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Parental Responses to Sibling Conflict: The Effects of Development and Parent Gender

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Mothers' and fathers' responses to their children's spontaneous sibling conflicts were observed using a wireless microphone system. Eighty-eight two-child, two-parent families participated in three home observations. Secondborn children were 3 to 5 years of age and firstborn children were 2 to 4 years older. Associations between parents' enactment of three categories of conflict management strategies (passive nonintervention, child-centered management, and parental control) and sibling interaction quality varied according to children's ages, gender of the monitoring parent, and type of strategy used. Passive nonintervention was highly associated with the occurrence of subsequent conflict. Younger sibling dyads, in particular, behaved more antagonistically when their parents did not intervene. In contrast, older sibling dyads were less involved and less close when their mothers intervened in any way. Results suggest that relatively younger sibling dyads may benefit more than older dyads from parental intervention.

INTRODUCTION

Many parents are disturbed by conflict between their children and would like assistance in determining how best to respond to these disputes (Kramer & Baron, 1995). This is understandable as sibling conflicts are by nature high in negative affect (Felson, 1983; Gelles & Cornell, 1990) and can escalate into violence (Felson & Russo, 1988; Roscoe, Goodwin, & Kennedy, 1987; Steinmetz, 1978; Weihe, 1990). Intractable sibling conflicts that began during childhood have been linked with long-term negative consequences such as antisocial and disturbed behaviors in adolescence (Richman, Stevenson, & Graham, 1982) and adulthood (Patterson, 1982), as well as domestic violence (Gully, Dengerink, Pepping, & Bergstrom, 1981).

Clearly, constructive forms of conflict do exist and may have positive consequences for children's social development (Faber & Mazlish, 1987; Felson, 1983; Raffaelli, 1992; Shantz & Hobart, 1989). Constructive forms of conflict are characterized by relatively lower levels of negative affect, a focus on a single issue, and attempts to manage or resolve the conflict (Deutsch, 1973; Vandell & Bailey, 1992). Constructive conflict may aid in the development of conflict management skills (Hartup, Laursen, Stewart, & Eastenson, 1988), foster children's ability to tolerate negative affect (Katz, Kramer, & Gottman, 1992), increase children's understanding of family rules (Dunn, 1988), aid in the construction of personal boundaries (Raffaelli, 1992), and promote the development of social understanding (Dunn & Slomkowski, 1992). Furthermore, Shantz and Hobart (1989) maintain that conflict episodes provide opportunities for children to assert their own ideas and beliefs and to recognize how they differ from others. Through experiences such as these, children gain a clearer sense of their individual identity as well as a greater appreciation of their connectedness to others.

Unfortunately, research suggests that many of the conflicts between young siblings are not constructive in nature. For example, conflicts among 5-year-old children and their younger siblings are characterized by chains of simple assertions and counterassertions, with few attempts at management or compromise, or explanations of viewpoint or goals (Phinney, 1985). Instead of identifying a resolution to the conflict, young siblings often simply withdraw or separate from one another (Vandell & Bailey, 1992). Physical aggression is another, albeit less frequent, outcome of sibling conflict (Shantz & Hobart, 1989).

There is little consensus among researchers and practitioners about how parents should help children to reduce destructive forms of conflict. Some researchers (Felson, 1983; Levi, Buskila, & Gerzi, 1977) and practitioners (Faber & Mazlish, 1987) have asserted that parents should not intervene in sibling conflicts. Felson and Russo (1988) stated that parental intervention upsets the balance of power in sibling relationships, particularly if parents side with younger siblings. Parental intervention on behalf of one child may be perceived by children as differential treatment, which has been shown to be predictive of future conflicts (Brody & Stoneman, 1987). A related view, articulated by Dreikurs (1964), is that children may use conflict to gain parental attention. Furthermore, Brody and Stoneman point out that parental intervention may deprive children of opportunities to

work through conflicts on their own and develop competencies in conflict management. Bank and Kahn (1982) go so far as to say that parental intervention may "deprive the children of the birthright of learning, on their own, to work out their problems" (p. 203). In accordance with these ideas, researchers have found that children engage in more agonistic behaviors when their mothers are present than when they are absent (Corter, Abramovitch, & Pepler, 1983) and that conflicts with parental intervention last longer than do those without parental intervention (Levi et al., 1977; Prochaska & Prochaska, 1985; Vuchinich, Emery, & Cassidy, 1988).

In contrast, other researchers (Dunn, 1988; Perlman & Ross, 1997a, 1997b; Prochaska & Prochaska, 1985; Ross, Filyer, Lollis, Perlman, & Martin, 1994) and authors in the popular press (e.g., McDermott, 1980) advocate that parents take a relatively active role in sibling conflict. Dunn (1988) posited that young children lack skills in conflict management and are dependent upon their parents to orchestrate conflict management processes. For example, in their study of 4-year-old children with 2-year-old siblings, Ross et al. (1994) found that when parents did not intervene in conflicts, rules of fairness were violated and older siblings dominated younger siblings. Accordingly, Ross et al. viewed parental intervention as an important context for teaching rules of justice and fairness. Parental involvement in sibling conflict has also been associated with more sophisticated conflict behaviors. Dunn and Munn (1986) demonstrated that maternal intervention in the conflicts of 18- and 24-month-old children and their older siblings was associated with more elaborate conflict behaviors such as providing justifications along with prohibitions, referring to social rules, and conciliating. Perlman and Ross (1997a) showed that conflicts between 2-year-old children and their 4-year-old siblings became less intense following maternal intervention as children engaged in fewer verbal and physical power strategies, fewer oppositional tactics, and cried less often. Simultaneously, children's reasoning and perspective-taking increased after intervention. In summary, these researchers contend that parental intervention in conflict may have dual functions of decreasing the likelihood of future coercive behaviors while also helping to advance children's social cognitive development.

Although the cases both for and against parental intervention appear to be compelling, there are several factors that need to be considered before we can adopt either stance. First, children's developmental levels must be taken into account when evaluating the effectiveness of parental intervention strategies. Children's ability to manage sibling conflict increases with age (Phinney, 1985), and so parental intervention may be less necessary as children develop. As few studies have examined third party interventions into sibling conflicts beyond the preschool years, however, we have little information about the effectiveness of parental intervention for children at different developmental levels. The current study evaluates the strength of associations between parental intervention in conflicts and sibling relationship quality for children ranging in age from 3 to 9 years.

