Everyday marital conflict and child aggression. E. Mark Cummings; Marcie C. Goeke-Morey; Lauren M. Papp.

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Children's immediate aggressive responding to exposure to marital conflict was examined. Participants were 108 families with 8- to 16-year-old children (53 boys, 55 girls), with diary records of children's reactions to marital conflict in the home completed by 103 mothers (n = 578 records) and 95 fathers (n = 377 records) during a 15-day period. Child responses to analog presentations of marital conflict tactics were also obtained. Exposure to destructive conflict tactics and negative parental emotionality increased the likelihood of aggressive behavior in children when they witnessed marital conflict, whereas constructive conflict tactics and positive parental emotionality decreased the probability of aggression. Conflict topics presumed to be threatening to the child (child- or marital-related) also heightened the likelihood of aggression. Aggressive responding to conflict in both home and laboratory predicted externalizing behavior problems. Fathers' and mothers' separate diary reports, and child responses to analog presentation of conflict, provided generally consistent findings. An exposure hypothesis for marital conflict as an influence on child aggression is discussed.

KEY WORDS: aggression; behavior problems; family; marital conflict.

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Ecological factors and social stressors, including family processes, are predictors of individual differences in aggression (Campbell, 2002; Shaw, Gilliom, Ingoldsby, & Nagin, 2003). Among possible family influences, marital conflict has been linked with child aggression (Grych & Fincham, 1990; Klauczynski & Cummings, 1989), although the role of marital conflict has received minimal consideration in recent reviews (Dodge & Pettit, 2003). Several theoretical models (e.g., Bandura, 1973; Davies & Cummings, 1994) support the notion that exposure to marital conflict is a situational influence that may lead to child aggression. An alternative hypothesis is that family processes associated with marital conflict, such as parenting problems (Erel & Burman, 1995), entirely account for links between marital conflict and child externalizing symptoms. Given the clinical significance of child aggression as a behavior problem, focused examination of family factors influencing the occurrence of aggression, and the contexts that may promote aggression, are merited (Campbell, 2002; Shaw et al., 2003).

In this study we examine an exposure hypothesis, that is, exposure to marital conflict promotes children's aggressivity. We argue that simple exposure to marital conflict increases the probability of child aggression and that these responses are relevant to understanding children's broader patterns of aggressive symptoms. First, demonstrating that exposure to marital conflict is a situational influence on aggression requires showing that children's immediate responses to marital conflict include aggression. Second, for pertinence to broader models of developmental psychopathology and family process
(Cummings, Davies, & Campbell, 2000), it is necessary to demonstrate that aggressive responding in these contexts is related to child aggression more generally, for example, that immediate aggression is related to externalizing symptoms.

**Child Immediate Aggressive Responses to Marital Conflict**

Laboratory studies have indicated relations between exposure to interadult conflict and child aggression. Cummings, Iannotti, and Zahn-Waxler (1985) found that exposure to angry adults in laboratory play sessions increased aggression between 2-year-old friends. Cummings (1987) reported increased verbal aggression between 5-year-old friends after exposure to background anger. Cummings, Hennessy, Rabideau, and Cicchetti (1994) reported higher aggression among 5-year-old physically abused boys following exposure to interadult anger involving the mother in laboratory play sessions. Finally Davis, Hops, Alpert, and Sheeber (1998) found that adolescent aggression (14- to 18-year olds) was sequentially related to marital conflict in a laboratory conflict resolution paradigm.

However, the validity of the argument that exposure to marital conflict is a situational influence on child aggression requires its demonstration in the most ecologically pertinent context for observing such relationships, that is, the home. The present report is distinctive in that it examines children's aggressive reactions to exposure to naturally occurring marital conflict in the home. Study of children's immediate reactions during exposure to marital conflict in the home should help to clarify whether simple exposure relates to aggressive behavior.

More broadly, we adopt a multireporter and multimethod approach to cogently address the exposure hypothesis. To this end, we include: (a) diary records of children's immediate aggressive reactions to marital conflict in the home based on two different reporters (mothers, fathers) and (b) children's reported aggressive responses to exposure to analog presentations of marital conflict in the laboratory. Findings of consistencies across multiple reporters and methodologies provide validating data, that is, suggest that results cannot be attributed to the limitations of single approaches (Cummings et al., 2000).

**Child Aggression in Response to Everyday Marital Conflict in the Home**

We also specify which aspects of everyday marital conflict in the home may increase the likelihood of child aggression. Everyday marital conflict includes a wide range of expressions. It may be incorrect to assume that all forms of marital conflict elicit aggression in children. Thus, we examine children's immediate aggressive responses as a function of different marital conflict tactics (i.e., destructive, constructive), different parental emotions (i.e., negative, positive) and different marital conflict topics (i.e., child, marital, social, work). Children's aggressive behaviors may be more closely linked with fathers' than mothers' marital conflict expressions in the home (e.g., Crockenberg & Forgays, 1996; Crockenberg & Langrock, 2001). Only a handful of studies have considered the impact of the gender of the angry parent, none based on home report, and the evidence is mixed (Cummings, Goeke-Morey, & Raymond, in press).
Relations between marital conflict and children's immediate aggression are examined based on parental diary records completed after specific episodes of marital conflict in the home. Diary records about family events are a promising way to study the impact of everyday stressful experiences on family functioning (e.g., Almeida & Kessler, 1998; Repetti & Wood, 1997). Useful for examining the microprocesses, or specific details, of family interactions, diary records minimize memory errors and maximize the details that can be reported in relation to other self-report methods, as diaries are completed immediately after the events occur (Bolger, Zuckerman, & Kessler, 2000). In the present study, records were obtained after particular incidents of interparental conflict that parents recently experienced. Moreover, parents were extensively trained in the use of the diary procedure before completing home records.

