Physical Violence Between Siblings

A Theoretical and Empirical Analysis

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This study develops and tests a theoretical model to explain sibling violence based on the feminist, conflict, and social learning theoretical perspectives and research in psychology and sociology. A multivariate analysis of data from 651 young adults generally supports hypotheses from all three theoretical perspectives. Males with brothers have significantly higher levels of sibling violence than the other three types of sibling pairs. As predicted, conflict and abuse between parents are associated with negative parent-child interactions, which in turn are related to problems in siblings' relationships with each other. All of these predict sibling violence.

Keywords: *sibling violence; family violence; feminist theory; conflict theory; social learning theory*

Sibling violence is the most common form of family violence (Straus & Gelles, 1990; Straus, Gelles, & Steinmetz, 1980). Estimates are that from 60% to more than 80% of children engage in it (Goodwin & Roscoe, 1990; Roscoe, Goodwin, & Kennedy, 1987; Straus & Gelles, 1990; Straus et al., 1980). Frequently measured by the Conflict Tactics Scale (Straus, 1979), sibling violence includes shoving, slapping, hitting, punching, and threatening or using a weapon. Sibling violence often leads to retaliation, and it tends to escalate (Brody, Stoneman, & McCoy, 1987; Dunn & Munn, 1986; Patterson, Dishion, & Bank, 1984).

Sibling violence has been linked to poor peer relationships between school-age children (Berndt & Bulleit, 1985; MacKinnon-Lewis, Starnes, Volling, & Johnson, 1997; Stormshak, Bellanti, & Bierman, 1996), negative behavior in childhood and adolescence (Brody, 1998; Dunn,

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Slomskowski, Beardsall, & Rende, 1994), and violence in adulthood (Gully, Dengerink, Pepping, & Bergstrom, 1981; Mangold & Koski, 1990). Thus, sibling violence may presage violence in dating relationships, family violence in adulthood, and nonfamily adult violence. Yet tests of theoretical explanations for sibling violence are rare. Most rely on one theoretical perspective, usually social learning theory (Pagelow, 1984; Steinmetz, 1977; Straus et al., 1980).

In this study, we develop and test a model of sibling violence that incorporates propositions from feminist, conflict, and social learning theories. The model also draws on findings from observational studies on sibling conflict between young children, clinical case studies of severe sibling violence, larger studies of less severe types of sibling violence, and research on other types of family violence.

We test the model on a sample of older adolescents. Adolescents may deliberately use negative behaviors to control their siblings' behavior or resolve conflicts, and they can inflict more serious injury on each other than younger children can. Teenage siblings frequently differ in physical strength, spend considerable unsupervised time together, and know what to say to upset and provoke each other. As adolescents tend to be especially sensitive about their appearance and achievements, they react strongly to verbal insults and taunts (Klagsbrun, 1992). These conditions provide an opportunity for conflict and even physical violence.

A THEORETICAL MODEL OF SIBLING VIOLENCE

Our theoretical model of sibling violence is based on the feminist, conflict, and social learning theoretical perspectives. We briefly review these theories here (see K. L. Hoffman & Edwards, 2004, for more detail). We then describe the components of the model and the linkages between them.

FEMINIST THEORY

Feminist theory explains how patriarchal patterns of power and oppression in society and in families can influence sibling relationships. The theory contends that family violence, particularly wife abuse, stems from the patriarchal organization of society (Dobash & Dobash, 1979, 1998; McCall & Shields, 1986; Walker, 1981), in which men's use of violence enjoys considerable cultural acceptance (Dobash & Dobash, 1979, 1998; Kurz, 1989). Patriarchal norms also dictate stratification in families based

on age and gender (Pagelow, 1984; Wiehe, 1997). Children may perpetrate sibling violence to assuage feelings of powerlessness vis-à-vis their parents (Finkelhor, 1983; Pagelow, 1984; Wiehe, 1997). Men may use violence to gain or reestablish control over women, especially when they feel powerless (Chapman, 1990; Johnson, 1995). Similarly, boys may use sibling violence to demonstrate their masculinity and to exert power over their sisters and younger brothers (Klagsbrun, 1992; Wiehe, 1997). This theory implies that boys will engage in sibling violence more than girls will.

CONFLICT THEORY

Conflict theory suggests that family members, including siblings, use violence to resolve conflicts that stem from their competing interests (Coser, 1956; Felson & Tedeschi, 1993; Sprey, 1969). Several studies support the popular belief that jealousy and rivalry for parents' attention are at the heart of siblings' disputes (e.g., Ross & Milgram, 1982; Wiehe, 1997). The social structure of families also may generate competing interests: Siblings typically have intense and frequent interactions, must share valued property, and must perform assigned chores, perhaps not of their choosing (Raffaelli, 1992, 1997; Vuchinich, 1987). Hence, from a conflict perspective, violence between siblings may result from anger over parental favoritism, attempts to gain control of valuable resources, or conflict about their share of household labor.

SOCIAL LEARNING THEORY

Feminist and conflict theories emphasize the social structural conditions in society and families that give rise to sibling conflict and sibling violence. These perspectives, however, do not explain why sibling violence varies in severity or frequency or why most siblings treat each other respectfully despite their competing interests and a cultural acceptance of violence. Social learning theory illuminates the familial interaction patterns that encourage sibling violence. Specifically, negative interactions between parents and between parents and children, the use of physical punishment, and inconsistent punitive discipline provide models of violence and aggression for children (Bandura, 1978; Caffaro & Conn-Caffaro, 1998; O'Leary, 1988).[1,2] Children who observe or experience such negative exchanges learn behavior to imitate in similar situations, as well as rationales and motivations for using violence (Akers, 2000; Bandura, 1978). From this perspective, perpetrators of sibling violence

are modeling behavior that they have learned and seen reinforced in their families (Pagelow, 1984; Wiehe, 1997).

Children also may learn violent behavior outside their families to use against siblings. Children are apt to see violence in video games, on television, and in movies and other media (Elliott, Hamburg, & Williams, 1998; Irwin & Gross, 1995). Children also may witness or even participate in violent interactions with their peers in schools or neighborhoods. Although such interactions vary by socioeconomic status and neighborhood, schools or communities that have no violence are rare (Elliott et al., 1998; A. M. Hoffman, 1996). Social learning theory proposes that as children witness and experience violence and verbal abuse, they are likely to model these behaviors when interacting with their siblings.

Social learning theory also recognizes the greater cultural acceptance of violence by men and by men against women. Although both boys and girls learn how to use aggressive behavior, boys probably receive more positive reinforcement than girls for using it. Consequently, social learning theory, similar to the feminist theory, predicts that boys will approve of and engage in sibling violence more than girls will (Pagelow, 1984).

KEY COMPONENTS OF THE MODEL

Our theoretical model of sibling violence has several major components: characteristics of parents' relationship, characteristics of the parent-child relationship, characteristics of siblings' relationship, individual attitudes, and verbal conflict with a sibling. Respondent's and sibling's gender, the age difference between respondent and sibling, family structure, family stress, and income are included as background variables. Figure 1 shows the hypothesized relationships between the components.

