Family Conflict and Violent Electronic Media Use in School-Aged Children

Elizabeth A. Vandewater, June H. Lee, and Mi-Suk Shim
University of Texas at Austin

Using a national sample of children aged 6 to 12 ($N = 1,075$), this study examined the relative merits of 3 theoretical perspectives on the relation between family conflict and children's use of electronic media (television and electronic games with violent content): (a) the family context hypothesis, whereby family conflict is positively related to violent electronic media use because family tensions will be reflected in children's interest in media with violent content; (b) the reaction hypothesis, whereby family conflict is positively related to nonviolent media use because children seek out nonviolent media content as a reaction against conflict in their family environment; and (c) the escape hypothesis, whereby family conflict is positively related to total electronic media use because children use media to escape family conflict regardless of content. Results supported the family context hypothesis. There was no support for the reaction and escape hypotheses.

Violence in the media has been blamed for various ills of American children, including insensitivity to violence, violent behavior, and even acts of murder (Huston, Zillmann, & Bryant, 1994). The link between use of media with violent content and antisocial or aggressive behavior in children is by now well established (Bushman & Huesmann, 2001; Friedrich-Cofer & Huston, 1986; Huesmann & Eron, 1986). We know that there is a link, that the relation is positive, and that the magnitude of the relation is only slightly less than the relation between cigarette smoking and lung cancer (Bushman & Huesmann, 2001). Other negative effects of violent media content, including desensitization and fear, have also been well documented (Cantor, 2000).

However, much less is known about why children become interested in media with violent content in the first place. Although a plethora of theory and research

supports the notion that the family and the nature of family interactions are major socializing forces in children's lives, few studies have attempted to understand the nature of the relation between family interactions and children's interest in media with violent content. On the basis of family systems theory (Sameroff, 1987), ecological theory (Bronfenbrenner, 1986), and social learning theory (Bandura, 1973, 2002), we believe that family interactions—specifically conflictual interactions—may have an important impact on children's use of violent media content. Our purpose in this study is to address this gap in the literature by explicitly examining the relation between family conflict and children's use of television and video games with violent content.

THE IMPACT OF VIOLENT MEDIA ON CHILDREN

The relation between viewing violent television programs and aggression has been thoroughly established (Bushman & Huesmann, 2001; Friedrich-Cofer & Huston, 1986; Huesmann & Eron, 1986). Across methodologies (laboratory experiments, field studies, and longitudinal studies) and measures, research has converged to suggest that viewing television violence is positively related to both short-term and long-term aggressive behavior (Bushman & Huesmann, 2001; Friedrich-Cofer & Huston, 1986; Huesmann & Miller, 1994; Paik & Comstock, 1994). Moreover, this relation has been found to be remarkably consistent over time and across gender (Huesmann, Moise-Titus, Podolski, & Eron, 2003). A comprehensive meta-analysis of 217 studies of the association between antisocial behavior (aggression, violent criminal behavior, and nonviolent criminal behavior) and media violence revealed the correlation between the two to be sizable (.31) and significant (Paik & Comstock, 1994).

There is also a fair amount of evidence that violent content in video games is related to externalizing and aggressive behavior, both in the short term and longitudinally (Anderson & Bushman, 2001; Anderson & Dill, 2000). A meta-analysis of 33 studies that tested the relation between video game violence and aggression indicated a positive and significant effect size of $r = .19$ (Anderson & Bushman, 2001). Because of the interactive nature of video games, both researchers and the general public are particularly concerned about the effects of violent content in such games on children (Silvern & Williamson, 1987). Several characteristics of video games are different from television. In contrast to television, video games require action on the part of a player for the game to progress. A player can become an active aggressor, carry out aggressive behaviors, and practice them repeatedly. In addition, video game violence is directly rewarded, and consequences for the aggression are not realistic. Such characteristics provide reasons to believe that the effects of video game violence might be stronger than those of television violence (Calvert & Tan, 1996; Dill & Dill, 1998).