A second factor that must be evaluated before we accept the value of parental intervention or nonintervention into sibling conflict is parent gender. With few exceptions (e.g, Vuchinich et al., 1988; Washo, 1992), the research on parental intervention in sibling conflict has considered only maternal interventions or has evaluated fathers' responses when mothers are present (Lollis, Ross, & Leroux, 1996; Perlman & Ross, 1997a). Little is known about whether fathers respond to sibling conflict in the same ways that mothers do when they are fully in charge of their children. In addition, little is known about whether particular conflict management strategies have a different impact on children's behavior when they are employed by mothers as opposed to fathers. Vuchinich et al.'s (1988) research suggests that mothers and fathers have different styles of intervention in family conflicts. In reviewing videotapes of 52 families eating dinner, Vuchinich et al. found that mothers intervened more often than fathers in their children's conflicts. Furthermore, fathers more often than mothers were observed using authority strategies, whereas mothers used mediational tactics more than fathers did. The current study will further examine this issue in a context where mothers and fathers have separate jurisdiction over their children.

Third, the issue of whether or not parents should intervene in their children's conflicts may depend on the type of intervention that parents select. Most studies of parental responses to sibling conflict have either not distinguished between forms of intervention (Perlman & Ross, 1997a), or have focused on a single intervention strategy such as "time out" (Allison & Allison, 1971; Leitenberg, Burchard, Burchard, Fuller, & Lysaght, 1977; Levi et al., 1977; O'Leary, O'Leary, & Becker, 1967; Olson & Roberts, 1987). We hypothesize that different styles of intervention (and nonintervention) may have differential associations with sibling behaviors. For example, based on the work by Vuchinich et al. (1988), Dunn and Slomkowski (1992), and Baumrind (1967), we would expect that parental interventions that rely on the use of parental authority to curtail conflicts are

likely to have an impact different from that of interventions that involve open discussions with siblings aimed at reconciling their individual needs and goals. Thus, in the current study we examine associations between parents' use of a range of conflict management strategies and the quality of children's sibling relationships.

Washo (1992) examined five ways that parents respond to sibling conflict in terms of their associations with the quality of interaction between the siblings. Secondborn children were 2.5 to 4 years of age and their siblings were 2 to 4 years older. Parents indicated on a questionnaire the extent to which they used: (1) power assertion techniques (parents using their superior power and authority to end conflicts; e.g., punishing children for fighting), (2) collaborative problem solving (working with children to reach a resolution that satisfies the needs of both children), (3) conflict avoidance (distracting or redirecting children to a different activity), (4) commands to stop fighting (verbally compelling children to immediately terminate conflict; e.g., "just cut it out!"), and (5) nonintervention (ignoring the conflict or tacitly allowing children to resolve it on their own). In addition, the spontaneous use of these parental conflict management strategies in response to sibling conflict was observed in a laboratory setting. Washo found that siblings engaged in relatively low levels of conflict in the laboratory. As a result, analyses were based on parent reports. Parents' reports of using power assertion and redirection to settle conflicts was negatively correlated with the quality of children's sibling interactions in the laboratory. Mothers' use of passive nonintervention was associated with positive sibling interaction quality. Further, parents viewed nonintervention and commands to stop fighting as relatively ineffective conflict management strategies. Interestingly, mothers viewed collaborative problem solving as effective more than fathers did, and fathers viewed power assertion and commands to stop fighting as effective more than mothers did.

The present study builds upon previous research in several ways. First, parental responses to sibling conflict were observed in the natural home environment rather than in a laboratory. As indicated by the results of Washo (1992) and others, children are likely to suppress conflict engagement and parents are likely to engage in socially desirable responses in a laboratory context. Further, an attempt was made to minimize the potentially reactive effects of observers in the home by using a wireless microphone observational procedure (see Asher & Gabriel, 1993) that allows children to move anywhere in their home without an observer following them. Parents monitored their children by listening to their ongoing conversation on a remote speaker system.

The current study also builds upon previous research by considering a broader range of parental conflict management strategies. Two additional categories of response were identified on the basis of pilot testing and current research: active nonintervention and exploration of emotion. In active nonintervention, parents explicitly tell children to try to resolve the conflict on their own. Parents may also explain to children that they are available to help with this process if the children are unsuccessful in resolving the conflict on their own. Thus, the use of active nonintervention may tell children that their parents believe they have the skills to resolve conflicts but need a reminder to use them. We see this as quite different from passive nonintervention, because children who do not receive any input from parents during conflict may be unsure as to whether their parents are condoning the conflict, expecting them to engage in some form of conflict management on their own, or trying to avoid the conflict.

The exploration of emotion category reflects parents' attempts to help children explore their own or their sibling's emotions during conflict. This category was developed on the basis of Dunn and Slomkowski's (1992) research showing that children's competence in perspective taking, empathy, and social understanding may be advanced by having opportunities to examine the consequences of conflict for themselves and their siblings. Lollis et al. (1996) also described a parental intervention in which parents ask children to consider each other's needs and feelings, or ask one child to share or be generous to alleviate the unhappiness of a sibling.

In summary, the objectives of the present study were: (1) to identify how mothers and fathers respond to sibling conflict in their natural home context; (2) to evaluate the degree to which a range of parental conflict management strategies are related to variations in sibling relationship quality, (3) to determine whether associations between parental conflict management strategies and sibling relationship quality are moderated by developmental effects, and (4) to empirically speak to the issue of whether or not parents should intervene in sibling conflict.

METHOD

Participants

Eighty-eight two-parent families, consisting of a 3- to 5-year-old secondborn child ($M = 4.19$ years, $SD = .97$) and a firstborn child who was 2 to 4 years older

(M = 6.95 years, SD = 1.32), participated. The sample included 21 sister dyads, 20 brother dyads, 22 older sister–younger brother dyads, and 25 older brother–younger sister dyads. The mean age difference between the siblings was 2.76 years (SD = .91).

Participants were mostly white (95%). Mothers were 33.74 years of age on average (SD = 4.19) and fathers were 36.05 years (SD = 5.16). Couples had been married 9.25 years (SD = 3.37) on average. Mothers and fathers had completed an average of 16.01 (SD = 3.75) and 16.06 (SD = 3.24) years of schooling, respectively. Median family income was in the $40,000–49,999 range. Families were recruited via advertisements in newspapers and received $50 at the end of the study.