Analog research suggests that children's reactions vary as a function of the forms of marital conflict to which they are exposed (Cummings & Davies, 1994). On the basis of the diary responses of 51 couples with children between 4 and 11 years of age, Cummings, Goeke-Morey, Papp, and Dukewich (2002) indicated widely varying reactions by children as a function of different marital conflict expressions (i.e., conflict tactics, parents' emotionality). However, the low frequency of conflict episodes occurring in front of children did not permit study of relations between forms of marital conflict and relatively low base-rate responses, such as aggression.

With a larger sample of marital conflict episodes, this study permits the systematic examination of children's immediate aggressive reactions after exposure to marital conflict in the home. Destructive conflict tactics and parental negative emotionality are hypothesized to be linked with children's higher likelihood of aggression, possibly as a byproduct of modeling (Bandura, 1973), or by inducing emotional insecurity in children, with accompanying behavioral dysregulation (Davies & Cummings, 1994). By the same token, constructive conflict tactics and parental positive emotionality are hypothesized to be unrelated, or even negatively related, to aggression. This might be due to the positive models of conflict resolution that are provided, and/or the positive messages provided about the marital relationship, which foster children's emotional security and therefore their capacity for well-regulated interpersonal functioning.

Little is known about relations between marital conflict topics and children's functioning (Grych & Fincham, 1990). It might be expected that topics that involve the child or the integrity of the family would be most likely to increase the probability of child aggression. Child-related topics have been identified as especially disturbing (Davies, Harold, Goeke-Morey, & Cummings, 2002; Grych & Fincham, 1993; Jouriles et al., 1991) and thus may increase the probability of children's aggressive responding to marital conflict. Conflict about issues pertaining to the unhappiness of the marital relationship, which may affect children's perceptions of emotional security (Cummings & Davies, 1996), may also be associated with aggressive reactions. By contrast, less relationship-threatening disagreements, such as conflicts about work, are expected to have little or no relations with child aggression.
It is also important to explore how the various aspects of conflict co-occur and predict child responses when they are all considered in the same model. Thus, it is significant to know whether patterns of conflict tactics, parental emotions, and themes of conflict tend to co-occur as well as the extent to which any one, or more, of these elements are predominant, or independent, predictors of aggression.

This study addresses a gap in the ages studied (8- to 16-year-old children). Previous reports have focused on younger (e.g., preschoolers, Cummings et al., 1985) or older (e.g., adolescents, Davis et al., 1998) children. However, given the weak, inconsistent findings, there is little basis for making firm predictions about child age or gender differences in responding to marital conflict (Davies & Lindsay, 2001). Cummings et al. found higher aggressive reactions in toddler boys than girls, but only after children's responding across two exposures to interadult conflict were combined in the analyses. On the other hand, Cummings (1987) and Davis et al. (1998) reported similar patterns for boys and girls among preschoolers and adolescents.

**Children's Responses to Analog Marital Conflict**

Aggression in response to analog marital conflicts is also examined. Although vulnerable to questions about generalizability, analog procedures complement home report methods by increasing precision. Analog presentations isolate children's responses to particular conflict stimuli, with the stimuli presented the same way across all participants. Specifically, aggression in response to destructive versus constructive conflict tactics is compared in this study.

**Aggression in Response to Marital Conflict and Externalizing Behaviors**

Children's immediate aggressive responses to marital conflict may be related to broader patterns of aggression. Research has accumulated to support links between children's reactions to marital conflict and their adjustment (Cummings & Davies, 2002). However, study of the relations between immediate aggressive reactions to exposure to marital conflict and externalizing symptoms is very limited (Davis et al., 1998). In this study relations between aggressive responding to marital conflict in each context (home, laboratory) and child externalizing behaviors are analyzed. According to the emotional security hypothesis, aggressive responding reflects an emotional reactivity component of emotional security and therefore should be related to externalizing behaviors (Davies & Cummings, 1998; Davies, Harold, et al., 2002). Social learning theory also supports the prediction that child aggression in the context of marital conflict will be related to their externalizing behaviors due to social learning processes (e.g., modeling, Davis et al., 1998). Demonstrations of relations between aggressive responses to marital conflict and externalizing symptoms are pertinent to the notion that exposure to marital conflict is among the situational influences on the development or maintenance of aggression.
METHOD

The data for this report are drawn from a larger, longitudinal investigation concerning family relationships and child development (Goeke-Morey, Cummings, Harold, & Shelton, in press; Papp, Cummings, & Goeke-Morey, 2002). Characteristics of the participants and procedures relevant to the present purpose of examining the links between marital conflict characteristics, child aggressive responding, and child externalizing behaviors are described below.