THE FAMILY ECOLOGY OF CHILDREN'S MEDIA USE

Children's exposure to violent content in media does not happen in a vacuum; rather, it occurs in the wider contexts in which they live their lives. For preadolescent children, the family is perhaps the most important context of media use. In fact, children's primary contact with media occurs informally as part of the home and family environment, rather than in structured settings and activities (Huston et al., 1994). However, research on children's media use generally ignores the importance of the family in understanding the relations between violent content and behavior. Likewise, family researchers tend to ignore the importance of media as a context of socialization (e.g., in addition to parenting and family interactions) within families. Thus these two literatures, both concerned with understanding adjustment in children, have proceeded independently of one another, with little sharing of ideas and information.

Only a handful of researchers have looked to aspects of the family, and particularly conflictual interactions among family members, in an attempt to broaden our understanding of the determinants of interest in violent media content among children (Tangney, 1988). Thus far, research in this area has primarily focused on the relation between family interactions and television viewing. Such research suggests that family tensions are related to higher levels of total viewing (Rosenblatt & Cunningham, 1976), and there is some indication that parent–child conflict is related to exposure to violent content (Chaffee & McLeod, 1972). In an early study, Dominick and Greenberg (1972) found that violent program content was positively related with aggressive behavior only among children whose parents approved of aggression as a problem-solving tactic. Despite the high level of interest in video game violence, however, almost nothing is known about how family processes, such as family conflict, may be related to violent video game play among children. Given the impact of violent media use on children, understanding the antecedents and contexts surrounding their use is especially important.

THIS STUDY

In this study, we strove to integrate ideas from two rather disparate literatures—the literature on children's media use, and the literature on family interactions. We explored the relation between family conflict and school-aged (6- to 12-year-old) children's overall electronic media (i.e., television and electronic games) use, and their use of violent electronic media. To develop our hypotheses, we relied on two prominent theoretical perspectives, the uses-and-gratifications perspective (Conway & Rubin, 1991) and social cognitive theory (Bandura, 2002). According to the uses-and-gratifications perspective (Conway & Rubin, 1991), audience members select media content based on how it fulfills their needs (e.g., stress relief, information seeking, escape). According to social cognitive theory (Bandura, 2002), mod-

eled events become part of children's repertoire of behaviors and cognitive re-
hearsals. The notion that family context will affect children's media preferences
fits quite well with both perspectives.

Based on these perspectives, we formulated and examined three competing hy-
potheses. The first is the *family context hypothesis,* which posits that family con-
flict will be positively related to violent electronic media use because family ten-
sions will be reflected in children's interest in media with violent content. This
hypothesis is commensurate with social cognitive theory. It assumes that children
will be attracted to violent (i.e., conflictual) media content because conflict is mod-
eled in the family and they will use media as another avenue for acting out such
conflict. Another plausible hypothesis is the *reaction hypothesis,* where family
conflict will be positively related to nonviolent electronic media use because chil-
dren seek out nonviolent media content as a reaction against conflict in their family
environment. This hypothesis is commensurate with the uses-and-gratifications
perspective, and assumes that children's motivation for using particular media is to
reduce opportunities for experiencing conflict. Finally, the *escape hypothesis* posits
that family conflict will be positively related to higher levels of total media use, re-
gardless of content, because children use media to escape family conflict. This hy-
pothesis is also commensurate with the uses-and-gratifications perspective, and also
assumes that children's motivation for using particular media is to reduce opportuni-
ties for experiencing conflict. However, unlike the reaction hypothesis, the escape
hypothesis assumes that content does not matter, and thus any content (including vi-
olent content) can be used to escape or avoid conflictual family interactions.