Procedures

Three home observations were conducted in which children's spontaneous conversations with their siblings were observed using a wireless microphone system. This system allowed audiotaping of children's conversations as they moved freely about their homes. Parents were also able to listen to their children's conversations using a speaker set up in another room in the home.

The home observations were conducted approximately 1 week apart. The objective of the first session was simply to acquaint children and parents with the wireless microphone recording procedure. Each child was asked to wear a pair of colorful suspenders in which a microphone was concealed. They also wore a fanny pack which held the transmitter. The children's conversation was transmitted to two small speakers placed in a separate room in which a parent was stationed. The conversation was simultaneously transmitted to a tape recorder. Once the equipment was set up, the children were escorted to a room in their house where they were asked to play. Although they were free to move about the house, sessions always began with both children in the same location. The children were told that the researchers were interested in how brothers and sisters played at home. Researchers told the siblings they could play with any toys or materials available, but they did not instruct children to play either together or separately. The children's conversations and parent interventions were then audiotaped for 30 min.

During the second and third home visits, individual parents were asked to monitor their children's play for 45 min by actively listening to their children on the speaker system. It was emphasized that they should respond to the children as they normally would. A research assistant shadowed the monitoring parent to ensure that the parent was listening to the children's conversation and to write notes about any events related to the family interaction that would not appear on the audiotape.

Parents were not informed of the interest in sibling conflict; they were told that the purpose of this study was to learn about how brothers and sisters play together at home. All questions to parents as to their views about or responses to sibling conflict were administered only after the observations of family interaction were complete. Mothers and fathers independently monitored the children. That is, one parent was selected at random to be the monitor at the second session and the other parent served as the monitor at the third session.

Parents' spontaneous reactions to their children's conflict were also audiotaped. These responses were later coded by independent observers. When conflict occurred, observers noted: (1) whether or not the parent chose to intervene, and (2) the strategies the parent used to help resolve the conflict.

In order to increase the probability of observing conflict, all home visits were scheduled late in the afternoon when children are often tired and hungry. In addition, relatively extended observation periods were used. Forty-five minutes was selected as the length of the observation sessions because pilot testing revealed that this was the amount of time parents felt comfortable having us in their homes before dinner.

Measurement of Observational Constructs

Parental responses to sibling conflict. Audiotapes and verbatim transcripts of the home sessions were used to identify all instances of extended sibling conflict. Following Shantz (1987), sibling conflict was defined as three or more turn units of conversation (i.e., changes in speaker) that reflected mutual opposition. A conflict was designated as physical when at least one child made a verbal statement indicating that some form of physical aggression had just taken place (e.g., "Mom, Brian just hit me!"). A conflict was considered to have terminated after a clear resolution of the disagreement or after a 30-s interval in which there were no oppositional turns.

Seven categories of parental conflict management strategies were identified on the basis of prior research (Dunn & Munn, 1986; Dunn & Slomkowski, 1992; Felson & Russo, 1988; Ross et al., 1994; Vuchinich et al., 1988; Washo, 1992) and pilot testing. These included: passive nonintervention, active nonintervention, collaborative problem solving, redirection, power assertion, commands to stop fighting, and ex-

ploration of emotion. Brief definitions and examples of these strategies are provided in the Appendix. Coders listened to each audiotape and, using a verbatim transcript, indicated the beginning and end of all conflicts. Data were summarized in terms of: (1) the number of conflicts that occurred, (2) the type of conflict (verbal versus physical), (3) the length of the conflict (in seconds), (4) the intensity of the conflict (mild, moderate, or intense), (5) the latency of parental intervention (in seconds), and (6) which of the seven parental conflict management strategies was used. Assuming that parents might try different strategies in response to the same conflict, raters specified in sequence all the strategies that were used.

One third of the observational sessions were coded by a second independent rater to calculate interrater agreement. Cohen's κs were .77 for the number of conflicts that occurred in the session, 1.00 for the type of conflict (verbal versus physical), .70 for the intensity of conflict, and .70 (overall) for the type of strategy parents used. Correlations were computed to estimate interrater agreement in timing the length of conflicts, $r(57) = .98$, and the latency of parent intervention, $r(57) = .88$.

Observed sibling interaction quality. Using the audiotapes and verbatim transcripts, two additional independent observers rated the quality of the sibling interactions. The procedures of Stocker, Dunn, and Plomin (1989) were modified so that coders used a 5-point Likert scale to rate the sibling interactions for involvement, warmth, agonism, control, and rivalry/competition. Higher scores indicated higher frequencies of each of these behaviors or affects. Estimates of interrater agreement (κ) were .84, .80, .90, .89, and .94, for involvement, warmth, agonism, control, and rivalry/competition, respectively.

RESULTS

The results are organized so that descriptive information is first presented about the occurrence of sibling conflict, the parents' management of the conflict, and the quality of the sibling interaction. We then address how each of these interpersonal processes are related to children's developmental levels and gender. Next, we report associations between parental conflict management behaviors and children's sibling relationship quality, and end with the sequential analyses of parent–sibling interaction.

Verbal and Physical Conflicts

Table 1 presents descriptive information on the types of conflicts between children when their play was being monitored by their mothers and fathers. Children engaged in similar amounts of conflict per session irrespective of which parent was monitoring their play. Children engaged in approximately 2.60 extended conflicts per 45-min observation. Physical conflicts were rare. Conflicts lasted approximately 45 s, but ranged significantly in length between 3 s and 6 min. On average, conflicts were rated as moderate in intensity. When parents intervened, they were likely to enter the interaction approximately 28 seconds after the conflict began. Parents used an average of 3.5 management strategies per session and about 1.5 strategies per conflict.