Sample and Procedures

Several strategies were used to attempt to recruit a representative sample of families from the community, including letters sent home with children from local public and private schools; postcards sent to neighborhood residents; referrals from other participating families; flyers distributed at churches and community events; and newspaper, television and radio advertisements. Participants included 108 mothers, fathers, and a target child (53 boys, 55 girls), who ranged in age from 8- to 16-years (M = 10 years, SD = 2 years), with most children (85% of boys, 82% of girls) falling between the ages of 8- and 12-years. Child gender was evenly distributed within each age. When families had more than one child in the age range for the study, parents selected the target child. Ninety-one percent of the children were Caucasian, 7% African American, 2% biracial or other. The mean age of mothers was 37 years (SD = 5 years, range = 25-50 years) and the mean age of fathers was 40 years (SD = 6 years, range = 25-57 years). All mothers reported graduating high school and 37% had at least a college degree; 98% of fathers reported graduating high school and 53% had at least a college degree. Median family income fell in the $40,001-65,000 range, but ranged from less than $10,000 to more than $85,000. On the basis of the Marital Adjustment Test (MAT; Locke & Wallace, 1959), 43% of couples were maritally distressed using a cutoff of less than 100 reported by either spouse as the criterion. Thus, the sample was diverse, but minority and low SES groups in the recruiting area were underrepresented.

Families attended two private laboratory sessions that were scheduled several weeks apart. The study was explained to parents as being concerned with everyday marital differences, family relationships, and children. During the first laboratory session, parents were taught to complete a home diary record of marital conflict. Training with each couple lasted approximately 1 hr and included verbal, written, and video descriptions of the elements on the form (e.g., topics, behaviors, emotions). Parents were then given the opportunity to practice completing the forms and were encouraged to ask questions or seek clarification at any time throughout the training session. Parents were also provided with written definitions and instructions to take home as a reference during reporting. Research assistants telephoned parents during the reporting period as a reminder to complete records and to provide clarification if needed. Parents completed diary records following each instance of marital conflict over a period of 15 days and returned the completed diary forms during the second laboratory session. During the sessions, children participated in video analog procedures that involved presentation of multiple examples of everyday conflict tactics between adult couples representing their own
parents. The conflict tactics presented were the same as the conflict tactics on the home diary record forms. Parents and children also completed questionnaires assessing child behavioral symptoms. Families were paid for their time and participation in the project, with a portion of the payment given directly to the child in the form of a toy or gift certificate.

**Measures**

**Home Diary Reports of Marital Conflict and Child Aggressive Responses**

During a 15-day period, mothers and fathers completed Marital Daily Records (MDR; see Papp et al., 2002) at home following each naturally occurring instance of marital conflict. Parents were instructed to complete records separately. For these reports, marital conflict was defined as any major or minor interparental interaction that involved a difference of opinion, whether it was mostly negative or even mostly positive. Thus, every incident recorded reflected a conflict of some sort between the parents. This definition allowed us to sample the broad range of everyday marital conflict expressions, including responses associated with different parental emotions, behaviors and topics of marital conflict.

Using a checklist format, parents indicated (endorsed or not endorsed) the conflict tactics used by themselves and their spouses during each conflict interaction. Parents endorsed all of the conflict tactics that occurred; multiple behaviors could be endorsed on the same record. Conflict tactics included calm discussion, humor, support, physical affection, verbal affection, problem solving, nonverbal hostility, defensiveness, physical distress, verbal hostility, threat, pursuit, personal insult, physical aggression toward an object, physical aggression toward a person, and withdrawal. In addition, parents rated their own and their partners' positivity, anger, sadness, and fear on 10 point scales ranging from 0 (None) to 9 (High). Parents also indicated (endorsed or not endorsed) the topic(s) discussed during each interparental conflict episode, including children, work, money, intimacy, communication, habits, personality, relatives, leisure, friends, and chores. Again, multiple responses could be checked. Finally, when their child was present for the conflict episode, parents indicated their child's responses on the Child Response Record (CRR). Aggressive responses included yelling, being physically aggressive, misbehaving, and hurting themselves. After training, mothers and fathers were able to reliably identify child aggressive behaviors during a behavior matching task, mean [kappa] = .95 (range = .92-.97) and mean [kappa] = .92 (range = .87-.95), respectively.

Past research supports the use of composite scores to provide a more efficient or parsimonious account of marital processes and children's reactions (see Cummings et al., 2002). Accordingly, marital conflict tactics endorsed on the MDR were summed to create composites of Destructive Tactics (nonverbal hostility, defensiveness, physical distress, verbal hostility, threat, pursuit, personal insult, physical aggression toward an object, physical aggression toward a person, withdrawal) and Constructive Tactics (calm discussion, humor, support, physical affection, verbal affection, problem solving). Reviews (Cummings & Davies, 2002) and empirical research on classification of conflict
tactics (Goeke-Morey et al., in press) support these distinctions between destructive and constructive conflict tactics. Thus, conflict tactics were compiled based on total frequency counts of Destructive or Constructive conflict tactics for each conflict record for each parent. Likewise, ratings of emotions were summed to create composites of Positive Emotion (positivity) and Negative Emotion (anger, sadness, fear). Ratings of topics discussed during interparental conflicts were summed to create four composites: Child (child), Marital (intimacy, communication, habits, personality), Social (relatives, leisure, friends, chores), and Work (work, money); see Table I. Finally, child aggressive responses as indicated on the CRR (yelling, being physically aggressive, misbehaving, and hurting themselves) were summed to create a composite Aggression score for each conflict to which children were exposed.