Dependent variable: Sibling violence. The rate of sibling violence is higher than any other form of family violence. Although sibling violence declines with age, studies find that at least two thirds of teenagers annually commit at least one act of physical assault against a sibling (e.g., Goodwin & Roscoe, 1990; Roscoe et al., 1987; Straus & Gelles, 1990; Straus et al., 1980). Most of this violence entails pushing, slapping, and throwing or hitting with an object, and more than one third of acts are more severe. Previous research documents that boys engage in more frequent and more severe forms of sibling violence than girls do. Brothers have the highest rates of violence, followed by mixed pairs and sisters (Goodwin & Roscoe, 1990; Roscoe et al., 1987; Straus & Gelles, 1990; Straus et al., 1980).

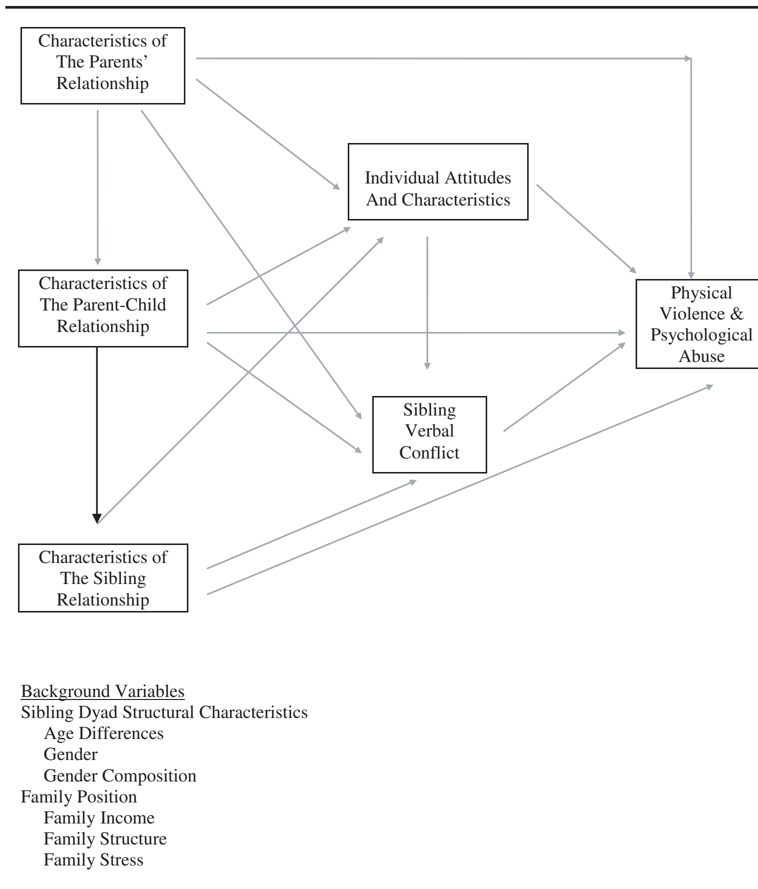

Figure 1: Conceptual Framework of Sibling Physical Violence

Characteristics of parents' relationship. Parents' relationship with each other is predicted to provide an important initial impetus for sibling violence. Several studies, albeit with small samples, have found higher levels of sibling conflict in families where adult partners are dissatisfied with their relationship and are frequently in conflict (e.g., Brody & Stoneman, 1987; Caffaro & Conn-Caffaro, 1998; MacKinnon, 1989; McGuire, McHale, & Updegraff, 1996). Exchanges of negative behaviors between parents may encourage negative parenting techniques, reduce emotional support of and closeness to their children, and increase children's sense of parental rejection and neglect. Moreover, as verbal conflict

between parents provides a model for sibling interaction (Akers, 2000; Bandura, 1977; Pagelow, 1984), it is likely to be mirrored in increased verbal conflict between siblings.

Research documents strong associations between spousal, parent-child, and sibling violence (e.g., Graham-Bermann, Cutler, Litzenberger, & Schwartz, 1994; Haj-Yahia & Dawud-Noursi, 1998; Kratcoski, 1984; Steinmetz, 1977; Straus & Gelles, 1990; Straus et al., 1980). Violence and verbal abuse between parents are expected to be positively related to child abuse and negative parenting techniques. Children who observe and experience these violent and abusive acts are more likely to approve of violence to resolve their own conflicts and to emulate those behaviors with their siblings (Akers, 2000; Bandura, 1977; Pagelow, 1984).

Families in which parents play traditional gender roles have higher rates of wife abuse (Crossman, Stith, & Bender, 1990; Stith & Farley, 1993); whether such families have higher rates of sibling violence has not been studied. Traditional gender roles authorize men to control numerous aspects of family life. Wives not only do most of the housework but also tend to anticipate their husband's needs and defer to his wishes. Based on social learning theory, we predict that parents' gender roles influence not only their interactions with each other but also children's interactions with their siblings. Children whose parents have a hierarchical relationship tend to have unequal sibling relationships (Akers, 2000; Bandura, 1977; Pagelow, 1984). Based on feminist theory, the more unequal the parents' division of domestic labor is, the more siblings will favor a gendered division of chores, and the more unevenly children's chores will be distributed. An unequal distribution of chores is likely to fuel verbal conflict and even violence between siblings.

Characteristics of parent-child interaction. Affection and closeness between parents and children may foster positive sibling relations (e.g., Dunn & Kendrick, 1982; Teti & Ablard, 1989). The more secure children's attachment to their parents is and the more positive their mothers are toward them, the less frequently children argue with siblings (Bryant & Crockenberg, 1980; Volling & Belsky, 1992). In contrast, in families where young children engage in severe sibling violence, parental affection often is lacking (Bender, 1953). Hence, emotional support from and closeness to parents should be negatively related to arguments between siblings.

Parental favoritism, in contrast, tends to foster conflict and violence between siblings (Boer, 1990; Brody, Stoneman, & McCoy, 1992; Furman & Buhrmester, 1985; Klagsbrun, 1992; McHale, Crouter,

McGuire, & Updegraff, 1995; Ross & Milgram, 1982; Volling, 1997). Parental favoritism includes making invidious comparisons between siblings and giving preferential treatment to one child. For example, inequities in siblings' division of chores or their use of family property indicate parental favoritism. Conflict theory would predict that parental favoritism increases conflict by encouraging siblings to view each other as competitors for tangible resources and parents' attention.

Clinical studies and larger representative samples find strong associations between child abuse and sibling violence (e.g., Green, 1984; Haj-Yahia & Dawud-Noursi, 1998; Kratcoski, 1984; Rosenthal & Doherty, 1984; Straus & Gelles, 1990; Straus et al., 1980). From a social learning perspective, children whose parents abuse them learn to use violence with their siblings (Akers, 2000; Bandura, 1977, 1978; Pagelow, 1984). Feminist theory posits that experiencing child abuse increases acceptance of using one's physical strength to control others' behavior and perhaps fosters traditional gender-role attitudes (Dobash & Dobash, 1979, 1998; Kurz, 1989). In addition, children who are abused by their parents are predicted to argue more with their siblings and to engage in more sibling violence.

Parental intervention in sibling conflict also may influence sibling violence. Parents often ignore conflict between their children rather than intervening because they assume that arguments and even physical assault are normal and harmless. Studies of more severe sibling violence, however, suggest that not intervening intensifies conflict and violence, as well as psychological distress for the victims (Klagsbrun, 1992; Wiehe, 1997). Parents who hold more traditional gender-role attitudes also may be less likely to intervene. Some women report that when their brothers abused them, even good parents trivialized their physical and psychological pain and did not intervene to protect them (Klagsbrun, 1992; Wiehe, 1997). Younger brothers also may find themselves at the mercy of older brothers, as parents often allow them to resolve disputes themselves (Wiehe, 1997).