Table 1 Frequencies of Sibling Conflict and Parental Intervention ($N = 88$ families)

	Monitor			
Conflict Behavior	Mother *M* (*SD*)	Father *M* (*SD*)	*df*	*t*
Verbal conflicts	2.26 (2.33)	2.47 (2.47)	87	−.80
Physical conflicts	.13 (.43)	.19 (.42)	87	−.90
Total conflicts	2.38 (2.38)	2.65 (2.52)	87	−.96
Length of conflict (s)	44.58 (53.06)	43.67 (60.49)	62	.03
Intensity of conflict (3-point scale)	1.56 (.62)	1.50 (.58)	62	.53
Latency to parental intervention (s)	27.92 (28.75)	29.57 (33.15)	62	.38
Number of parental conflict management strategies per session	3.77 (5.53)	3.44 (3.61)	62	.46
Number of parental conflict management strategies per conflict	1.51 (1.42)	1.62 (2.35)	62	.17

Due to the low frequency of physical sibling conflicts, subsequent analyses were performed only using parents' responses to verbal disputes. In addition, observational sessions that did not include sibling conflict ($n = 15$ for mothers and 12 for fathers) were omitted in subsequent analyses involving parental conflict management strategies.

Parental Conflict Management Strategies

Descriptive data on mothers' and fathers' use of the seven conflict management strategies are presented in Table 2. As shown in this table, mothers and fathers were most likely to use passive nonintervention when responding to sibling conflict. Collaborative problem solving, redirection, power assertion, and commands to stop fighting were used less frequently. Very few parents used the strategies of active nonintervention and exploration of emotion. A series of paired *t* tests failed to reveal significant differences in the frequency

Table 2 Parental Conflict Management Strategies

	Monitor				
	Mother		Father		
Type of Conflict	*M* (*SD*)	Total	*M* (*SD*)	Total	*t*(62)
Passive nonintervention	1.67 (2.22)	144	2.08 (2.31)	179	−1.67
Redirection	.69 (1.75)	60	.57 (1.86)	49	.42
Power assertion	.36 (1.06)	31	.37 (1.23)	32	.07
Commands to stop fighting	.30 (1.25)	25	.15 (.54)	13	1.01
Collaborative problem solving	.45 (1.94)	39	.08 (.38)	33	1.79
Active nonintervention	.08 (.35)	7	.01 (.11)	1	1.52
Exploration of emotions	.13 (.93)	12	.13 (.92)	12	0

with which mothers and fathers employed the conflict management strategies.

In order to reduce the number of variables included in subsequent analyses, the seven parental conflict management strategies were collapsed into three categories based on their intercorrelations and on prior theory and research (Dunn, 1988; Felson & Russo, 1988; Ross et al., 1994; Vuchinich et al., 1988). The three categories were: (1) child-centered strategies, (2) parental control strategies, and (3) passive nonintervention. Child-centered strategies were conceptualized as responsive parental behaviors directed toward helping children to communicate with one another about their positions as well as to negotiate, compromise, and solve problems. Child-centered strategies require that children and parents be relatively active in the conflict management process as they work through and try to resolve the conflict, and explore emotions; and these strategies give children responsibility for ending the conflict. Accordingly, collaborative problem solving, active nonintervention, and exploration of emotion categories were considered child-centered strategies ($\alpha = .58$). Parental control strategies were conceptualized as parent behaviors that are not directed toward understanding children but that seek to eliminate conflict through punishment or threats, or by distracting or redirecting children's attention to nonconflictual topics. The categories of power assertion, redirection, and commands to stop fighting were considered parental control strategies ($\alpha = .73$). Passive nonintervention was kept as an independent category as it represented an absence of parent involvement. The child-centered, parental control, and passive nonintervention categories were not significantly intercorrelated. An examination of parental conflict management behavior considered as composite categories revealed that mothers ($M = .66$, $SD = 1.07$) tended to use child-centered strategies more often than did fathers ($M = .22$, $SD = 0.47$), $t(62) = 1.88$, $p < .07$. No differences were found between mothers' and fathers' uses of control and nonintervention strategies.

Sibling Relationship Quality

Table 3 provides descriptive data on the observational measures of sibling relationship quality. As shown in this table, no effects for parent gender were found for any of the measures of sibling interaction quality. Thus, children appeared to interact just as positively (or negatively) when their mother or their father served as monitor.

Due to significant intercorrelations among the five dimensions of sibling relationship quality, these dimensions were collapsed to form two composite categories: positive and negative sibling interaction. The positive category consisted of warmth and involvement ($\alpha = .93$) and the negative category consisted of agonism, control, and rivalry ($\alpha = .88$).

Sibling interaction was judged to be more negative when conflict episodes lasted longer, $r(61) = .27$, $p < .05$, and were more intense, $r(61) = .40$, $p < .001$. The corresponding correlations for positive sibling interaction were not significant. Interestingly, the number of conflicts that children engaged in was moderately correlated with both positive, $r(87) = .33$, $p < .01$, and negative, $r(87) = .33$, $p < .01$, dimensions of sibling relationship quality. Thus, children who engaged in more conflicts with their siblings were more likely to be rated by the observers as exhibiting both positive and negative forms of sibling behaviors.

Developmental Effects

Developmental effects on children's engagement in conflict, parental conflict management strategies,

Table 3 Children's Sibling Interaction Quality ($N = 88$ families)

	Monitor		
Sibling Interaction Quality	Mother *M* (*SD*)	Father *M* (*SD*)	*t*(87)
Warmth	2.87 (1.08)	3.06 (1.13)	−1.69
Involvement	2.86 (1.19)	3.00 (1.13)	−1.22
Agonism	2.84 (1.20)	3.11 (1.21)	−1.48
Control	2.81 (1.22)	2.83 (1.26)	−.12
Rivalry/competition	2.96 (1.37)	2.98 (1.38)	−.08

and sibling relationship quality were next investigated using two analytic tactics. First, analyses of variance (ANOVAs) were performed to determine whether sibling dyads of various ages engaged in different types of conflict behavior and sibling interaction, and further, whether parents differentially respond to children's conflicts according to children's ages. As the age variables approximated a bimodal distribution, the sample was divided into two groups representing younger and older sibling dyads on the basis of a median split conducted on age of the firstborn child (median = 83 months). (The ages of the first and secondborn children were highly correlated, $r(87) = .71$, $p < .001$.) Younger sibling dyads ($n = 43$) included first- and secondborn children in the 3- to 7-year-old range. Children in the older sibling dyads ($n = 45$) were in the 4.5- to 9-year-old range. Second, correlational analyses were used to assess the strength of the associations between age difference between siblings and their engagement in conflict, sibling interaction, and parental responses to sibling conflict.