**Child Aggressive Responses to Analog Marital Conflict**

Children's reports of aggressive responding to marital conflict were obtained using a video analog procedure that involved the controlled presentation of a series of everyday conflict tactics. Children witnessed the same 16 conflict tactics included on the MDR in analog presentations, with all of the behaviors presented as occurring discretely in the context of interparental conflict. The examiner verbally described a common interparental conflict stem in vivid detail. After imagining the stem scenario, the experimenter told the child that each video to follow showed something different that happened when the initiating parent came home and instructed the child to imagine the people in the videos were their parents. Children were then shown videos of a man and woman interacting (5-10 s in length), with each segment followed by an assessment interview (see Goeke-Morey et al., in press). For the present study, the question scored from this interview was "What would you do if you were in the same room with your parents?" which was coded for the presence of aggression (yelling, being physically aggressive, misbehaving, and hurting themselves). Sample responses include "Shake them around," "Be pounding something to bits ... like furniture or something soft," "Yell stop! Stop! Stop! Stop! Stop, Dad! Stop!" Mean Kappa between coders across the 32 presentations = .98. Over the course of the two visits, the "mother" and "father" engaged in the role of initiator of each conflict tactic. Child aggression was summed across videos representing Destructive (nonverbal hostility, defensiveness, physical distress, verbal hostility, threat, pursuit, personal insult, physical aggression toward an object, physical aggression toward a person, withdrawal) and Constructive (calm discussion, humor, support, physical affection, verbal affection, problem solving) Tactics, respectively.

**Child Externalizing Behaviors**

Mothers rated externalizing symptoms using the Child Behavior Checklist (Achenbach, 1991). Mothers rated behaviors as 0 (not true), 1 (somewhat or sometimes true), or 2 (very true or often true) for their child during the previous 6 months. Standardized t scores were calculated for the externalizing behavior problem scale of the CBCL. Alpha reliability for this sample was .90.
Analyses of relations between marital conflict and child aggressive responses in the home were conducted using a hierarchical generalized linear modeling (HGLM) approach (Raudenbush, Bryk, & Congdon, 2001). HGLM, an extension of hierarchical linear modeling (HLM), permits the prediction of outcomes with nonnormal distributions, such as count variables (i.e., child aggression composite score; see Raudenbush & Bryk, 2002). We employed multilevel modeling because it provided a more appropriate framework than standard regression for addressing questions concerning dependent measurements, including diary data in which multiple reports are obtained from participants (Kenny, Bolger, & Kashy, 2002; Nezlek, 2001).

Similar to HLM, HGLM provides separate estimates based on data collected from an individual participant and then efficiently aggregates these estimates to produce results.
for all participants. The Level-1 model estimates separate intercepts (representing each individual child's level of aggression) and regression slopes (representing the relation between marital conflict characteristics and child aggression) based on the individual MDRs completed by each participant. The Level-2 model simultaneously aggregates the Level-1 parameters and produces an intercept coefficient (representing the average level of aggression across children) and a slope coefficient (representing the average relationship between marital conflict characteristics and child aggression) for the population of families. Thus, in the following analyses on reports of marital conflict and child aggressive responses we investigated links between marital conflict characteristics and child aggression during conflict (measured by fathers' and mothers' MDRs) by examining the Level-2 slope coefficients produced by a series of HGLMs. This coefficient is represented as "[gamma]" and can be interpreted similarly to an unstandardized beta coefficient in linear regression. Child age X child gender, and the child age X gender interaction term were considered as Level-2 variables to examine the extent to which these child characteristics moderated the relationship between conflict expressions and child aggression.

RESULTS

Descriptive Statistics: Home Reported Child Aggression and Marital Conflict

Mothers reported 1,638 marital conflict episodes, with 578 of these incidents reported as occurring in the presence of the child. One hundred three mothers completed the MDRs, concerning parental conflict expressions, with corresponding CRRs, concerning children's aggressive responses. Thus, 5.61 incidents in which the child was present were reported by the average mother over the 15-day reporting period (range = 1-24 records). Mothers reported aggressive responding for 33 children (20 boys and 13 girls). For these children, mean aggressive responding was 0.24 (SD = 0.53). Fathers completed MDRs and CRRs separately from mothers. Fathers reported 1,281 marital conflict episodes, with 95 fathers reporting that 377 of these incidents (M = 3.97 per father, range = 1-19 records) occurred in the presence of the child. Fathers reported aggressive responding for 24 children (M = 0.38, SD = 0.64; 16 boys and 8 girls).

Most incidents were relatively complex. For example, according to mothers' reports, most conflicts included at least one negative expression (i.e., destructive tactic or negative emotion) and one positive expression (i.e., constructive tactic or positive emotion) by one or both members of the dyad (70%). Some incidents included only negative expressions (6%) or only positive expressions (24%) by both parents. The percentage occurrence of different conflict topics was as follows: 44% child-related, 40% marital, 45% social, and 26% work. The sum of the percentages is greater than 100 because multiple topics were sometimes discussed during a single marital conflict.

Marital Conflict Characteristics as Individual Predictors of Child Aggression

Table I presents descriptive statistics of the MDR variables and results of analyses that considered mothers' and fathers' expressions of tactics, emotions and topics during
marital conflict in the home related to child aggressive responding. Child age and gender were considered as possible moderating factors of the associations between specific marital conflict characteristics and child aggression.