Research on milder forms of sibling violence suggests that parental intervention can increase sibling violence by empowering a weaker sibling (e.g., Brody & Stoneman, 1987; Felson, 1983; Felson & Russo, 1988). Conversely though, parental intervention also can decrease sibling violence by quelling unequal contests between a dominant sibling and a weaker sibling (Bennett, 1990). Given these mixed findings, how parental intervention will affect sibling verbal conflict and violence is uncertain.

Problems in siblings' relationship. Children often must share or compete for property, space, and other goods with family members, particu-

larly siblings. Problems with sharing generate many sibling conflicts (Felson, 1983; Raffaelli, 1997). Hence, such problems should be positively related to verbal conflict and violence between siblings.

Siblings who do a disproportionate share of household labor also tend to have higher levels of verbal disputes and physical violence (Felson, 1983). If chores are assigned on the basis of traditional gender roles, they are likely to encourage arguments and violence between siblings because they tend to be unequally distributed and to foster acceptance of traditional gender roles.

Individual attitudes. Feminist theory and some research suggests that men's favoring traditional gender roles and approval of physical force partly explain wife and child abuse (e.g., Crossman et al., 1990; Dobash & Dobash, 1979, 1998; Kantor & Straus, 1990; Stith & Farley, 1993; Yllo & Bogard, 1988). No research has investigated whether such attitudes are related to sibling violence. Among siblings, favoring traditional gender roles regarding household labor and approval of physical force may be positively related to sibling violence.

Frequency of sibling arguments. Numerous studies find that arguing usually precedes family violence, including sibling violence (e.g., Goodwin & Roscoe, 1990; Roscoe et al., 1987; Straus & Gelles, 1990; Straus et al., 1980). Arguing is one of the strongest predictors of violence against wives (K. L. Hoffman, Demo, & Edwards, 1994; Stets, 1990). Consequently, arguments between siblings should be strongly related to sibling violence.

Background variables. The analysis includes six characteristics of sibling and family relationships: respondent's and sibling's gender, the age difference between the respondent and the sibling, family income, family stress, and family structure. Brothers have the highest rate of sibling violence, and boys commit more serious acts than girls do (Goodwin & Roscoe, 1990; Mangold & Koski, 1990; Roscoe et al., 1987; Straus & Gelles, 1990). The closer in age siblings are, the higher their rates of conflict and physical violence (Felson, 1983; Felson & Russo, 1988; Furman & Buhrmester, 1985; Newman, 1996). Family income, family stress, and family structure may indirectly affect sibling violence by influencing family interaction, such as conflict between parents, and the social context of sibling relationships.

METHOD

SAMPLE

Data were collected from a survey of 928 students enrolled in eight introductory and other lower division sociology courses at a large state university in fall of 1996. This selection process maximized the number of 1st-year students to minimize recall problems, as most questions referred to the respondents' senior year of high school. Only those 651 respondents who had complete data and who resided with at least one sibling and with two parents, whether biological or stepparents, during their senior year of high school were included in the analysis.

Seventy-one percent of the respondents in the analysis were 17 to 19 years old; fewer than 4% were 22 or older. Eighty-six percent were White and 56% were female. About 47% of the respondents had more than one sibling. Respondents with more than one sibling reported on their relationship with the sibling closest to them in age. About 6% of closest-age siblings were step- or half-siblings.

MEASURES

Sibling violence. Respondents were asked how often during arguments they had done any of 15 acts to their closest-age sibling during the respondent's senior year of high school.[3] Three of the items were taken verbatim from the original Conflict Tactics Scale (Straus, 1979; see also Straus, Hamby, Boney-McCoy, & Sugarman, 1996): pushed, grabbed, or shoved; slapped; and beat up. Seven other items grouped acts or worded acts slightly differently (kicked or bit, hit with hand or objects, punched, threatened to hit or threw something, choked or smothered with a pillow, threatened to use a weapon, and used a weapon). Five other items asked about additional acts (scratched, pulled hair or pinched, physically restrained or pinned down, threw against a wall or pushed down, and burned). A sibling violence scale was computed by summing the number of violent behaviors that respondents had perpetrated against their sibling (alpha = .85). Values ranged from 0 to 15. The data on sibling violence are described below at the beginning of the Results section.

Characteristics of parents' relationship. Several items measured respondents' perceptions of their parents' or stepparents' marital relation-

ship during their senior year of high school. One item assessed how traditional parents' gender roles were in terms of father's share of household chores, such as grocery shopping, cooking, doing the dishes, and doing laundry. The item asked whether the father or stepfather did *much more* (coded 1), *as much as* (coded 1), or *much less* housework than his wife (coded 2) or *almost never* did household chores (coded 3). The mean of 1.9 (*SD* = 0.7) indicated that in most households, mothers did much more housework than fathers did.

The frequency of parents' or stepparents' arguing during the respondent's senior year was measured with an item whose responses were 1 = *never*, 2 = *rarely* (one or two times), 3 = *sometimes* (three or four times), and 4 = *often* (five or more times). The average response was 2.4, between *rarely* and *sometimes* (*SD* = 1.0). Spousal abuse between parents was a dummy variable indicating whether the respondent saw either parent restrain or push, or slap or hit the other parent. It was rare (*M* = 0.1, *SD* = 0.3).[4]

Characteristics of parent-child interaction. Although both positive and negative parent-child interactions could affect sibling relations, initial analyses showed that parents' emotional supportiveness was not related to sibling violence. The model included four aspects of parent-child interactions. Parents' tendency to show favoritism between siblings was measured by an item that assessed how often (1 = *never*, 2 = *rarely*, 3 = *sometimes*, and 4 = *often*) parents held up one child as the standard and compared other siblings to her or him. Parents made a modest amount of comparisons between siblings (*M* = 1.8, *SD* = 0.9). Another item asked how frequently, from *never* (1) to *often* (4), parents yelled at respondents to discipline them during their senior year of high school. Parents yelled at respondents fairly frequently (*M* = 2.7, *SD* = 1.0). Child abuse by parents was measured by whether a parent or stepparent disciplined the respondent by grabbing or shoving, spanking or hitting, or slapping her or him (0 = no, 1 = yes). The mean of 0.2 indicated that few parents had engaged in child abuse (*SD* = 0.4).[5]

To measure parental intervention in sibling conflict, respondents were asked what parents usually did when the respondent and his or her sibling got into major arguments. Respondents whose parents intervened—by trying to stop the argument, punishing one sibling, or punishing both siblings—were coded 1. Other respondents, whose parents let them and their sibling work it out, were coded 0. Most parents intervened (*M* = 0.76, *SD* = 0.4).

Problems in siblings' relationship. Perceived unfairness of chores was coded 1 if respondents believed they did more than their fair share of siblings' household chores and 0 if household chores were divided evenly, if respondents did less than their fair share of chores, or if siblings were not assigned chores. Twenty percent of respondents believed that they did more than their fair share of chores (*SD* = 0.4). Respondents also were asked how frequently, from 1 = *never* to 4 = *often*, they had problems sharing family property with their closest-age sibling (*M* = 2.3, *SD* = 0.9).

Individual attitudes. Respondents were asked whether chores should be assigned based on gender. Responses were 1 = *no*, 2 = *sometimes*, and 3 = *yes* (*M* = 1.5, *SD* = 0.7). Tolerance of sibling violence was measured by asking the extent to which the respondent "thinks it is okay for siblings to physically fight during a major argument." Responses were 1 = *no*, 2 = *sometimes*, and 3 = *yes*. Tolerance was fairly low (*M* = 1.5, SD = O.7).