Conflict features and children's age. Older sibling dyads engaged in more conflicts ($M = 5.93$, $SD = 4.17$) than did younger sibling dyads ($M = 4.05$, $SD = 3.97$), $F(1, 87) = 4.05$, $p < .05$. There was also a tendency for the conflicts of older sibling dyads to be rated by observers as more intense ($M = 2.42$, $SD = 1.25$) in comparison to those of younger sibling dyads ($M = 1.93$, $SD = 1.35$), $F(1, 87) = 3.10$, $p < .08$. The length of individual conflict episodes was unrelated to children's age; and age disparity between siblings was not related to frequency, length, or intensity of the observed conflicts.

Parental conflict management and children's age. We next evaluated whether parents used particular conflict management strategies based on their children's ages. A 2 (younger/older sibling dyad) × 2 (parent gender) multivariate repeated analysis of variance (MANOVA) was performed with the three parental conflict management strategies as the dependent variables and parent gender as the repeated factor.

A significant interaction effect was found for parent gender and sibling age, $F(2, 60) = 4.07$, $p < .05$. Follow-up one-way ANOVAs revealed that mothers were more likely to use passive nonintervention with older ($M = 2.03$, $SD = 1.56$) rather than younger ($M = 1.18$, $SD = 1.61$) sibling dyads, $F(1, 61) = 3.65$, $p < .05$. However, fathers' passive nonintervention was not related to children's ages. In addition, fathers used more control strategies with younger ($M = .57$, $SD = 1.21$) rather than older ($M = .19$, $SD = .87$) sibling dyads, $F(1, 61) = 3.63$, $p < .05$. In contrast, mothers' use of parental control strategies was not found to vary in accordance with children's ages. No effects for children's age were found for either mothers' or fathers' use of child-centered strategies. Only one significant correlation was found between sibling age difference and parents' use of the conflict strategies: fathers engaged in more control strategies when the age difference between siblings was smaller, $r(61) = -29$, $p < .01$).

Sibling relationship quality and children's age. Older sibling dyads ($M = 6.45$, $SD = 1.97$) were found to engage in more positive forms of social interaction than younger sibling dyads ($M = 5.23$, $SD = 1.70$), $F(1, 87) = 8.37$, $p < .01$. In contrast, ratings of negative sibling interaction did not vary according to children's ages. Furthermore, neither positive nor negative sibling interaction was significantly related to the age difference between siblings.

Gender Effects

Conflict features and children's gender. The gender constellation of the sibling dyad was not significantly related to the frequency, length, or intensity of the observed conflicts.

Parental conflict management and children's gender. Parents' selection of conflict management strategies was generally unrelated to the gender constellation of the sibling dyad. A series of one-way ANOVAs revealed only one significant effect for children's gender constellation with regard to fathers' use of control strategies, $F(3, 72) = 3.38$, $p < .05$. Post hoc contrasts (Tukey) revealed that, in comparison to the other gender constellations, fathers were most likely to use control strategies with sibling dyads consisting of an older brother and younger sister.

Sibling relationship quality and children's gender. None of the measures of sibling relationship quality were significantly associated with the gender constellation of the sibling dyad.

Parental Conflict Management Strategies and Children's Sibling Interaction Quality

We next examined the degree to which the parents' observed use of the conflict management strategies (frequencies) were correlated with the quality of children's concurrent sibling interactions as measured by observers' ratings. These analyses were intended to show whether children behaved in particular ways with their siblings when parents used a given conflict management strategy. Because parental behavior may vary according to the amount of conflict children engage in, the total length of conflict engagement for each session (transformed into a standard score) was included as a covariate in these analyses.

Table 4 Correlations between Maternal and Paternal Responses to Sibling Conflicts and Sibling Interaction Quality, Controlling for Length of Conflict Engagement

		Monitor			
		Mother (N = 73)		Father (N = 76)	
Parental Response	Age of Sibling Dyad	Positive Interaction	Negative Interaction	Positive Interaction	Negative Interaction
Passive nonintervention	Younger[a]	.62***	.62***	.20	.56***
	Older[b]	.37*	.06	.19	.09
Child-centered	Younger	.05	.30*	.08	.51***
	Older	−.30*	.09	−.02	.09
Parental control	Younger	−.01	.01	.12	.13
	Older	−.50***	.11	−.17	.22

[a] *Range* = 3–7 years.
[b] *Range* = 4.5–9 years.
* $p < .05$; ** $p < .01$; *** $p < .001$.

Results pertaining to maternal and paternal conflict management behaviors are presented in Table 4. In interpreting these correlations, note that the direction of effects is ambiguous. That is, whereas it is possible that parental use of particular conflict management strategies affects sibling interaction quality, it may also be true that certain characteristics of sibling interaction may lead parents to use particular conflict management strategies. Alternately, some third variable(s) may mediate these associations.

Passive nonintervention. As shown in Table 4, mothers' passive nonintervention with younger sibling dyads was related to greater positive, $r(33) = .62$, $p < .001$, *and* negative, $r(33) = .62$, $p < .001$, forms of sibling interaction, when controlling for the length of conflict involvement. Mothers' passive nonintervention with older sibling dyads was related to more positive, but not more negative, interaction between siblings, $r(38) = .37$, $p < .05$. R to z transformations indicated that the differences between corresponding correlations for younger and older sibling dyads were significant for both positive, $z = 2.81$, $p < .05$, and negative, $z = 5.54$, $p < .001$, sibling interaction. Thus, maternal noninvolvement was more likely to be linked with both positive and negative forms of sibling interaction when the sibling dyads were younger rather than older.

For fathers, passive nonintervention was correlated with more negative forms of sibling interaction for younger, $r(36) = .56$, $p < .001$, but not for older, sibling dyads. R to z transformations indicated that the difference between corresponding correlations for younger and older sibling dyads was significant for negative sibling interaction, $z = 4.53$, $p < .001$. Paternal passive nonintervention was not correlated with positive sibling interaction for either younger or older sibling dyads.

Child-centered strategies. Mothers' use of child-centered strategies with younger sibling dyads was linked with higher ratings of negative sibling interaction, $r(33) = .30$, $p < .05$. This association, however, was not significant for older sibling dyads. R to z transformations indicated that the differences between corresponding correlations for younger and older sibling dyads were marginally significant, $z = 1.86$, $p < .06$.