Marital Conflict Tactics and Child Aggression

Associations Based on Home Data. According to both parents, mothers' use of destructive conflict tactics was linked with a greater likelihood of child aggression, whereas mothers' use of constructive conflict tactics were related to a reduced probability of child aggression. Similarly, both mothers and fathers reported that fathers' use of destructive conflict tactics predicted a greater likelihood of child aggression, whereas fathers' constructive conflict tactics were associated with a lower probability of child aggression. Mothers reported that the effects of fathers' destructive and constructive tactics, respectively, were greater for older children than younger children ((gamma) = 0.15, t = 3.21, p = .00; (gamma) = -0.11, t = -2.11, p = .03). By contrast, according to fathers, the effects of fathers' constructive tactics were greater for younger children than older children ((gamma) = .12, t = 2.59, p = .01). Mothers reported that the effect of mothers' constructive behavior was stronger for girls than boys ((gamma) = -0.58, t = -2.45, p = .01).

Associations Based on Laboratory Data. Thirty-six children (15 boys and 21 girls) reported aggression in response to analog presentations of marital conflict. These children were not necessarily the same children who were aggressive according to parent report in the home (60\% of boys and 19\% of girls were found to be aggressive in both the lab and home). Examination of child aggressive responses to marital conflict analog stimuli overwhelmingly supported the proposition that destructive conflict tactics induced more aggression in children than constructive conflict tactics. Of all aggressive responses, 96\% occurred in response to destructive conflict tactics and 4\% occurred in response to constructive conflict tactics. All children reporting aggression in response to analog marital conflict expressions reported aggression more often in response to destructive than constructive conflict tactics, binomial test, p = .00. Comparisons of child aggression as a function of the gender of the parent expressing conflict tactics and the age and gender of the child were nonsignificant.

Marital Conflict Emotions and Child Aggression

According to mothers' and fathers' reports, mothers' and fathers' negative emotionality during marital conflict were linked with a greater likelihood of child aggression, whereas positive emotionality by either parent was related to a lesser likelihood of child aggression. Mothers and fathers reported, respectively, that the effects of mothers' negative emotionality was greater for younger than older children, ((gamma) = -0.03, t = -3.35, p = .00; (gamma) = -0.03, t = -2.27, p = .02). Fathers reported that the effects of mothers' negative and positive emotionality were greater for boys than girls ((gamma) = -0.13, t = -2.96, p = .00, and (gamma) = 0.14, t = 2.05, p = .04, respectively). According to mothers and fathers, respectively, the effect of fathers' negative emotionality was greater
for boys than girls ([gamma] = -0.08, t = -2.60, p = .01; [gamma] = -0.13, t = -3.03, p = .00).

**Marital Conflict Topics and Child Aggression**

According to mothers and fathers, child or marital topics were related to a greater likelihood of child aggression, whereas social or work topics did not significantly relate to the likelihood of child aggression. Fathers reported that the effect of child topics was greater for boys than girls ([gamma] = -0.69, t = -2.20, p = .03).

**Marital Conflict Characteristics as Multiple Predictors of Child Aggression**

For the remaining analyses, in the interest of space only mothers' home reports are used to demonstrate associations among the marital conflict characteristics (tactics, emotions, and topics) and the relative influence of multiple marital conflict expressions on the likelihood of children's aggressive responding in the home (results based on father report are available upon request).

**Marital Conflict Tactics and Emotionality**

For both mothers and fathers, respectively, use of destructive tactics was related to negative emotionality ([gamma] = 2.53, t = 11.65, p < .01; [gamma] = 2.45, t = 9.98, p < .01) and use of constructive tactics was related to positive emotionality ([gamma] = 1.04, t = 12.62, p < .01; [gamma] = 1.01, t = 11.01, p < .01).

When considered simultaneously, father negative emotionality, but not destructive tactics, was related to a greater likelihood of child aggression ([gamma] = 0.08, t = 4.06, p < .01). Similarly, mother positive emotionality, but not constructive tactics, was related to a lesser likelihood of child aggression ([gamma] = -0.16, t = -3.91, p < .01). When considered simultaneously father negative emotionality and destructive conflict tactics both remained related to a greater likelihood of child aggression ([gamma] = 0.13, t = 7.89, p < .01; [gamma] = 0.20, t = 3.49, p < .01, respectively) and positive emotionality and constructive tactics were still associated with lesser likelihood of child aggression ([gamma] = -0.11, t = -3.27, p < .01; [gamma] = -0.18, t = -2.28, p = .02, respectively).

**Additional Contribution of Marital Conflict Topics**

Child topics were unrelated to the conflict tactics or emotionality of either parent during marital conflict (see Table II). On the other hand, personal marital topics were related to a greater likelihood of parents' destructive conflict tactics, greater negative emotionality, and less positive emotions. By contrast, work topics were related to a greater likelihood of parents' constructive conflict tactics. Finally, social topics were related to a greater likelihood of constructive conflict tactics as well as more positive emotionality and less negative emotionality. Relations found between conflict topics and other characteristics of marital conflict were the same for mothers' or fathers' conflict expressions. Thus, the
emotional and strategic topography of marital conflict was quite different depending on
the nature of the topics at issue between the parents.

