Separated	Single/ Widowed	F	df	p
How often does a parent put limits on how much time you may watch TV?						
Child	2.24 _a	2.00	1.79 _a	4.90	2,908	.008
Parent	3.69 _c	3.47	3.10 _c	7.43	2,963	.001
Does your family have rules about how much TV may be watched? (N/S/Y)						
Child	2.04 _a	1.93 _b	1.50 _{ab}	8.34	2,801	.000
Parent	2.25 _c	2.17	1.90 _c	3.31	2,967	.037
Does your family have rules about when TV may be watched? (N/S/Y)						
Child	2.08 _a	1.84	1.63 _a	7.34	2,839	.001
Parent	2.58	2.39	2.33	4.80	2,966	.008
Does your family have rules about how much you may play video games? (N/S/Y)						
Child	2.05 _a	1.86	1.50 _a	8.02	2,747	.000
Parent	2.39	2.19	2.15	3.04	2,855	.048
Does your family have rules about when you may play video games? (N/S/Y)						
Child	1.98 _a	1.90	1.58 _a	3.75	2,761	.024
Parent	2.50	2.41	2.21	2.45	2,853	.087
How often does your parent help you decide what programs to watch?						
Child	1.90	2.00	1.74	1.02	2,899	.362
Parent	3.88	3.46	3.51	10.00	2,966	.000
How often do you have to ask permission before watching a movie or DVD on TV?						
Child	2.52 _{ab}	2.17 _a	1.89 _b	8.92	2,906	.000
Parent	3.78 _{cd}	3.29 _c	3.10 _d	11.79	2,965	.000
How often does a parent help decide what video games you may buy or rent?						
Child	2.54 _a	2.36	1.97 _a	4.69	2,799	.009
Parent	4.61 _c	4.35 _c	4.28	5.52	2,804	.004
How often do you have to ask permission before playing video games?						
Child	2.33 _a	2.13	1.78 _a	4.43	2,813	.012
Parent	3.55	3.20	3.15	3.61	2,851	.028

Note: Means with similar subscripts are significantly different from each other as determined by Bonferroni post hoc analysis (tests are conducted only within reporter). Frequency scale items are centered at 0 around the midpoint of each scale to make child and parent report means comparable. N/S/Y (*No*, *Sometimes*, or *Yes*) scales are scored as 1, 2, and 3, with “Yes” highest.

^aChild version of items is displayed.

monitoring aspects with ordinal education level (six levels from *some high school* to *graduate or professional degree*) or income level (six levels from *<\$15,000/year* to *>\$100,000/year*).

Coviewing. Coviewing of TV is negatively related to education level, with lower educated parents coviewing the most: child-report $r = -.15$, $F(5, 858) = 2.68$, $p < .05$, and parent

report $r = -.12$, $F(5, 911) = 2.28$, $p < .05$. (In all cases below, only the correlation coefficients are reported for simplicity.)

Limits on amount. In contrast to coviewing, limit setting is positively related to education level, with higher educated parents setting limits the most. Regarding limits on TV, this is seen for frequency of setting limits on TV time (child report $r = .18$, parent report $r = .18$), whether families have rules for amount of TV time (child report $r = .19$, parent report $r = .14$), and whether families have rules about when TV may be watched (child report $r = .19$, parent report $r = .12$). Regarding limits on video games, education level is related to frequency of setting limits on game time (child report $r = .14$, parent report $r = .12$), whether families have rules about how much children may play (child report $r = .14$, parent report $r = .12$), and rules about when children may play (child report $r = .10$, parent report $r = .07$, marginally significant).

Limits on content. Parental monitoring of content is positively related to education level. Children from higher educated families are more likely to need permission before they may watch TV or DVDs (child report $r = .13$, parent report $r = .15$) or play video games (child report $r = .08$, parent report $r = .06$, marginally significant). There is a less consistent picture when examining whether parents help to choose TV programs to watch (parent report $r = .12$) or video games children may buy or rent (child report $r = .08$).

Active mediation. Whether parents are likely to discuss TV, movies, and video games with their children seems not to be related to education level.

Regarding income level, the results are almost identical to those of education level, although the correlations are generally a little bit smaller.