Frequency of sibling arguments. Respondents were asked how frequently they argued with their closest-age sibling during their senior year of high school, where 1 = *never*, 2 = *rarely* (one or two times), 3 = *sometimes* (three or four times), and 4 = *often* (five or more times). Arguments were moderately frequent (*M* = 2.7, *SD* = 0.9).

Background variables. Several variables were included in the regression analyses as background variables. Respondent's and sibling's gender was a set of dummy variables (female with a brother, male with a sister, and male with a brother); the comparison category was female with a sister. The age difference between the respondent and the closest-age sibling was measured in years, from 0 to 6 or more (*M* = 3.1, *SD* = 1.5). Whether the respondent was older or younger than the sibling (*M* = .52) was coded as 1 and 0, respectively. Family structure was a dichotomous variable (0 = intact family, 1 = stepfamily), with 10% of respondents living in a stepfamily. Family income during the respondent's senior year of high school ranged from 1 (*less than $20,000*) to 7 (*more than $125,000*). Seventy-three percent of respondents had family incomes of $50,000 or more. As an indicator of family stress, three items determined if the family had experienced a job loss, had financial problems, or had taken on the primary care for an elderly relative during the respondent's senior year of high school. Scores on these items were added to form a scale, which ranged from 0 to 3 (*M* = 0.7, *SD* = 0.8).[6]

RESULTS

DESCRIPTIVE STATISTICS FOR SIBLING VIOLENCE

The mean number of types of sibling violence was low (*M* = 3.1; Table 1). Nevertheless, sibling violence was not uncommon. Most respondents (about 69%) had committed a violent act against their closest-age sibling during their senior year in high school. Pushing, shoving, or grabbing was by far the most common set of acts; more than 60% of respondents had engaged in at least one of these during an argument. Many respondents (40%) had threatened to hit or had thrown things at their sibling, and 35% had hit their sibling with a hand or object. Twenty-nine percent of respondents had physically restrained their sibling, and a fifth to a fourth of respondents had slapped, punched, kicked, bitten, scratched, or pinched their sibling. As for the most dangerous acts, fewer than 5% of respondents had choked, burned, beaten up, threatened to use a weapon, or used a weapon against a sibling.

Respondent's gender and sibling's gender influenced the extent and type of sibling violence. An analysis of variance of the mean number of behaviors perpetrated found that males with brothers committed more types of sibling violence than any other type of sibling pair. No other differences between sibling pairs in the number of types of sibling violence were significant. We then performed separate logistic regression analyses for each of the 15 types of sibling violence. In each logistic regression analysis, three types of sibling pairs were compared to a fourth, the omitted category. We then reestimated the equations for each type of sibling violence with different categories omitted to test for differences between all types of sibling pairs.

Two patterns emerged. First, respondents seemed to gauge their and their siblings' strength and to choose tactics accordingly. Second, patterns of sibling violence among males reflected the cultural acceptance of violence between men and to a lesser extent prohibitions of violence against women. Compared to the other three types of sibling pairs, males with a brother were far more likely to push, shove, or grab; punch; restrain; or choke their sibling or throw their sibling up a wall. That is, males used a wide range of tactics against brothers, probably choosing those tactics that seemed feasible given their and their brother's strength. Males also used their physical strength against sisters: Males were more likely to physically restrain a sister or throw a sister against a wall than females with a brother were. In contrast, females were more likely to slap, scratch, or hit a sister or brother than males were to slap, scratch, or hit a sister. Females

TABLE 1

Types of Sibling Violence by Respondent in Senior Year of High School, by Respondent's and Sibling's Gender ($N = 651$)

		Female Respondent Against		*Male Respondent Against*		
	Total	*Sister*	*Brother*	*Sister*	*Brother*	*Significance*
Mean number of types of sibling violence perpetrated[a]	3.13	3.09	2.73	2.47	4.25[b]	.000[c]
Percentage of respondents who had						
Slapped	26.1	32.2	28.2	14.5[d,e]	27.0[b]	.002[f]
Pushed, shoved, or grabbed	60.1	60.6	53.6	55.8	71.1[b,d,e]	.007[f]
Physically restrained or pinned down	29.0	20.0	13.8	27.5[e]	59.2[b,d,e,]	.000[f]
Scratched	20.9	33.3	26.0	10.9[d,e]	9.2[d,e]	.000[f]
Pulled hair or pinched	25.5	36.7	24.3[d]	22.5[d]	16.4[d]	.000[f]
Threatened to hit or thrown something	39.6	38.3	34.8	38.4	48.0[e]	
Hit with hand or objects	34.8	37.4	33.7	23.2[d,e]	43.4[b]	.003[f]
Punched	25.8	18.3	21.0	16.7	48.7[b,d,e]	.000[f]
Kicked or bit	21.4	20.6	23.2	12.3[e]	28.3[b]	.007[f]
Thrown against a wall or pushed down	14.7	7.2	3.9	14.5[d,e]	36.8[b,d,e]	.000[f]
Choked or smothered with a pillow	4.3	1.7	2.8	3.6	9.9[b,d,e]	.003[f]
Burned	0.6	0.0	1.1	0.0	1.3	.144[f]
Beaten up	3.7	0.0	1.7	2.2	11.8[b,e]	.000[f]
Threatened to use a weapon	4.8	2.2	4.4	4.3	8.6[d]	.066[f]
Used a weapon	1.8	0.6	1.1	0.7	5.3[d,e]	.013[f]
Done any of the above acts	68.7	71.7	63.0	61.6	78.3[d,e]	.004[g]

a. Range is 0 to 15.
b. Differs from male respondent against sister, $p < .05$
c. $F(df = 3, 647) = 9.65$ in ANOVA of number of types of sibling violence perpetrated, by respondent's and sibling's gender.
d. Differs from female respondent against sister, $p < .05$.
e. Differs from female respondent against brother, $p < .05$.
f. Significance of model chi-square in logistic regression of a given type of sibling violence on respondent's and sibling's gender.
g. Significance of model chi-square in logistic regression of any type of sibling violence on respondent's and sibling's gender.

also were more likely to kick or bite a brother than males were to kick or bite a sister. Females tended to perpetrate the same types of sibling violence against sisters and brothers.

REGRESSION ANALYSES OF INTERVENING VARIABLES

The background variables and parents' interaction with each other were predicted to influence sibling violence partly by influencing parent-child interaction. In turn, parent-child interaction was predicted to influence problems in siblings' relationship and individual attitudes. These potentially mediating variables were regressed on their predictors (see Tables 2 and 3).

Characteristics of parent-child interaction. Parent-child interaction differed little by respondent's and sibling's gender (Table 2). Parents were more likely to intervene in male respondents' conflicts with sisters than in conflicts between other types of sibling pairs, and they were more likely to intervene when the respondent was the older of the two siblings. Family structure had two effects on parent-child interaction. Parents in stepfamilies yelled at respondents less and were less likely to intervene in siblings' conflicts than parents in intact families were. No background variable influenced the level of child abuse. As predicted, the more often parents argued, the more often they compared siblings to each other and yelled at respondents, and the more likely they were to engage in child abuse. Spouse abuse between parents increased parents' likelihood of comparing siblings and engaging in child abuse.