Given links between topics and other characteristics of marital conflict, the question
remains whether topics add independent variance to the prediction of child aggression.
When entered simultaneously with parent conflict tactics and emotionality, child-related
topics added independent variance to the prediction of child aggression, but marital, work,
and social topics did not. When negative emotions, destructive conflict tactics, and child
topics were considered simultaneously as predictors, negative emotions and child topic
significantly predicted a greater likelihood of child aggression for both mothers' ([gamma]
= 0.12, t = 5.08, p < .01; [gamma] = 1.76, t = 6.88, p < .01) and fathers' ([gamma] = 0.14,
t = 7.41, p < .01; [gamma] = 1.67, t = 7.11, p < .01) expressions, respectively. On the
other hand, when positive emotions, constructive conflict tactics, and child topics were
considered simultaneously, positive emotions remained a negative predictor of the
likelihood of child aggression, but child topics were a positive predictor of child
aggression for both mothers' ([gamma] = -0.16, t = -4.64, p < .01; [gamma] = 1.61, t =
7.07, p < .01) and fathers' ([gamma] = -0.11, t = -3.37, p < .01; [gamma] = 1.67, t = 6.23,
p < .01) expressions, respectively. Thus, the discussion of child topics increased the
likelihood of children's immediate aggressive reactions to marital conflict, whether the
characteristics of the marital conflict were otherwise negative or positive.

Associations between Child Aggressive Responding to Marital Conflict and
Externalizing Problems

Responses to Marital Conflict in the Home

A single score was calculated for each child representing whether the child showed any
aggression in response to marital conflict in the home on the basis of diary reports.
Mothers' report of child externalizing behaviors was regressed on the diary-reported
aggression classification. Even after controlling for child age and gender, aggression
immediately in response to marital conflict in the home predicted externalizing problems,
B = 5.84, SE B = 2.08, [beta] = .27, p = .01. A series of logistic regressions examined
whether the child diary-reported aggression classification predicted scoring within the
clinical range on the externalizing (n = 18) scale of the CBCL. A t score of 60 was used
as the cutpoint for the total externalizing scale (Achenbach, 1991). Even after controlling
for child age and gender, child aggressive responses to marital conflict in the home
predicted scores in the clinical range on the externalizing scale, B = 2.06, SE B = .62,
Wald (df = 1) = 11.00, p < .01. Aggressive responding to marital conflict in the home
increased the odds of scoring within the clinical range on the externalizing scale by a
factor of 7.88.

Responses to Analog Marital Conflict in the Laboratory

A single score was calculated for each child representing whether the child reported any
aggression in response to the marital conflict analog presentations. Mother report of child
externalizing behaviors was regressed on the analog aggression classification. Even after
controlling for child age and gender, child aggression in response to marital conflict stimuli predicted externalizing problems, $B = 5.10$, SE $B = 2.00$, $\beta = .24$, $p = .01$. A logistic regression examined whether the child analog aggression classification predicted scoring within the clinical range on the externalizing scale of the CBCL. After controlling for child age and gender, children's aggressive responses to the video analog presentations significantly predicted whether children scored in the clinical range on the externalizing scale, $B = 1.09$, SE $B = .54$, Wald (df = 1) = 4.06. Aggressive responding increased the odds of scoring within the clinical range on the externalizing scale by a factor of 2.98.

**DISCUSSION**

The results from this study indicated that marital conflict occurred relatively frequently and could be measured, including children's reactions, with diary reports. Consistent with the exposure hypothesis, children's aggression was associated with exposure to marital conflict. Particular facets of marital conflict were salient in the prediction of child aggression, including whether negative tactics were used, whether negative affect was expressed, and whether the topic was threatening to the child because it involved them or the integrity of the family. Patterns of relations were generally similar based on the mothers' and fathers' records, lending confidence that results were not tied to any individual parental reporter. Children's immediate aggressive responding to marital conflict was also related to externalizing behaviors in other contexts. Consistencies in the findings for analog tests based on children's report further increased confidence in the robustness of the findings. Thus, exposure to marital conflict was implicated as pertinent to models of the development of child aggression (Cummings et al., 2000).

The importance of distinguishing between different expressions during marital conflict for understanding effects on children was again indicated (Cummings & Davies, 2002). Parents' destructive conflict tactics and negative emotionality were linked with a higher likelihood of aggression in children. By contrast, exposure to constructive behaviors and positive emotionality was linked with a lower probability of children's aggressive responses. These results are consistent with a long series of analog studies indicating that exposure to marital conflict may be associated with very different responses in children, depending on how parents negotiate their differences (reviewed in Cummings & Davies, 1994; see also Goeke-Morey et al., in press). The particular contribution was to demonstrate these relations (a) in everyday contexts of marital conflicts occurring in the home and (b) for the clinically interesting response of aggressiveness in children.
Breaking new ground in a longstanding gap in the study of conflict topics (Grych & Fincham, 1990), multiple topics of marital disputes were investigated and found to be differentially related to children's reactions. As expected, topics potentially threatening to children's emotional security (conflicts about the child or the marital relationship) were linked with greater behavioral dysregulation in children, as indicated by a heightened probability for aggressiveness. To some extent, the relations found may reflect differences in conflict negotiation styles for different conflict topics. Thus, certain topics (i.e., social, work) predicted relatively positive marital conflict styles, whereas other themes (i.e., marital-relationship issues) were linked with relatively negative marital conflict patterns. However, child-related topics predicted a greater probability of aggressive responding by children considered in the context of either positive or negative expressions by the parents. Thus, support was found for the longstanding clinical wisdom, supported by some past research (Grych & Fincham, 1993; Jouriles et al., 1991), that parents should avoid fighting about their children in front of their children (Papp et al., 2002), with the additional possibility suggested that even constructive conflict about the children in front of the children may increase the likelihood of children's behavioral dysregulation.