METHOD

The Panel Study of Income Dynamics

The data for these analyses were collected by the Institute for Social Research at
the University of Michigan as part of the Panel Study of Income Dynamics (PSID).
The PSID is a longitudinal study for which more than 30 years of data have been
collected from a nationally representative sample. Originally consisting primarily
of demographic data focusing on social and economic capital, the PSID was aug-
mented in 1997 to include the Child Development Supplement (CDS). The CDS
comprises a series of questionnaires and tests concerning children of families in
the sample. All families participating in the PSID with children under 12 years old
were asked to complete the CDS. A total of 2,380 families agreed to participate,
yielding a sample of 3,562 children.

Samples

Each participant in the PSID was assigned a weight based on various demographic
characteristics (e.g., race, income level, and education level) to reflect the PSID's

oversampling of minorities, lower income groups, and those with less education. The original CDS weights were recalibrated for the subsample of 2,902 children who completed at least one of two time-use diaries and were then used to weight individuals in this study to achieve nationally representative estimates.

Analyses were conducted on two subsamples of 6- to 12-year-olds. Analyses of television viewing included respondents who completed both time diaries and had complete data on all other variables ($n = 1,075$). Children who reported no television use ($n = 47$) were also included. The sample for electronic game analyses included children who returned two diaries, had complete data on the variables of interest (i.e., child age, gender, and ethnicity; level of family conflict; household income-to-needs ratio; and education of the head of household), and who reported any electronic game play ($n = 428$).

Media Use Variables

The CDS comprised a number of instruments completed by primary caregivers, teachers, and occasionally the older children. Among these instruments were two 24-hr time-use diaries that provided all the media use data reported in this analysis. On 1 weekday and 1 weekend day, the primary caregiver of each child was asked to report all activities in which the child engaged. Older children participated in the completion of their own diaries. A primary activity and its duration were recorded to account for every minute of each 24-hr period and, if appropriate, a secondary activity was also noted. For instance, if a child was traveling while playing a video game, traveling would be coded as the primary activity and playing a video game as the secondary activity. For a complete discussion of the diary procedures, see Hofferth and Sandberg (2001).

When watching television, playing a video game (on a game console such as Nintendo or Sony Playstation), or playing a computer game (on a computer CD-ROM) was the child's primary activity, the title of the program or game was requested. No request for titles was made for television viewing or electronic game play when the activity was reported as a secondary activity. Every television program was coded as violent or nonviolent, and every electronic game was coded as nonviolent, mildly violent, or severely violent.

Total television viewing and electronic game play.   Total times spent viewing television and playing electronic games were expressed as weekly estimates using the following equation: (Reported weekday viewing or play × 5) + (Reported weekend viewing or play × 2) = Estimated weekly viewing or play. Minutes of game play were log-transformed to correct for skewness.

Violent television content.   Television programs were coded as violent if violence was a central and integral part of the plot or of the main characters' occupations, if the lead characters' main purpose was to fight or flee from violence, or if

there was more violence in the program than would be expected in the everyday life of a child (e.g., *Power Rangers, X Files*). Three coders, with an average kappa estimate of interrater reliability of .81, determined which programs were considered violent. Minutes per week of violent television viewing was calculated in the same manner as for total television viewing. Minutes per week of nonviolent television viewing (e.g., *Barney, Wheel of Fortune*) was calculated in the following way: (Total weekly minutes of television viewing) – (Minutes per week of violent television viewing) = Minutes per week of nonviolent television viewing.

   Violent electronic game content.   Electronic games were considered mildly violent if they contained comedic or slapstick violence; mild acts against inanimate objects; nongraphical physical acts against humans or animals (without blood or gore); or unsafe, hazardous, or conflicting behavior. Examples included *Super Mario Brothers, Donkey Kong,* and *Pat Riley Basketball.* Games were coded as severely violent if they depicted serious acts against humans, vicious acts against animals, acts producing injury or death, deliberate vehicular violence, sexual violence or aggression, explosives, blood, gore, body parts, or mutilation. Examples of such games were *Mortal Kombat, Street Fighter,* and *Mighty Morphin Power Rangers.* Examples of nonviolent games include *Reader Rabbit* and *Tetris.* One expert coder coded all the electronic game titles for violence and 10 trained student coders each coded 10% of the titles. The average exact agreement between the student coders and the expert coder was 88%. Minutes per week of mildly violent, severely violent, and nonviolent electronic game play were calculated in the same way as for television viewing and were log-transformed to correct for skewed distributions.