Problems in siblings' relationship. Some of the background variables influenced problems in siblings' relationship (Table 3, Panel 1). Female respondents with sisters (the comparison group) had more problems than all other types of sibling pairs sharing property with their siblings. As predicted, the further apart in age siblings were, the fewer problems they had sharing property. Respondents with a younger sibling were more likely than those with an older sibling to believe that they did more than their fair share of chores and to have more problems sharing property.

Parents' relationship with each other and their interactions with respondents were predicted to influence problems in siblings' relationships with each other. Parental comparisons of siblings and parents' yelling at respondents increased respondents' sense that chores were divided unfairly. Parental comparisons and parents' intervening in sibling conflicts exacerbated siblings' problems sharing property.

TABLE 2
Regressions[a] of Characteristics of Parent-Child Relationship on Characteristics of Parents' Relationship and Background Variables (*N* = 651)

	Parent-Child Interaction			
Independent Variable	*Parents Compare Siblings*[b]	*Parents Yell at Respondent*[b]	*Child Abuse*[c]	*Parents Intervene in Sibling Conflict*[c]
Background characteristics				
Female respondent, male sibling[d]	–.15*	–.09	–.09	.08
Male respondent, female sibling[d]	–.15	–.15	.34	.77***
Male respondent, male sibling[d]	–.05	–.07	.07	.06
Sibling age difference	–.03	.02	–.02	.05
Respondent is older	.12*	.10	.05	.40**
Family income	–.04	.01	–.04	–.16**
Family structure (1 = *stepfamily*)	–.14	–.33***	–.26	–.78***
Family stress	.02	.01	.14	.07
Parents' relationship				
Traditional division of household labor	.02	.00[e]	.07	.04
Frequency parents argue	.16****	.45****	.59****	.07
Spouse abuse between parents	.24**	.15	.90***	–.16
Constant	1.61****	1.56****	–3.07****	1.19**
R^2	.05	.21		

a. Ordinary least squares (OLS) regressions are shown for ordinal- and interval-level dependent variables; logistic regression is shown for dichotomous dependent variables (child abuse and parents intervene in sibling conflict).
b. Unstandardized regression coefficients are shown for the OLS regressions.
c. Unstandardized regression coefficients are shown for the logistic regressions.
d. Female respondent, female sibling is the comparison category.
e. Coefficient is less than .005 in absolute value.
*$p < .10$. **$p < .05$. ***$p < .01$. ****$p < .001$. All two-tailed tests.

Individual attitudes. The theory predicted that respondents whose parents had a traditional division of housework would be more likely to favor a gendered division of siblings' chores as well. The data did not support this hypothesis (Table 3, Panel 2). Only gender influenced this attitude: Males, regardless of their sibling's gender, were more likely than females to favor a traditional division of chores. Gender also influences tolerance of sibling violence. Males with a brother were more tolerant of sibling violence than female respondents with a sister were.

TABLE 3

Regressions[a] of Problems in Siblings' Relationship, Individual Attitudes, and Sibling Arguments on Characteristics of Parents' Relationship, Parent-Child Interaction, and Background Variables (N = 651)

	Dependent Variables				
	Problems in Siblings' Relationship		*Individual Attitudes*		*Sibling Arguments*
Independent Variable	*Chores Divided Unevenly*[b]	*Problems Sharing Property*[c]	*Favor Gendered Division of Chores*[c]	*Tolerance of Sibling Violence*[c]	*Frequency of Sibling Arguments*[c]
Background variables					
Female respondent, male sibling[d]	.51*	–.67****	.08	–.03	–.05
Male respondent, female sibling	.09	–.43****	.40****	.15*	–.03
Male respondent, male sibling	–.04	–.56****	.44****	.22****	–.07
Sibling age difference	.12	–.06***	.01	–.01	.03
Respondent is older	.50**	.24****	–.04	.07	.18***
Family income	.03	–.01	.01	.03	–.01
Family structure (1 = *stepfamily*)	.60*	–.09	.04	–.09	–.20**
Family stress	.20	.00[e]		–.02	–.03

Parents' relationship					
Traditional division of housework	.24*	–.04	.04	–.03	–.02
Frequency parents argue	.16	.04	–.02	.03	.06
Spousal abuse between parents	.14	.06	–.02	.02	.02
Parent-child interaction					
Parents compare siblings	.29**	.09**	.01	.06*	.04
Parents yell at respondent	.27**	.06	.05	.02	.14****
Child abuse	.40	.06	.02	.10	.01
Parents intervene in sibling conflict	.44	.16**		.10	.08
Problems in siblings' relationship					
Chores divided unevenly					.14*
Problems sharing property					.52****
Constant	–5.24****	2.32****	1.10****	1.09****	0.87****
R^2		.13	.06	.04	.39

a. Ordinary least squares (OLS) regressions are shown for ordinal- and interval-level dependent variables; logistic regression is shown for dichotomous dependent variables (chores are divided unevenly).
b. Unstandardized regression coefficients are shown for the logistic regression.
c. Unstandardized regression coefficients are shown for OLS regressions.
d. Female respondent, female sibling is the reference category.
e. Coefficient is less than .005 in absolute value.
*$p < .10$. **$p < .05$. ***$p < .01$. ****$p < .001$. All two-tailed tests.

Frequency of sibling arguments. Three predictors had significant, positive effects on how often respondents argued with their closest-age sibling: having a younger rather than an older sibling, how often parents yelled at respondents, and problems sharing property with their sibling (Table 3, Panel 3). Respondents in stepfamilies, however, had fewer arguments with their siblings than did respondents in intact families.

REGRESSION ANALYSIS OF SIBLING VIOLENCE

We then performed a regression analysis that predicted sibling violence in five steps (Table 4). Model 1 shows the effects of the background variables and characteristics of parents' relationships on sibling violence. Model 2 adds characteristics of the parent-child relationship, and Model 3 adds problems in siblings' relationship. Model 4 includes individual attitudes along with the above blocks of variables, and Model 5 adds the frequency of arguing with one's sibling.

Model 1 in Table 4 shows the effects of the background variables and characteristics of parents' marital relationship on sibling violence. As described above, males with brothers engaged in higher levels of sibling violence than any other type of respondent-sibling pair. Family structure also was significant but not as predicted: Compared to respondents in intact families, respondents in stepfamilies engaged in less sibling violence. Spousal abuse between parents increased the level of sibling violence; the frequency of parents' arguing was even more significant.

Model 2 added aspects of parent-child interaction. The more often parents compared siblings and yelled at or physically abused respondents, the greater the frequency of sibling violence. In addition, parental intervention in sibling conflict increased the level of sibling violence.

Model 3 added problems in siblings' relationship to the regression model. Having problems sharing property was strongly and positively related to teenage sibling violence. Moreover, problems with sharing property mediated some of the effects of comparisons of siblings and parents' yelling. Individual attitudes were added to the equation in Model 4. As predicted, favoring assigning chores to siblings based on traditional gender roles and approval of using physical force in sibling conflict were positively associated with sibling violence.