Comparing the Validity of Child and Parent Reports

Although the pattern of results described above is very similar regardless of whether one examines the child-report or parent-report data, it is surprising that the correlations between the two reporters are so low (Table 2). Although parents and children live in the same house and should

both be generally aware of the family's rules and children's media habits, several hypotheses can be posited to explain differences between them. It is possible that parents are more accurate reporters because they set the rules and are more accurate in their observations than elementary school children. It is also possible that children are more accurate because they are more able to see inconsistencies in the family rules and because their parents are not always around to see what the children actually do with their media time. Furthermore, parents may feel some social desirability pressure when asked to report on their parenting. It is also possible that both may be equally accurate reporters, and the low correlation between parents and children is due only to random error in measurement. We were able to provide a test of these hypotheses because both parents and children reported on parental monitoring and also provided information on children's weekly screen time. We conducted multiple regressions predicting both child- and parent-reported children's screen time, controlling for child age, child sex, family marital status, parental education, and total household income. Theoretically, after controlling for these variables, parental limits on amount should still be a significant predictor of screen time if the reporter is providing valid information.

Focusing first on television, child-reported limits on amount was a significant predictor of both child-reported amount of TV children watched per week ($\beta = -.32$, $p < .001$) and parent-reported amount of TV watched per week ($\beta = -.17$, $p < .001$). The parent-reported limits were also a significant predictor of both child-reported amount of TV children watched per week ($\beta = -.14$, $p < .001$) and parent-reported amount of TV watched per week ($\beta = -.32$, $p < .001$). Focusing on video games, child-reported limits on amount was a significant predictor of child-reported amount of video game play per week ($\beta = -.17$, $p < .001$), but not parent-reported amount of play ($\beta = -.03$, *ns*). Parent-reported limits were also a significant predictor of parent-reported amount of children's video game play ($\beta = -.10$, $p < .01$) but not child-reported amount of play ($\beta = .04$, *ns*). As can be seen, method variance appears to have an effect, as within-reporter variables predict each other better than when one reporter's variable is used to predict the other reporter's variable, although these still

work for TV time. Both child- and parent-report variables appear to be equally valid.

Both limits on content and active mediation are hypothesized to reduce media violence exposure. When we compare child- and parent-reported limits on content, both are significant predictors of lower media violence exposure, although child reports are better ($\beta = -.24, p < .001$, and $\beta = -.09, p < .01$, respectively, after controlling for age, sex, marital status, parental education, and income). Similarly, when we compare child- and parent-reported active mediation, both are significant predictors of lower media violence exposure, with child reports predicting better ($\beta = -.22, p < .001$, and $\beta = -.08, p < .05$, respectively).

As a final comparison of validity, we used teacher reports of children’s school performance as an outcome variable. Theoretically, parental limits on amount should have a significant mediated effect on school performance through screen time controlling for age, sex, marital status, parental education, and income. Direct and mediated pathways were tested via path analyses in Mplus 6.1. Table 4 shows the direct and mediated pathways predicting teacher-reported school performance from parental limit setting via total screen time. Regardless of whether child- or parent-report variables are used, all path coefficients are significant, and all model fits are excellent. Although shared method variance by reporter increases the magnitude of path coefficients, child reports tend to work slightly better than parent reports.

DISCUSSION

This study was designed to replicate and extend previous research on parental monitoring by studying a large sample of both parents and children in middle childhood, a unique developmental period in which media become increasingly important. Because little work has explored monitoring of video game use, we also extended previous research by including reports of both television and video games. Given the importance of video games for children (Rideout et al., 2010), we focused on how parents monitor both television and video game use. By studying both, we have provided a more comprehensive snapshot of how parents monitor children’s media use. Second, we explored how parent and child reports of parental monitoring vary by key sociodemographic factors. Finally, we assessed the validity of reports from both parents and children in order to help solve one of the literature’s lingering conceptual and methodological questions about the appropriateness of relying on either source to provide information about parental monitoring.