On the basis of parents' diary records, mothers' and fathers' individual conflict expressions had similar relations with child aggression, although some differences emerged when broader contexts of marital conflict expression were examined. In particular, when considered simultaneously, conflict tactics and emotions each remained predictors for fathers, but only the emotionality of mothers' expressions remained linked with child aggression. The implication is that children place emphasis on the emotionality of mothers' conflict expressions, but separately weigh emotions and conflict tactics of fathers. This result may reflect that mothers are more effective emotional communicators whereas for fathers, children may learn to rely on a broader range of cues about the meaning of conflict expressions.

Extending findings based on younger (Cummings, 1987) and older (Davis et al., 1998) children, the results suggested that marital conflict is a situational influence on aggression among 8 to 16-year-olds. Within this age period, only a relatively small number of significant age or gender effects were found and the pattern of effects was weak, but there were some consistencies. In particular, boys were more sensitive than girls to parental emotionality and child topics during marital conflict, consistent with previous findings that boys may be more sensitive to the threat posed by marital conflict (e.g., Cummings, Davies, & Simpson, 1994). These results must be interpreted with caution, however, particularly given relatively small cell sizes for some age groups. Relatively modest, and somewhat inconsistent, results for age and gender are also reported in the broader literature on marital conflict and children's adjustment (Davies & Lindsay, 2001), including the period between middle childhood and early adolescence (Cummings & Davies, 2002).

Findings of relations with externalizing disorders are consistent with both theoretical predictions (Bandura, 1973; Davies & Cummings, 1994) and empirical findings (Davies & Cummings, 1998; Davies, Forman, Rasi, & Stevens, 2002; Davies, Harold, et al.,
2002). Notably, recent tests suggest that children's reactions to marital conflict are generally more consistent with processes implicated by the emotional security hypothesis, such as the threat to the stability of the marital relationship, than with processes identified by social learning theory, such as imitation (see Davies, Harold, et al., 2002). However, it is also possible that other processes (e.g., other social learning influences, Davis et al., 1998) are pertinent to explanations for children's symptoms due to exposure to marital conflict (Jenkins, 2002). Notably, emotional security theorists have stressed its status as a mid-level theory, rather than a comprehensive account of pathways of influence.

Further study is needed to delineate precisely the bases for relations between children's immediate reactions and their adjustment. Adding to the strength of the case for these relations, the links to externalizing behavior were found based on both mother and child report, and were evident across both laboratory and home-based assessments of children's immediate aggression in response to marital conflict. On the other hand, the research design for obtaining responses in the naturalistic context of the home was not experimental, so it is important not to overstate the conclusions for process-oriented explanations. For example, parents' monitoring of children for aggressive reactions during marital conflict might have been related to child aggressive responses. Moreover, the cross-sectional design qualifies conclusions about the direction of effects. Aggressive children may tend to respond with aggression in multiple contexts, including episodes of marital conflict. In addition, parents may be more likely to have negative conflict about aggressive children, so that results attributed to child-related themes may reflect the greater aggressiveness of the children about whom parents had child-related conflict. Relatedly, child effects may be partly genetically mediated. That is, parents who engage in more destructive conflict may also have children who are more aggressive across situations partly because of genetic similarity.

Moreover, rates of aggressive responding were relatively low. Thus, although aggression was related to broader patterns of externalizing, aggression was not a dominant response to marital conflict, consistent with past research (e.g., Cummings, 1987; Cummings et al., 1985; Davies, Harold, et al., 2002). One interpretation is that exposure to marital conflict is specifically related to increased risk for externalizing problems among a subgroup of children, whereas other children experience other vulnerabilities to adjustment problems (e.g., internalizing problems, Davies, Harold, et al., 2002) as a function of exposure to marital conflict.

At the same time, the present report reflects a "second generation" of process-oriented research that aims to move beyond simply documenting correlations between global notions of marital relations and child outcomes towards understanding the more precise processes that account for the linkage, both at the level of family process (e.g., destructive and constructive marital conflict) and child process (e.g., aggression as a particular, immediate response). A distinction can be drawn between process variables (i.e., specific reactions in the specific context of parental or marital relations) and outcome variables (e.g., scores on instruments designed to assess general adjustment beyond specific relational contexts). The discipline of developmental psychopathology aims, as a primary goal, to identify specific processes and processes-in-context that may
underlie what is broadly conceptualized as normal development, psychopathology and symptomatology. Moreover, from this perspective, subclinical, as well as clinical, levels of aggression or externalizing behaviors can be seen to be of interest to a clinical audience (Cummings et al., 2000).