Family Conflict

Family conflict was determined using a six-item measure (Sweet, Bumpass, & Call, 1988) asking primary caregivers to report the level of overall conflict in the family on 4-point scale ranging from 1 (*completely agree*) to 4 (*completely disagree*). Examples of items include "family members often criticize each other," "we fight a lot in our family," and "family members sometimes get so angry they throw things." The average of items was used as the final score, wherein higher scores indicate higher levels of family conflict ($\alpha = .69$). Descriptive statistics for the television and electronic game samples are shown in Table 1.

Covariates

Variables known to be related to family conflict and children's media use were statistically controlled (see Table 1 for descriptives). Children's media use varies by demographic factors such as age, gender, and ethnicity (Greenberg & Dominik,

TABLE 1
Means and Standard Deviations for All Variables by Subsample

	Television Sample[a]		Electronic Game Sample[b]	
	M	SD	M	SD
Total television	824.76	594.34	—	—
Violent television	221.82	280.67	—	—
Nonviolent television	602.94	501.63	—	—
Total electronic games	—	—	352.75	353.57
Mildly violent electronic games	—	—	125.20	209.34
Severely violent electronic games	—	—	57.09	223.48
Nonviolent electronic games	—	—	59.34	143.71
Family conflict	2.05	0.46	2.05	0.45
Child age	9.03	2.04	9.12	2.01
Child gender[c]	0.49	0.50	0.36	0.48
Child ethnicity[d]	0.48	0.50	0.43	0.50
Income-to-needs ratio	3.09	4.03	3.48	5.40
Education of household head	12.82	2.74	13.20	2.49

[a]$n = 1,075$. [b]$n = 428$. [c]0 = boys, 1 = girls. [d]0 = White, 1 = non-White.

1969; Wright et al., 2001) and socioeconomic factors like household income and parental education (Comstock, 1991; Greenberg & Dominik, 1969; Truglio, Murphy, Oppenheimer, Huston, & Wright, 1996). Children also respond differently to family tensions based on age (Allison & Furstenberg, 1989) and gender (Aro, 1988; Cummings, Vogel, Cummings, & El-Sheikh, 1989; Emery & O'Leary, 1982). The child's gender and ethnicity were included as dummy variables with boys and White children as reference groups. The child's age, family's income-to-needs ratio (i.e., family income divided by family poverty threshold income), and the years of education completed by the head of each household were also used as covariates.

Analysis Plan

Recall that our main interest was to ascertain whether family conflict is associated with the total time children spend watching television and playing electronic games, and the amount of time spent playing or watching mildly violent, severely violent, and nonviolent programs.

   Ordinary least squares regression was used on each of the dependent variables (i.e., minutes per week spent on television viewing and electronic game play; minutes per week spent watching violent content on television, and playing with mildly or severely violent electronic games; and minutes per week spent playing or watching nonviolent content). The variables child's age, gender, ethnicity, income-to-needs ratio, and education of household head were entered as control

variables. Family conflict was entered as a second step in the regression to assess its relation to each dependent variable. Because children's responses to family discord differ by age (Allison & Furstenberg, 1989) and gender (Aro, 1988; Cummings et al., 1989; Emery & O'Leary, 1982), we tested for interactions of family conflict with age and gender in the third step of the regression. Unless these interactions were statistically significant, the second step was considered the most accurate estimate of the relations tested.

RESULTS

Television

Intercorrelations among all variables for the television subsample are shown in Table 2. Family conflict was not significantly related to either children's total television viewing or nonviolent television viewing (see Table 3). However, there was a significant Age × Family Conflict interaction for violent television viewing. Follow-up analyses revealed that the relation between family conflict and violent television viewing was positive only among older children in the sample (9- to 12-year-olds). Thus, the family conflict hypothesis was supported only for older children's viewing of violent television content.