Mothers' use of child-centered strategies with older sibling dyads was related to lower ratings of positive sibling interaction, $r(38) = -.30$, $p < .05$. The corresponding correlation was not significant for younger sibling dyads. R to z transformations indicated that the difference between corresponding correlations for younger and older sibling dyads was significant for positive sibling interaction, $z = 5.00$, $p < .001$. Thus, mothers' use of child-centered strategies with older sibling dyads, in comparison with younger sibling dyads, was related to less sibling warmth and involvement. Also, maternal child-centered strategies with younger sibling dyads, in comparison with older sibling dyads, was linked with the exertion of greater agonism, control, and rivalry/competition between siblings.

Fathers' use of child-centered strategies was linked with more negative sibling interaction for younger sibling dyads, $r(36) = .51$, $p < .001$. For older sibling dyads, however, paternal child-centered strategies were not significantly related to the measures of sibling interaction quality. R to z transformations indicated that correlations between paternal child-centered strategies and negative sibling interaction for younger

sibling dyads differed significantly from those for older sibling dyads, $z = 3.94$, $p < .001$.

Parental control strategies. Maternal use of parental control strategies was not significantly correlated with either positive or negative forms of sibling interaction among younger sibling dyads. In contrast, mothers' use of parental control strategies with older sibling dyads was related to ratings of less positive sibling interaction, $r(38) = -.50$, $p < .001$. The results of R to z transformations revealed a significant difference in corresponding correlations between younger and older sibling dyads, $z = 4.57$, $p < .001$. Thus, when performed by mothers, parental control strategies appear to be relatively less effective with older sibling dyads, inasmuch as they are related to lower levels of sibling involvement and warmth.

Fathers' use of parental control strategies was not significantly related to any of the indices of sibling interaction quality for younger or older sibling dyads.

Parents' Sequential Enactment of Conflict Management Strategies

Another measure of the effectiveness of a particular parental conflict management strategy is the extent to which implementation is followed by additional conflict. Transitional probabilities (Bakeman & Gottman, 1986) were computed to estimate the degree to which mothers' and fathers' use of passive nonintervention, and child-centered and parental control strategies with younger and older sibling dyads were followed by sibling conflict. With respect to passive nonintervention, each conflict move made by children that was not followed by a parental intervention was examined to determine whether or not it was followed by further conflict. Z-score binomial tests were then conducted to determine the extent to which the observations exceeded expected probabilities.

With few exceptions, when their play was monitored by their mothers and fathers, the patterns of results obtained for younger and older sibling dyads were similar. It was most noteworthy that passive nonintervention was highly associated with the occurrence of subsequent sibling conflict, with zs ranging from 4.43 to 7.52, $p < .001$. In contrast, child-centered strategies were unlikely to lead to additional sibling conflict (zs ranged from .48 to 1.35, $p = ns$). The findings for parental control strategies were mixed; although maternal use of parental control strategies was likely to lead to subsequent sibling conflict for younger sibling dyads, $z = 2.04$, $p < .05$, this was not true for older sibling dyads, $z = 1.53$, $p = ns$. In addition, the paternal use of parental control strategies was not linked with subsequent sibling conflict, $z =$ 1.38 and .07, $p = ns$, for younger and older sibling dyads, respectively. Instead, it was very common for both maternal and paternal control strategies to be followed by the implementation of additional control strategies, zs ranged from 3.94 to 7.37, $p < .001$. Thus, it appears that once parents intervened using control strategies, any continued involvement in their children's interaction was likely to consist of additional controlling methods. This involvement may have diminished the occurrence of further sibling conflict.

Parents' use of child-centered strategies was also likely to be followed by additional child-centered strategies, zs ranged from 4.57 to 7.52, $p < .001$, rather than parental control strategies or passive nonintervention. Thus, parents who enacted child-centered strategies were likely to continue their involvement in the children's interaction using similar strategies. This continued involvement was linked with a lower probability of continued conflict. It was notable that parents who began their intervention with child-centered strategies did not use more intense control or power assertive methods as their involvement in the conflict continued.

A related finding was that sibling conflicts were longer in duration when parents intervened. Bouts of sibling conflict were longer when mothers and fathers used more child-centered strategies with their younger, $r(33) = .34$ for mothers and $r(36) = .36$ for fathers, $p < .05$, and older sibling dyads, $r(38) = .73$, $p < .001$ for mothers and $r(39) = .36$, $p < .05$ for fathers. Similarly, length of sibling conflict was also greater when mothers and fathers used more controlling strategies with younger, $r(33) = .66$ for mothers and $r(36) = .67$ for fathers, $p < .001$, and older sibling dyads, $r(38) = .72$ for mothers and $r(39) = .60$ for fathers, $p < .001$. No significant associations were found between parents' use of passive nonintervention and the length of sibling conflict. However, the length of sibling conflict was generally shorter when parents allowed children to handle the conflicts on their own ($M = 43.03$, $SD = 7.42$) than when they engaged in either child-centered ($M = 82.53$, $SD = 43.81$), $t(62) = 2.32$, $p < .05$, or control ($M = 105.74$, $SD = 31.56$), $t(62) = 2.44$, $p < .05$, interventions. In interpreting these correlations, note that a shorter duration of conflict does not necessarily indicate that the conflict was resolved.

DISCUSSION

The results of this study suggest that different patterns of associations exist between the parental conflict management strategies under study and children's sibling interaction quality in accordance with children's devel-

opmental status. Furthermore, different patterns were found when mothers versus fathers monitored their children's play. The key findings are discussed below in light of previous research and theory.

The Range of Parental Responses to Sibling Conflict

One objective of this research was to catalog the range of strategies parents use when responding to conflicts between their children. This range turned out to be relatively narrow. Passive nonintervention (letting children work out difficulties on their own) was by far the most common strategy used by parents in the home observations. Mothers and fathers used passive nonintervention in approximately 45% and 56%, respectively, of their children's conflicts. These percentages are consistent with Perlman and Ross's (1997a) finding that in 43% of the conflicts they observed, parents did not intervene.

The fact that parents often did not intervene in their children's conflict is particularly significant given Washo's (1992) conclusion that parents view passive nonintervention as a relatively ineffective technique for managing conflict. In this study, we went to great lengths to ensure that parents could hear their children's interactions via the speaker system. Thus, we are confident that nonintervention was not due to parents' unawareness of sibling conflict. Instead, it seems that on many occasions parents elect to not interfere.