Model 5 added the frequency of arguing with one's sibling. Arguing was positively and strongly related to sibling violence. The frequency of parents' arguing, child abuse, problems sharing property with one's sibling, favoring a gendered division of siblings' chores, and tolerance of sibling violence still had positive, significant effects on the level of sibling vi-

TABLE 4

Regressions of Sibling Violence on Characteristics of Parents' Relationship, Parent-Child Relationship, and Siblings' Relationship, and Background Variables (N = 651)

Independent Variables[a]	*Model 1*	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Background variables					
Female respondent, male sibling[b]	–0.38	–0.29	0.33	0.27	0.32
Male respondent, female sibling	–0.41	–0.46	–0.06	–0.39	–0.36
Male respondent, male sibling	1.34****	1.37****	1.89****	1.39****	1.48****
Age difference between siblings	–0.02	–0.02	0.03	0.04	0.01
Respondent is older	0.32	0.17	–0.07	0.03	–0.15
Family income	–0.12	–0.08	–0.08	–0.10	–0.09
Family structure (1 = *stepfamily*)	1.16***	–0.83**	–0.76**	–0.70**	–0.52
Family stress	–0.31*	–0.36**	–0.36**	–0.32**	–0.29**
Parents' relationship					
Traditional division of household labor	–0.16	–0.19	–0.16	–0.15	–0.13
Frequency of parents' arguing	0.80****	0.47****	0.43****	0.41***	0.36***
Spouse abuse between parents	1.02**	0.66	0.60	0.59	0.57
Parent-child interaction					
Comparisons of siblings		0.39***	0.30**	0.24*	0.20
Frequency parents yell at respondent		0.34**	0.28**	0.24*	0.10
Child abuse		1.21****	1.14****	1.03****	1.03****
Parents intervene in sibling conflict		0.84***	0.68***	0.51**	0.43*

(continued)

TABLE 4 (continued)

Independent Variables[a]	*Model 1*	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Problems in siblings' relationship					
Chores are divided unevenly (1 = yes)			0.11	0.20	0.07
Problems sharing property			0.94****	0.87****	0.38***
Individual attitudes					
Favor gendered division of chores				0.40***	0.42***
Tolerance of sibling violence during arguments				1.03****	0.95****
Frequency of arguing with sibling					0.97****
Constant	2.14	0.43	–1.71	–3.07	–3.87
R^2	.11	.19	.25	.31	.35

a. Unstandardized regression coefficients are shown.
b. Female respondent, female sibling is the reference category.
*$p < .10$. **$p < .05$. ***$p < .01$. ****$p < .001$. All two-tailed tests.

olence. In addition to the ordinary least squares regression analysis of sibling violence reported above, we also tested for interactions of respondent's and sibling's gender with the other model variables. Only the interaction with the frequency of arguing was significant. Specifically, arguments tended to lead to sibling violence for all respondents, but arguments between brothers were even more likely to lead to sibling violence than were arguments between the other three types of sibling pairs ($p < .05$; results available from the first author).

SUMMARY AND DISCUSSION

Consistent with prior reports of sibling violence (Goodwin & Roscoe, 1990; Steinmetz, 1977; Straus et al., 1980), almost 70% of the young adults in this study had committed at least one violent act against their closest-age sibling during their senior year of high school. The most common acts were pushing or shoving, throwing things, and hitting a sibling with a hand or object. Physically restraining, slapping, punching, and pulling hair also occurred frequently.

Gender was significant at all stages of the multivariate analyses in ways that support a feminist theoretical explanation of sibling violence. Consistent with the notion that the patriarchal organization of society grants men the use of violence (Dobash & Dobash, 1998; Kurz, 1989), arguments between brothers were the most likely to lead to sibling violence. Male respondents perpetrated more violent acts against their brothers than against sisters and sisters against their siblings. In addition, the rates of more injurious behaviors—punching, choking, beating up, threatening to use a weapon, and using a weapon—were highest among brothers.

The findings on attitudes in sibling relationships also support a feminist explanation of sibling violence. Males favor a gendered division of siblings' chores more than females do. Opinions on this item do not reflect parents' division of household labor but may originate in the wider culture. Whatever its source, favoring a gendered division of chores independently increases the level of sibling violence. Males also are more approving of physically fighting in sibling arguments than females. As this attitude is not predicted by family conflict, it also may reflect the wider culture. Considerable cultural tolerance exists for sibling violence, and males may be especially likely to view physically dominating a sibling not only as a way of demonstrating their masculinity and social power but also their right. Approval of physical force to resolve conflict strongly predicts

sibling violence, just as it predicts abuse of female partners (e.g., Crossman et al., 1990; Kantor & Straus, 1990).

Contrary to prediction based on feminist theory, one aspect of gender inequality within families—a traditional division of housework between parents—was not related to the level of sibling violence. Parents' having a traditional division of housework also was not related to negative parent-child interactions or respondents' favoring gendered chores. Future research should investigate whether other aspects of gender inequality within families, especially between parents, influence siblings' attitudes and sibling violence.

As predicted by conflict theory, previous research, and folklore, parental comparisons of siblings heightened sibling violence (Brody et al., 1992; Goodwin & Roscoe, 1990; Klagsbrun, 1992; Ross & Milgram, 1982), particularly among males. Holding one child up as the standard did indeed lead to resentment and violence between siblings (e.g., Bryant, 1982). Parental comparisons of siblings affected sibling violence directly and also indirectly by increasing siblings' problems sharing property and siblings' arguments. These findings indicate that sibling violence has both instrumental and expressive sources. In contrast to Felson's (1983) study, perceived unfairness in the division of household chores did not affect the level of sibling violence.

Of the three theoretical perspectives, social learning theory garnered the strongest, most consistent empirical support. Social learning theory directs attention to the behavioral consequences of interaction patterns in families, emphasizing that children tend to adopt behaviors they learn from their parents. In our data, negative interactions between parents—the frequency of arguments and spouse abuse—were associated with negative parent-child interactions, particularly parents yelling at children and child abuse. In addition, parents yelling at the respondent was positively related to the frequency of sibling arguments. Moreover, negative interactions between parents and between parents and children were independently related to sibling violence.

The findings also highlight another way in which family dynamics produce sibling violence. Previous research on child abuse has emphasized the adverse consequences of experiencing physical abuse (Green, 1984; Kratcoski, 1984; Rosenthal & Doherty, 1984; Straus & Gelles, 1990; Straus et al., 1980). We find that witnessing arguments between parents and being involved in verbal conflicts with parents and siblings is related to higher levels of sibling violence.

The study has several limitations. First, that the data are cross-sectional dictates caution in drawing causal inferences. Some of the hypothesized

relationships in the model, such as attitudes that predict behaviors, may be reciprocal. Second, about half of the respondents reported on their relationship with an older sibling (past high school age). For those respondents, the opportunities for conflict and hence for sibling violence probably were fewer (see Table 3). Although we controlled for whether the respondent's sibling was older, we probably did not capture the full extent of sibling conflict and violence. Third, because exposure to severe kinds of spousal abuse and child abuse was not measured, the associations between sibling violence and family violence may have been attenuated. Similarly, exposure to intimate terrorism may affect children's behavior differently than exposure to common couple violence (Johnson & Ferraro, 2000). Fourth, the variance on some variables, such as family income, was limited. Fifth, the measure of sibling violence, similar to the Conflict Tactics Scale, does not distinguish between minor and severe types of violence (Dobash & Dobash, 1979; Kurz, 1989). Finally, tolerance and perpetration of sibling violence was assessed only in the context of arguments. Studying sibling violence in the other situational contexts (Straus et al., 1996) and the relational contexts (Johnson, 1995; Johnson & Ferraro, 2000) in which it occurs is an important task for future research. For example, Johnson's (1995) patterns of partner violence—common couple violence, intimate terrorism, violent resistance, and mutual violent control—also may characterize sibling violence, but their distribution may differ by type of sibling pair. Despite these limitations, however, the analyses reveal support for many of the propositions and for the three theoretical perspectives.