Electronic Games

Table 4 shows the intercorrelations among all variables for the electronic game subsample. As shown in Table 5, family conflict did not predict children's total electronic game play. It was, however, predictive of mildly violent electronic game

TABLE 2
Intercorrelations Among All Variables for the Television Sample

	1	2	3	4	5	6	7	8	9
1. Total TV	—	.57**	.88**	.04	.09**	.01	.16*	−.14**	−.12**
2. Violent TV		—	.14**	.02	.01	−.04	.09*	−.05	−.04
3. Nonviolent TV			—	.04	.11*	.02	.16*	−.13**	−.13**
4. Family conflict				—	.09**	.00	−.08*	−.07*	.01
5. Age					—	.10**	−.01	.03	.04
6. Gender[a]						—	−.08**	.04	.04
7. Ethnicity[b]							—	−.28**	−.38**
8. Income-to-needs								—	.38**
9. Education of head									—

Note. N = 1,075.
[a]0 = boys, 1 = girls. [b]0 = White, 1 = non-White.
**$p < .01$. *$p < .05$.

TABLE 3
Standardized Regression Coefficients for Predicting Total, Violent,
and Nonviolent Television Viewing From Family Conflict

	Total Viewing (β)	Violent Television Viewing (β)	Nonviolent Television Viewing (β)
Child age	.09**	.00	.11***
Child gender[a]	.01	−.02	.03
Child ethnicity[b]	.13***	.06[#]	.12***
Income-to-needs ratio	−.09**	−.06[#]	−.08*
Education of household head	−.05	.01	−.06[#]
Family conflict	.04	.02	.03
Age × Family Conflict	—	.06*	—
Gender × Family Conflict	—	.00	—
Adjusted R^2	.04***	.01[#]	.05***

[a]0 = boys, 1 = girls. [b]0 = White, 1 = non-White.
*$p < .05$. **$p < .01$. ***$p < .001$. [#]$p < .10$.

play: Children in higher conflict families spent more time playing mildly violent games than did those in less conflictual families. A significant Age × Family Conflict interaction emerged, such that the relation between family conflict and playing mildly violent games was stronger among younger children (ages 6–8) than older children (ages 9–12). These findings provide support for the family context hypothesis. Family conflict was also associated with nonviolent game play, such that children in higher conflict families spent less time playing nonviolent games than did those in lower conflict families (see Table 3). These findings run counter to the reaction hypothesis, but further support the family context hypothesis. There were no significant interactions of age or gender with family conflict.

DISCUSSION

The goal of this study was to examine the family context surrounding children's media use; specifically, we proposed that family conflict could be related to children's overall use of media and their interest in violent media in three ways: Children's media use could reflect modeled conflict in the their family environment, thereby increasing their use of violent media (the family context hypothesis); children could react against the conflict in their families by choosing nonviolent media (the reaction hypothesis); or children could use media, regardless of content, to escape family conflict (the escape hypothesis).

The findings consistently supported the family context hypothesis. Older children in high-conflict families watched more violent television than did those in less conflictual families. Children in families with higher levels of conflict spent

TABLE 4
Intercorrelations Among All Variables for the Electronic Game Subsample

	1	2	3	4	5	6	7	8	9	10
1. Total game play	—	.29**	.30**	.05	.04	.05	-.28**	.09*	-.03	-.07
2. Mild violent-game play		—	-.09	-.29**	.14**	-.03	-.17**	.00	.02	-.02
3. Severe violent-game play			—	-.07	.02	.00	-.17**	-.05	.02	.07
4. Nonviolent-game play				—	-.19**	.01	.22**	-.06	-.01	.01
5. Family conflict					—	.03	-.05	-.07	-.13**	-.16**
6. Age						—	.08	.05	-.04	.04
7. Gender[a]							—	-.11*	.05	.01
8.								—		
9. Income-to-needs									—	.32**
10. Education of head										—

Note. $N = 428$.
[a]0 = boys, 1 = girls. [b]0 = White, 1 = non-White.
*$p < .05$. **$p < .01$.