Consistent with prior work, parents reported substantially more monitoring of media than children. It is likely that parent reports were shaped by social desirability concerns, although we have no direct evidence of this. One hint comes from the fact that parents were less likely to report coplaying video games with their children. Parents may realize that societal conceptions of good parenting involve limiting children’s television time and discouraging

Table 4. Path Coefficients and Goodness-of-Fit Statistics Comparing Direct and Mediated Pathways Predicting Teacher-Reported Grades From Parental Limit Setting via Total Screen Time While Controlling for Child Age, Child Sex, Marital Status, Parental Education, and Household Income Level

	Child Report Parental Limits		Parent Report Parental Limits	
	Child Report Screen Time	Parent Report Screen Time	Child Report Screen Time	Parent Report Screen Time
Direct path from limit setting to screen time	.189**	.1069**	.1879**	.1029**
Direct path from screen time to grades	-.3209**	-.2259**	-.1139**	-.3149**
Mediated path from limit setting to grades	-.0619**	-.0249*	-.0219*	-.0329*
Chi-square, <i>df</i> , <i>p</i> value	12.6, 8, .13	15.4, 8, .05	12.9, 8, .11	13.0, 8, .11
Root mean square error of approximation	.021	.026	.022	.022
Comparative fit index	.994	.991	.993	.994
Tucker-Lewis index	.981	.969	.976	.980
Standardized root mean square residual	.018	.021	.019	.019

* $p < .01$, ** $p < .001$.

video game use. As a result, parents may be unwilling to admit that they play video games with their children. If parent reports are subject to social desirability biases, this may be less of a problem than it seems at first because most of the statistics used in psychological studies rely on variance and relative values rather than absolute values. Therefore, absolute accuracy is less important in measurement of monitoring than relative accuracy. The fact that both parent- and child-report variables tend to predict outcomes about equally well suggests that any systematic deviation due to social desirability does not eliminate the measure's value.

Our analyses on the demographic predictors of parental monitoring revealed several interesting trends. Parents are more likely to monitor their daughters' media use than their sons' media use. The prior work in this area is mixed but provides some evidence that parents monitor girls' media use more than boys' media use. Parents' self-reported monitoring activities for sons and daughters may have been shaped by parents' beliefs about how parents should monitor girls and boys. As a result, their reports may reflect stereotypes about boys and girls and the parenting of sons and daughters. For example, parents were more likely to report restricting their sons' video game playing time than their daughters, but were more likely to have stopped their daughters from getting a video game. As a result, parents report preventing their daughters from playing video games and allowing, but regulating, their sons' video game playing. It could be that parents believe that it is more culturally acceptable for boys to play video games than it is for girls. Girls' media use was more regulated, but also more shared, as girls reported more television coviewing than did boys. These differences may reflect parents' being more protective of and involved with their daughters compared with their sons. Other work has also found that parents communicate more with their daughters compared with their sons (Leaper, Anderson, & Sanders, 1998) and institute more rules about media use for girls compared with boys (Desmond et al., 1987; Gross & Walsh, 1980; Warren, 2003).

Even within our restricted age range, we found that parents are more likely to monitor their younger children's media use than their older children's media use. Most of these differences were based on parent reports, however. As a result, we should keep in mind

the likelihood that parents may believe it is socially desirable to report monitoring their younger children's media use. Nonetheless, the age differences in monitoring of video games were observed in both parent and child reports. These results replicate prior work using different age groups of children (Bybee et al., 1982; Hoffner & Buchanan, 2002; Nikken & Jansz, 2006). When we combine our results with those of other studies, we see that parental monitoring decreases in frequency as children age throughout middle childhood.

The negative correlation between parental monitoring and child age is important. Parents may believe that they have less influence on their children as they age and may therefore detach somewhat from their children. Other work shows, however, that older children and adolescents desire more parental involvement (Henry, Sager, & Plunkett, 1996) and that parents can continue to exert influence over their youngsters throughout development (Collins, 1990; Hunter & Youniss, 1982). Parents need to adapt their monitoring strategies as children mature in order to stay effective (Nathanson & Yang, 2003), but do not need to abandon monitoring attempts altogether. Because of the importance of media during middle childhood, parents should be informed about the importance of maintaining their monitoring efforts. Parents would also benefit from being educated about the types of strategies that should bring success with their developing children.

We found that children of married parents were more likely to receive some form of restrictive mediation than other children. This finding was not surprising and may reflect the simple fact that having two parents in the house increases the likelihood that a parent is monitoring children's media use. This is particularly true if at least one parent is home more often and can more easily involve himself or herself in the children's media use. Single parents may not be at home as often because of demanding work schedules and may not have the opportunity to regulate or enforce rules about media. In addition, because Brown et al. (1990) found that rules were less likely when fathers were absent, our findings could reflect the importance of fathers in particular for instituting restrictive mediation.