The past decade has seen considerable research on family violence, particularly wife, child, and elder abuse, but far less on sibling violence. Sibling violence remains more acceptable than other types of family violence even in the academic community, despite high rates of occurrence and negative short- and long-term consequences. In the future, research on sibling violence needs to be expanded and better integrated with existing theory and research on other types of family violence.

NOTES

1. The literature on family violence often interchanges the terms *aggression* and *violence*. Specifically, however, aggression is behavior intended to harm another; violence is the use of physical force against another person. We use the term *violence* as a "synonym for physical assault by a partner" (Straus et al., 1996, p. 290).

2. Parents and older siblings are important models for children (Akers, 2000; Bandura, 1977).

3. The Conflict Tactics Scale has been criticized for not taking into account the immediate social context in which violence occurs (Dobash & Dobash, 1979; Kurz, 1993). In this study, arguments with one's sibling were specified as the context for perpetrating sibling violence.

4. About 5.7% of respondents saw their father push or restrain their mother; 5.5% saw their mother push or restrain their father; 1.4% saw their father slap or hit their mother; and 4.0% saw their mother slap or hit their father.

5. About 13.8% of parents had disciplined respondents by grabbing, shoving, or pushing them; 8.6% by hitting or spanking them on the butt, arms, or legs; and 10.9% by slapping or hitting them on the face or head.

6. Preliminary ordinary least squares regression analyses were conducted with each component of the model to identify any variables that were not significantly related to sibling violence. Using this criterion, the following measures were excluded from the analysis: race, whether the respondent and the closest-age sibling were biologically related, parents' marital dissatisfaction, parents' emotional supportiveness of the respondent, and whether children's chores were assigned along gender lines. Verbal abuse between parents or stepparents was omitted because of collinearity with the frequency of parents' arguing. These analyses are available from the first author.

REFRENCES

Akers, R. L. (2000). *Criminological theories: Introduction, evaluation, and application* (3rd ed.). Los Angeles, CA: Roxbury.

Bandura, A. (1977). *Social learning theory.* Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1978). Learning and behavioral theories of aggression. In I. L. Kutash, S. B. Kutash, L. B. Schlesinger, & Associates (Eds.), *Violence: Perspectives on murder and aggression* (pp. 29-57). San Francisco: Jossey-Bass.

Bender, L. (1953). Children with homicidal aggression. In L. Bender (Ed.), *Aggression, hostility, and anxiety in children* (pp. 91-115). Springfield, IL: Charles C. Thomas.

Bennett, J. C. (1990). Nonintervention into siblings' fighting as a catalyst for learned helplessness. *Psychological Reports*, *66*, 139-145.

Berndt, T. J., & Bulleit, T. N. (1985). Effects of sibling relationships on preschooler's behavior at home and at school. *Developmental Psychology*, *21*, 761-767.

Boer, F. (1990). *Sibling relationships in middle childhood*. Leiden, the Netherlands: University of Leiden Press.

Brody, G. H. (1998). Sibling relationship quality: Its causes and consequences. *Annual Review of Psychology*, *49*, 1-24.

Brody, G. H., & Stoneman, Z. (1987). Sibling conflict: Contributions of the sibling themselves, the parent-sibling relationship, and the broader family system. *Journal of Children in Contemporary Society*, *19*, 39-53.

Brody, G. H., Stoneman, Z., & McCoy, J. K. (1987). Family system and individual child correlates of sibling behavior. *American Journal of Orthopsychiatry*, *57*, 561-569.

Brody, G. H., Stoneman, Z., & McCoy, J. K. (1992). Parental differential treatment of siblings and sibling differences in negative emotionality. *Journal of Marriage and the Family*, *54*, 643-651.

Bryant, B. K. (1982). Sibling relationships in middle childhood. In M. E. Lamb & B. Sutton-Smith (Eds.), *Sibling relationships: Their nature and significance across the lifespan* (pp. 87-121). Hillsdale, NJ: Lawrence Erlbaum.

Bryant, B. K., & Crockenberg, S. B. (1980). Correlates and dimensions of prosocial behavior: A study of female siblings with their mothers. *Child Development*, *51*, 529-544.

Caffaro, J. V., & Conn-Caffaro, A. (1998). *Sibling abuse trauma: Assessment and intervention strategies for children, families, and adults.* Binghamton, NY: Haworth.

Chapman, J. R. (1990). Violence against women as a violation of human rights. *Social Justice*, *17*, 54-71.

Coser, L. (1956). *The function of social conflict.* New York: Free Press.

Crossman, R., Stith, S., & Bender, M. (1990). Sex role egalitarianism and marital violence. *Sex Roles*, *22*, 293-303.

Dobash, R. E., & Dobash, R. P. (1979). *Violence against wives*. New York: Free Press.

Dobash, R. E., & Dobash, R. P. (1998). Violent men and violent context. In R. E. Dobash & R. P. Dobash (Eds.), *Rethinking violence against women* (pp. 141-168). Thousand Oaks, CA: Sage.

Dunn, J., & Kendrick, C. (1982). *Siblings: Love, envy, and understanding*. Cambridge, MA: Harvard University Press.

Dunn, J., & Munn, P. (1986). Sibling quarrels and maternal intervention: Individual differences in understanding and aggression. *Journal of Child Psychology and Psychiatry*, *27*, 583-595.

Dunn, J., Slomskowski, C., Beardsall, L., & Rende, R. (1994). Adjustment in middle childhood and early adolescence: Links with earlier and contemporary sibling relationships. *Journal of Child Psychology and Psychiatry*, *35*, 491-504.

Elliott, D. S., Hamburg, B. A., & Williams, K. R. (Eds.). (1998). *Violence in American schools*. New York: Cambridge University Press.

Felson, R. B. (1983). Aggression and violence between siblings. *Social Psychology Quarterly*, *46*, 271-285.

Felson, R. B., & Russo, N. (1988). Parental punishment and sibling aggression. *Social Psychology Quarterly*, *51*, 11-18.

Felson, R. B., & Tedeschi, J. T. (1993). Social interactionist perspectives on aggression and violence: An introduction. In R. B. Felson & J. T. Tedeschi (Eds.), *Aggression and violence: Social interactionist perspectives* (pp. 1-10). Washington, DC: American Psychological Association.

Finkelhor, D. (1983). Common features of family abuse. In D. Finkelhor, R. Gelles, G. Hotaling, & M. Straus (Eds.), *The dark side of families* (pp. 17-27). Beverly Hills, CA: Sage.

Furman, W., & Buhrmester, D. (1985). Children's perceptions of the qualities of sibling relationships. *Child Development*, *56*, 448-461.

Goodwin, M. P., & Roscoe, B. (1990). Sibling violence and agonistic interactions among middle adolescents. *Adolescence*, *25*, 451-467.

Graham-Bermann, S. A., Cutler, S. E., Litzenberger, B. W., & Schwartz, W. E. (1994). Perceived conflict and violence in childhood sibling relationships and later emotional adjustment. *Journal of Family Psychology*, *8*, 85-97.

Green, A. H. (1984). Child abuse by siblings. *Child Abuse & Neglect*, *8*, 311-317.

Gully, K. J., Dengerink, H. A., Pepping, M., & Bergstrom, D. (1981). Research note: Sibling contribution to violent behavior. *Journal of Marriage and the Family*, *43*, 333-337.