In this study, a distinction was made between active and passive forms of nonintervention. We reasoned that simply leaving children to their own devices during conflict (passive nonintervention) may have a very different impact from active forms of nonintervention where children are prompted to use skills they already possess to resolve conflicts or are reminded that a parent is available if they need help working matters out on their own. Whereas children may interpret passive nonintervention as implicit permission to continue fighting, active nonintervention may provide children with needed support (or a "scaffold") as they practice conflict management skills that are either emerging or are already in their repertoire but are rarely expressed. We were struck by how infrequently parents used active nonintervention. Nonetheless, it will be important for subsequent researchers and practitioners to be aware of these distinct forms of nonintervention and to be clear with parents about how nonintervention can be practiced.

It was also notable that few parents explored their children's emotions during conflict situations. Given previous research by Dunn and Slomkowski (1992) and Lollis et al. (1996), exploration of emotion may be a productive way both to help children with their conflicts and to foster the development of social understanding. Empathic responding and altruism may be fostered by parental interventions that require children to consider how their coercive behaviors have caused distress in others. Thus, even though it is not a popular strategy, it should not be ruled out as a potentially effective one.

The Effectiveness of Nonintervention

Given the frequency with which passive nonintervention occurred, and the controversy in the literature about whether it is advisable for parents to intervene in children's conflicts, it is important to examine the ways in which passive nonintervention correlates with key dimensions of sibling relationship quality.

In general, both younger (*range* = 3–7 years) and older (*range* = 4.5–9 years) sibling dyads were more involved with one another when their parents allowed them to handle conflicts on their own. This involvement encompassed both positive and negative forms of sibling interaction. Passive nonintervention by mothers was associated with greater positive *and* negative sibling interaction for younger sibling dyads and with only positive sibling interaction for older sibling dyads. Passive nonintervention by fathers was linked only with negative sibling interaction for younger sibling dyads. Thus, the sibling interactions of younger dyads were marked by greater agonism, control, and rivalry/competition when they were more often left on their own to handle conflicts. Despite the fact that maternal passive nonintervention was also linked with positive sibling interaction, the probability of additional conflict was high for both younger and older sibling dyads when parents did not intervene.

How Effective are Parents' Interventions in Sibling Conflict?

A key finding in the current study is that there was less likelihood of continued conflict when parents intervened in their children's conflict than when they did not. The effectiveness of parents' intervention, however, depended on the type of conflict management strategy used. In accordance with Baumrind's (1967) work on authoritarian and authoritative parenting, we found that the exertion of parental control to curtail conflicts generally had a different association with child outcome variables than did child-centered intervention actions such as discussions with siblings aimed at reconciling their individual needs and goals. The effectiveness of the intervention strategy was also related to children's developmental level and the gender of the responding parent.

Type of intervention. Once parents decided to become involved in their children's conflicts they tended to stay involved using a similar type of conflict management strategy. Thus, parents' initial use of control methods to handle children's conflict predictably led to additional control methods, whereas the use of child-centered methods generally led to additional child-centered methods. Parents who began their intervention by facilitating a discussion of each child's needs and goals or by highlighting and exploring children's feelings during conflict, generally persisted in this strategy over time, and parents who began their intervention using power assertion or threats also continued in this vein. The child-centered strategies were associated with a lowered probability of subsequent conflict. Although subsequent conflict was also often avoided through sustained or repeated parental control intervention, the tone of the interaction was likely to be more negative given that parents were issuing additional directives, threats, and/or punitive statements. It is likely, therefore, that negative affect escalates in intensity with repeated or continued parental control intervention (Patterson, 1982) although this was not directly evaluated. It should also be noted that for younger sibling dyads only, mothers' use of control strategies was likely to be followed by additional sibling conflict. Thus, child-centered strategies may be preferable to control strategies because they perpetuate more positive parent-child interactions.

Children's developmental level. In general, parental intervention in conflict appears to be less adaptive for older sibling dyads. Mothers' (but not fathers') use of control and child-centered strategies was linked with lower levels of positive sibling engagement (such as sibling involvement and warmth) for older sibling dyads. The corresponding associations were not significant for younger sibling dyads. One possible explanation for these findings is that mothers of older sibling dyads tend to use child-centered and/or control strategies when they perceive their children to be less involved with one another. Alternately, it could be that mothers' use of controlling or child-centered methods may lead a pair of older siblings to feel less positively about one another. For example, relatively older siblings, who recognize the involuntary nature of sibling relationships, may react negatively to external pressure to get along.

It should be noted that maternal and paternal child-centered strategies were linked with more negative interactions for younger sibling dyads. This may reflect parents' willingness to try child-centered strategies with younger children who are exhibiting more friction in their relationship. An alternate interpretation of these correlations, that child-centered strategies lead to more negative sibling interactions, is contraindicated by the results of sequential analyses which show that child-centered strategies are linked with a reduced likelihood of further conflict.

Taken together, these results suggest that parental involvement in children's conflicts may be more advisable with younger than with older sibling dyads. Following Dunn's (1988) logic, younger dyads may need their parents to help them resolve conflicts and set the relationship back on course. In contrast, older dyads may be in less need of direct assistance; they know how to resolve conflicts, although they may choose not to, and parental intervention may in some way contribute to or accentuate a reduced involvement between children.

Parent gender. Our observations show mothers and fathers intervene in their children's conflicts to approximately the same degree. This finding differs somewhat from those of Vuchinich et al. (1988), Lollis et al. (1996), and Perlman and Ross (1997a), who found that mothers intervened more than fathers. The discrepancy between these findings is probably a function of asking fathers in the current study to supervise their children independently from their wives. The decision in this study to allow each parent to monitor a session, was made expressly to prevent fathers from deferring authority to mothers. Thus, the frequencies observed here may overestimate fathers' typical involvement in their children's conflicts when their wives are present. It may also be true, however, that the results of previous research underestimate paternal involvement when fathers act autonomously. It will be important in future research to clearly define the context in which parents respond to conflicts between their children and to include situations where fathers are fully responsible for monitoring their children.