Unlike prior work, however, no differences emerged between married and other parents in active mediation or coviewing. Our findings,

then, may reflect a general difference in the amount of rules for children of married or single parents. Rules may be more difficult to set and enforce in single-parent households, not only because of the difficulty of having just one parent in charge but also because single parents may be less willing to introduce additional stress and hardship into the family by creating and enforcing rules (Thomson, McLanahan, & Curtin, 1992).

Our results on education and income replicated some past work. We found that parents with less education and lower income covieved more than other parents, and parents with more education and higher income used more restrictive mediation. The results with covieving likely reflect the fact that households with less education and income are typically heavier consumers of media (Rideout et al., 2010; Roberts & Foehr, 2008). As a result, covieving or co-using media becomes a more common occurrence in these households compared with households with more parental education and higher income.

We did not find any relations between active mediation and either parental education or income. This is consistent with some prior work, but contradicts other work that found relations between these demographics and specific forms of active mediation, such as positive or negative active mediation (Austin et al., 1999). Because our measure of active mediation was more general, we may not have been able to detect any differences due to income or education. As a result, parents of all income and education levels may engage in about the same amount of general discussion about media with their children, but it remains unclear whether the parents in our sample were roughly equivalent in either condemning or praising the media content their children consume. This reliance on a general measure of active mediation is a serious limitation of this study, and future work should include information on the content of parent-child media discussions.

Although parent-child concordance is valuable, it does not answer the question about whether one reporter provides data that are more valid. By measuring variables that serve as theoretically relevant outcomes (i.e., screen time, media violence exposure, school performance), we could compare the validity of both reporters' data. In this sample, we found that both parent and child reports are good tools for measuring parental monitoring of television and video

games. Both types of reports were almost equally good predictors of children's screen time, media violence exposure, and teacher reports of school performance. When there were differences, the child reports tended to be slightly better predictors.

Child reports of parental monitoring are not free from bias or other error, but they nonetheless seem to function as slightly better measures. The majority of work on parental monitoring, however, has relied on parents as reporters, perhaps because researchers have assumed that parents would provide more accurate data. Child reports, at least from children in middle childhood, should be seriously considered by future work as equivalent, if not better, alternatives for assessing parental monitoring.

Although our study sheds light on parental monitoring of both television and video games, it does not address computer use during middle childhood. Eight- to 10-year-olds spend more time with television and video games compared with computers (Rideout et al., 2010); as a result, our findings address the types of screen media that children in this age range use the most. It is important to note, however, that computer use among children has been increasing over time (Rideout et al., 2010). Therefore, as children continue to incorporate computer use into their daily media repertoires, it will become important to understand how parents monitor children's computer time. Our measure is also limited in at least two other ways. The subscales for each aspect of monitoring are not balanced, with some aspects measured by only one item per medium. Although the scale has reliability as a whole, it should be improved if we desire to be able to measure these aspects independently. Furthermore, our items on active mediation are general, and it may be of value to include more items that ask about details of the parental mediation, such as how parents discuss what they agree or disagree with in media portrayals.

Previous work on parental monitoring has relied on relatively limited samples and measures. That is, what we know about parental monitoring is based on small samples of mostly young children's or adolescents' television use. Our study adds to the research by using a large sample of parents and children in middle childhood. In summary, our study offers two main contributions. First, by studying monitoring of both television and video games using a large sample of parents and children in middle

childhood, it increases our understanding of the predictors of parental media monitoring during a unique developmental period. Second, it illustrates the validity, and perhaps slight superiority, of child reports of monitoring with reporters as young as 8 years of age. Future research on middle childhood should continue to use child reports or at least acknowledge the limitations of using parent reports. In addition, research should be conducted on older populations to understand the relative validity of parental media monitoring reports from parents and adolescents. This type of research is critical to helping us gain an understanding of how parents monitor their children's media use. Furthermore, understanding the normative responses and differences in parent and child perspectives can help family therapists when they are working with families. Regardless of differences in parent and child perspectives, this study continues to demonstrate the importance of parental monitoring, as greater active and restrictive mediation predicted lower media violence exposure and better grades for children.

NOTE

This study was sponsored by grants from Medica Foundation, the Healthy and Active America Foundation, Cargill, Inc., and Fairview Health Services.

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