TABLE 5
Standardized Regression Coefficients for Predicting Total, Mildly Violent,
Severely Violent, and Nonviolent Electronic-Game Play From Family Conflict

	Total Game Play (β)	Mildly Violent-Game Play (β)	Severely Violent-Game Play (β)	Nonviolent Game Play (β)
Child age	.07	−.02	.02	.00
Child gender[a]	−.28***	−.16***	−.18***	.21***
Child ethnicity[b]	.05	.00	−.06	−.07
Income-to-needs ratio	.02	.05	.00	−.05
Education of household head	−.06	−.01	.06	−.03
Family conflict	.02	.16**	.02	−.20***
Age × Family Conflict	—	−.11*	—	—
Gender × Family Conflict	—	.01	—	—
Adjusted R^2	.08***	.04***	.03**	.08***

[a]0 = boys, 1 = girls. [b]0 = White, 1 = non-White.
***$p < .001$. **$p < .01$.

more time playing mildly violent electronic games, and less time playing nonviolent games, than did those from lower conflict families. It is worth noting that the variance in mildly violent electronic game play was primarily explained by two variables: child gender and family conflict. Although it is neither surprising nor novel information that boys play more violent electronic games than do girls (Wright et al., 2001), it is noteworthy that the strength of the association between family conflict and violent games is second only to that of gender.

At first glance, the fact that family conflict is only related to mild video game violence and not to severe video game violence seems to contradict the family context hypothesis. However, we believe that the nature of the violence in mildly violent video games is more akin to the level of the conflict children experience in their family. That is, although a few children undoubtedly experience severe violence in their families, this is not a normative experience (Vandewater & Lansford, 1998). Rather the majority of family conflict children experience is most likely closer to the kind of violence seen in mildly violent video games (e.g., slapstick-type hitting, such as is shown in *Mario Brothers*) and this is reflected in the positive relation between family conflict and mildly violent video games.

It is also possible that there are other processes underlying these findings. Parents who are in conflictual relationships could be themselves heavy users of violent media, and their children's media use could mirror theirs, either through modeling or coviewing. Family conflict may also interfere with parenting ability (e.g., Conger, Ge, Elder, Lorenz, & Simons, 1994); thus parents in high-conflict families may be unable to monitor their children's media use, especially their use of violent content.

Children's use of violent media may also reflect parental or familial attitudes toward violence and conflict. For preadolescent children in particular, parents are of-

ten the decision makers in purchasing video or computer games, and parents who allow violent games may have more lenient attitudes toward violence. This may partially explain why family conflict predicted only older children's use of violent television, whereas it predicted violent game play for all children. Television and electronic games enter the home in different ways. With television, the finding could suggest an interplay between the programming that is available and children's content preferences. Compared with programming for younger children, violent programming for older children and adults is more readily available and more graphic. Family conflict may lead children to be more interested in violent programs, and older children can more easily select such content because of its prevalence in programming for older age groups. Content preferences thus become more differentiated for older children than they do for younger children.

CONCLUSIONS AND IMPLICATIONS

Caveats are necessary in interpreting these results, chief of which is that these data are correlational and thus preclude causal inferences. Thus, for example, although it may be that family conflict increases children's interest in and use of media with violent content, it is equally plausible that use of media with violent content increases children's aggressive behavior (e.g., Bushman & Huesmann, 2001) and consequently increases family conflict. It is also possible that the two have reciprocal effects on one another. The disentangling of causal effects remains an important issue to be addressed in future research.

Regardless of the direction of the effect, however, our results indicate that family interactions (in this case conflictual interactions) are indeed related to the content of electronic media used by children (in this case violent content). These results suggest, then, that media researchers would do well to examine the connections between family contexts and children's electronic media use. Pursuing research questions that draw from both the family processes and media literatures is a fruitful approach to understanding the family ecology of children's media use.

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