Particular conflict management strategies may have a different impact when they are enacted by mothers than when they are used by fathers. For example, whereas mothers' passive nonintervention was correlated with positive sibling interaction among both younger and older sibling dyads, these associations were not significant for fathers' nonintervention. Furthermore, whereas mothers' use of child-centered and controlling strategies was associated with lower levels of positive interaction among older sibling dyads, fathers' use of these strategies was unrelated to sibling interaction quality. These different associations may have emerged because fathers tended to employ child-centered strategies less often than did mothers. Another possible explanation for these divergent findings may be that mothers and fathers hold different views about when it is appropriate to

intervene in conflict. In addition, mothers and fathers may have different beliefs about the circumstances under which their intervention is likely to be effective. For example, whereas mothers may view controlling and competitive sibling behaviors and affects as cues for them to lead children in a discussion of the conflict, fathers may use this technique more randomly. Research investigating maternal and paternal beliefs about when it is appropriate and effective to respond to children's conflict will be helpful in exploring hypotheses such as these.

A second possible explanation for why some different correlates emerged for maternal versus paternal intervention is that children may respond differently to conflict management strategies performed by their mothers than they do when the same strategies are used by their fathers. Whereas older sibling dyads may react to maternal intervention by becoming less engaged and positive with one another, these same children may not alter their behaviors as a consequence of paternal intervention. This explanation raises the question of whether there are stylistic differences in the ways that mothers and fathers enact the same strategies. For example, do children perceive their mothers as more punitive and their fathers as more playful when they intervene? Our understanding of these processes could be advanced by observational research that focuses on the immediate consequences of parental intervention for children's conflict management and affects.

The finding that mothers' and fathers' intervention in sibling conflict have different correlates is significant because, with some notable exceptions (e.g., Brody, Stoneman, & McCoy, 1992, 1994; Brody, Stoneman, McCoy, & Forehand, 1992), previous studies have typically treated the effects of mothers' and fathers' intervention strategies as if they are interchangeable. The results of this study strongly suggest that this is not the case. For children growing up in households with two parents, it is important to know not only how each parent responds to and is affected by children's behaviors, but also how the strategies used by one parent interface with those used by the other. For example, if one parent uses a "less effective" strategy to handle children's conflicts, does this mean that we can expect less optimal outcomes for children? Or will the other parent's behaviors serve to either compensate for or compound potentially deleterious effects? Future research needs to assess these dynamic processes.

Methodological Issues

In many ways the wireless microphone technology was quite beneficial for obtaining an objective picture of how children and parents behave during conflict. The potentially reactive effects associated with having families engage in contrived forms of conflict in a laboratory or following family members from room to room in their homes were avoided. Further, with the caveat that some forms of physical conflict may not be detected by only listening to children, the use of the speaker system allowed parents to have almost complete knowledge of their children's behavior. Still, it is possible that this technology had reactive effects on parents' and siblings' behavior. For example, some parents may have been less willing to intervene in sibling conflict because they knew that their responses would be captured on audiotape. Alternatively, some parents may have increased their levels of intervention because they did not want to appear to be ignoring their children. It was noticed that some of the older siblings were aware of the microphones and appeared to be self-conscious. And some of the younger siblings tried to suck on the microphone hidden in their suspenders. However, similar to the results of other observational studies, these reactions were largely confined to the first session. Thus, the inclusion of a pilot session intended to help family members become accustomed to the recording procedures appears to be an excellent use of resources and should be adopted in other observational studies.

It would be useful to expand the use of the wireless microphone technology to explore parents' beliefs about ways to respond to sibling conflict. For example, parents could be asked to listen to the audiotaped interaction in which they had participated and then be interviewed about their perceptions of what was going on between their children, what factors influenced their decision to intervene in the conflict, and why they responded in the way that they did. In this way, we might be able to further explore the factors that govern parents' selection of conflict management strategies and to determine whether particular barriers exist that prevent parents from responding to their children's conflicts in ways they believe to be most effective.

Limitations

Some limitations need to be considered when interpreting the current results. First, the sample selected was fairly homogeneous in that it focused on two-child, two-parent families. In addition, the large majority of families were white and well educated; the sample did include families who represented a broad range of socioeconomic status. Parental responses to sibling conflict may vary in accordance with family size, structure, socioeconomic status, and ethnic or cultural background. Thus, it is unclear to what de-

gree the current results may be applied to other types of families. These influences should be investigated in future studies. Finally, it is important to consider the results of the current study in light of the unique recording procedures that were used to assess family behavior.

In summary, we have learned from this study that parents' responses to their children's conflicts may take various forms. The extent to which parents chose to allow children to handle conflicts on their own was striking in light of prior research (Washo, 1992) which demonstrated that parents do not consider this to be an effective strategy. The correlates of parental nonintervention and intervention strategies were found to vary significantly depending on developmental factors and on which parent was in charge of monitoring children's behaviors. The results strongly suggest that resources for parents need to tailor their advice for children of different developmental levels and to consider differences in mothers' and fathers' roles and behaviors as they parent young children.

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APPENDIX

PARENTAL CONFLICT MANAGEMENT STRATEGIES

Passive nonintervention: Parents respond by simply ignoring the conflict.

Active nonintervention: Parents make a conscious decision not to intervene in their children's conflict, relaying the expectation that the children should resolve the issue on their own. For example, "I see that you two are having an argument. I'd like you to try to work this out together. I'll be inside if you need some help."

Collaborative problem solving: Parents actively work with both children together to reach a mutually acceptable resolution to the conflict. For example, a parent may sit down with both children and discuss each child's needs so that together they can devise an outcome on which all can agree.

Redirection: Parents attempt to end conflict quickly by directing the children's attention to a nonconflictual topic or object. For example, a parent may get out another toy to divert the children's attention away from the conflict or may direct the children to separate activities.

Power assertion: Parents use their authority and power to end children's conflicts. For example, a parent may threaten to punish the children if they continue to argue.

Commands to stop fighting: Parents use persuasive verbal methods in an effort to terminate children's fighting. For example, a parent may tell the children to stop fighting or to "cut it out!"

Exploration of emotion: Parents explore how they and their children feel about the conflict. These strategies are not focused on resolving the conflict per se, but on discussing and exploring the participants' emotions. For example, a parent may comfort the "victim" and in so doing make the aggressor feel left out and motivated to mend their ways.

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