Haj-Yahia, M. M., & Dawud-Noursi, S. (1998). Predicting the use of different conflict tactics among Arab siblings in Israel: A study based on social learning theory. *Journal of Family Violence*, *13*, 81-103.

Hoffman, A. M. (1996). *Schools, violence and society.* Westport, CT: Praeger.

Hoffman, K. L., Demo, D. H., & Edwards, J. N. (1994). Physical wife abuse in an non-Western society: An integrated theoretical approach. *Journal of Marriage and the Family*, *56*, 131-146.

Hoffman, K. L., & Edwards, J. N. (2004). An integrated theoretical model of sibling violence and abuse. *Journal of Family Violence, 19,* 185-200.

Irwin, A. R., & Gross, A. M. (1995). Cognitive tempo, violent video games, and aggressive behavior in young boys. *Journal of Family Violence*, *4*, 197-209.

Johnson, M. P. (1995). Patriarchal terrorism and common couple violence: Two forms of violence against women. *Journal of Marriage and the Family*, *57*, 283-294.

Johnson, M. P., & Ferraro, K. (2000). Research on domestic violence in the 1990s: Making distinctions. *Journal of Marriage and the Family*, *62*, 948-963.

Kantor, G. K., & Straus, M. A. (1990). The 'drunken bum' theory of wife beating. In M. Straus & R. Gelles (Eds.), *Physical violence in American families: Risk factors and adaptations to violence in 8,145 families* (pp. 203-224). New Brunswick, NJ: Transaction.

Klagsbrun, F. (1992). *Mixed feelings: Love, hate, rivalry, and reconciliation among brothers and sisters*. New York: Bantam Books.

Kratcoski, P. C. (1984). Perspectives on intrafamily violence. *Human Relations*, *37*, 443-454.

Kurz, D. (1989). Social science perspectives on wife abuse: Current debates and future directions. *Gender and Society*, *3*, 489-505.

Kurz, D. (1993). Physical assaults by husbands: A major social problem. In R. Gelles & D. Loseke (Eds.), *Current controversies on family violence* (pp. 88-103). Newbury Park, CA: Sage.

MacKinnon, C. E. (1989). An observational investigation of sibling interactions in married and divorced families. *Developmental Psychology*, *25*, 36-44.

MacKinnon-Lewis, C., Starnes, R., Volling, B., & Johnson, S. (1997). Perceptions of parenting as predictors of boys' sibling and peer relations. *Developmental Psychology*, *33*, 1024-1031.

Mangold, W. D., Jr., & Koski, P. R. (1990). Gender comparisons in the relationship between parental and sibling violence and nonfamily violence. *Journal of Family Violence*, *5*, 225-235.

McCall, G. J., & Shields, N. M. (1986). Social and structural factors in family violence. In M. Lystad (Ed.), *Violence in the home: Interdisciplinary perspectives* (pp. 98-123). New York: Brunner/Mazel.

McGuire, S., McHale, S. M., & Updegraff, K. (1996). Children's perceptions of sibling relationships in middle childhood: Connections with and between family relationships. *Personal Relationships*, *3*, 229-239.

McHale, S. M., Crouter, A. C., McGuire, S. A., & Updegraff, K. A. (1995). Congruence between mothers' and fathers' differential treatment of siblings: Links with family relations and children's well-being. *Child Development*, *66*, 116-128.

Newman, J. (1996). The more the merrier? Effects of family size and sibling spacing on sibling relationships. *Childcare, Health and Development*, *22*, 285-302.

O'Leary, K. D. (1988). Physical aggression between spouses: A social learning theory perspective. In V. Van Hassett, R. Morrison, A. Bellack, & M. Hersen (Eds.), *Handbook of family violence* (pp. 31-55). New York: Plenum.

Pagelow, M. D. (1984). *Family violence*. New York: Praeger.

Patterson, G. R., Dishion, T. J., & Bank, L. (1984). Family interaction: A process model of deviancy training. *Aggressive Behavior*, *10*, 253-267.

Raffaelli, M. (1992). Sibling conflict in early adolescence. *Journal of Marriage and the Family*, *54*, 652-663.

Raffaelli, M. (1997). Young adolescents' conflicts with siblings and friends. *Journal of Youth and Adolescence*, *26*, 539-558.

Roscoe, B., Goodwin, M. P., & Kennedy, D. (1987). Sibling violence and agonistic interactions experienced by early adolescents. *Journal of Family Violence*, *2*, 121-137.

Rosenthal, P. A., & Doherty, M. B. (1984). Serious sibling abuse by preschool children. *Journal of the Academy of Child Psychiatry*, *23*, 186-190.

Ross, H. G., & Milgram, J. I. (1982). Important variables in adult sibling relationships: A qualitative study. In M. Lamb & B. Sutton-Smith (Eds.), *Sibling relationships: Their nature and significance across the lifespan* (pp. 225-249). Hillsdale, NJ: Lawrence Erlbaum.

Sprey, J. (1969). The family as a system of conflict. *Journal of Marriage and the Family*, *31*, 699-706.

Steinmetz, S. K. (1977). *The cycle of violence, assertive, aggressive, and abusive family interaction*. New York: Praeger.

Stets, J. E. (1990). Verbal and physical aggression in marriage. *Journal of Marriage and the Family*, *52*, 501-514.

Stith, S. M., & Farley, S. C. (1993). A predictive model of male spousal violence. *Journal of Family Violence*, *8*, 183-201.

Stormshak, E. A., Bellanti, C. J., & Bierman, K. L. (1996). The quality of sibling relationships and the development of social competence and behavioral control in aggressive children. *Developmental Psychology*, *32*, 79-89.

Straus, M. A. (1979). Measuring intrafamily conflict and violence: The conflict tactics (CT) scales. *Journal of Marriage and the Family*, *41*, 75-88.

Straus, M. A., & Gelles, R. J. (1990). How violent are American families? Estimates from the National Family Violence Resurvey and other studies. In M. Straus & R. Gelles (Eds.), *Physical violence in American families: Risk factors and adaptations to violence in 8,145 families* (pp. 95-112). New Brunswick, NJ: Transaction.

Straus, M. A., Gelles, R. J., & Steinmetz, S. K. (1980). *Behind closed doors: Violence in the American family*. New York: Anchor.

Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised Conflict Tactics Scales (CTS2): Development and preliminary psychometric data. *Journal of Family Issues*, *17*, 283-316.

Teti, D. M., & Ablard, K. E. (1989). Security of attachment and infant-sibling relationships: A laboratory study. *Child Development*, *60*, 1519-1528.

Volling, B. L. (1997). The family correlates of maternal and paternal perceptions of differential treatment in early childhood. *Family Relations*, *46*, 227-236.

Volling, B. L., & Belsky, J. (1992). The contribution of mother-child and father-child relationships to the quality of sibling interaction: A longitudinal study. *Child Development*, *63*, 1209-1222.

Vuchinich, S. (1987). Starting and stopping spontaneous family conflicts. *Journal of Marriage and the Family*, *49*, 591-601.

Walker, L. E. (1981). A feminist perspective on domestic violence. In R. Stuart (Ed.), *Violent behavior: Social learning approaches to prediction, management, and treatment* (pp. 102-115). New York: Brunner/Mazel.

Wiehe, V. R. (1997). *Sibling abuse: Hidden physical emotional, and sexual trauma* (2nd ed.). Thousand Oaks, CA: Sage.

Yllo, K., & Bogard, M. (1988). *Feminist perspectives on wife abuse*. Newbury Park, CA: Sage.