In conclusion, these results support the relevance of marital conflict for understanding child aggression, although these processes of influence are most appropriately considered as one factor in the context of more general complex models of developmental psychopathology and family process (Cummings et al., 2000). At the same time, the findings dispel the notion that children's exposure to any form of marital conflict increases their aggression, indicating that constructive conflict tactics and parental positive emotionality during conflict may even reduce the likelihood of aggressive responses. An important direction for future work will be to test these predictions in the context of prospective longitudinal research designs to further specify directions of effects and patterns of causal relations. Templates for longitudinal and process-oriented models have been proposed (Cummings et al., 2000) and the challenge for future research is to accomplish these next steps with appropriate methodologies towards more advanced understanding of these influences on children's adjustment.

Table I. Conflict-Level Analyses Relating Parental Reports of Marital Conflict Expressions With Child Aggression: Individual Predictor Models

<table>
<thead>
<tr>
<th>Conflict expression</th>
<th>M</th>
<th>SD</th>
<th>([\text{gamma}])</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Father conflict expressions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal report (N = 103 mothers/578 MDRs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destructive tactics</td>
<td>0.73</td>
<td>1.04</td>
<td>0.46</td>
<td>8.20</td>
<td>.00</td>
</tr>
<tr>
<td>Constructive tactics</td>
<td>1.63</td>
<td>1.41</td>
<td>-0.30</td>
<td>-3.78</td>
<td>.00</td>
</tr>
<tr>
<td>Negative emotion</td>
<td>3.47</td>
<td>4.43</td>
<td>0.15</td>
<td>10.28</td>
<td>.00</td>
</tr>
<tr>
<td>Positive emotion</td>
<td>4.41</td>
<td>3.06</td>
<td>-0.16</td>
<td>-4.52</td>
<td>.00</td>
</tr>
<tr>
<td><strong>Mother conflict expressions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destructive tactics</td>
<td>0.94</td>
<td>1.16</td>
<td>0.33</td>
<td>4.25</td>
<td>.00</td>
</tr>
<tr>
<td>Constructive tactics</td>
<td>1.53</td>
<td>1.33</td>
<td>-0.24</td>
<td>-2.65</td>
<td>.01</td>
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<tr>
<td>Negative emotion</td>
<td>4.54</td>
<td>5.12</td>
<td>0.10</td>
<td>5.77</td>
<td>.00</td>
</tr>
<tr>
<td>Positive emotion</td>
<td>4.15</td>
<td>2.96</td>
<td>-0.18</td>
<td>-4.64</td>
<td>.00</td>
</tr>
<tr>
<td><strong>Conflict topics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Child</td>
<td>0.44</td>
<td>0.50</td>
<td>1.45</td>
<td>6.01</td>
<td>.00</td>
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<tr>
<td>Marital</td>
<td>0.55</td>
<td>0.80</td>
<td>0.40</td>
<td>2.81</td>
<td>.00</td>
</tr>
<tr>
<td>Social</td>
<td>0.67</td>
<td>0.68</td>
<td>0.07</td>
<td>0.50</td>
<td>.61</td>
</tr>
<tr>
<td>Work</td>
<td>0.31</td>
<td>0.54</td>
<td>-0.06</td>
<td>-0.33</td>
<td>.74</td>
</tr>
<tr>
<td><strong>Paternal report (N = 95 fathers/377 MDRs)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destructive tactics</td>
<td>0.66</td>
<td>0.95</td>
<td>0.36</td>
<td>3.54</td>
<td>.00</td>
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<tr>
<td>Constructive tactics</td>
<td>1.72</td>
<td>1.32</td>
<td>-0.27</td>
<td>-3.23</td>
<td>.00</td>
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<tr>
<td>Negative emotion</td>
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<td>4.21</td>
<td>0.12</td>
<td>6.17</td>
<td>.00</td>
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<tr>
<td>Positive emotion</td>
<td>4.35</td>
<td>2.88</td>
<td>-0.14</td>
<td>-3.24</td>
<td>.00</td>
</tr>
<tr>
<td>Destructive tactics</td>
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<td>1.00</td>
<td>0.36</td>
<td>4.04</td>
<td>.00</td>
</tr>
<tr>
<td>Constructive tactics</td>
<td>1.55</td>
<td>1.30</td>
<td>-0.32</td>
<td>-3.59</td>
<td>.00</td>
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Table II. Marital Conflict Topics: Relations With Conflict Tactics and Emotions

<table>
<thead>
<tr>
<th>Conflict topic</th>
<th>Mother</th>
<th>Father</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict expression</td>
<td>(gamma)</td>
<td>t</td>
</tr>
<tr>
<td><strong>Mother</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destructive tactics</td>
<td>-0.00</td>
<td>-0.02</td>
</tr>
<tr>
<td>Constructive tactics</td>
<td>0.15</td>
<td>1.77</td>
</tr>
<tr>
<td>Negative emotionality</td>
<td>-0.15</td>
<td>-0.37</td>
</tr>
<tr>
<td>Positive emotionality</td>
<td>0.19</td>
<td>0.74</td>
</tr>
<tr>
<td><strong>Father</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destructive tactics</td>
<td>0.01</td>
<td>0.13</td>
</tr>
<tr>
<td>Constructive tactics</td>
<td>0.08</td>
<td>1.18</td>
</tr>
<tr>
<td>Negative emotionality</td>
<td>0.44</td>
<td>1.19</td>
</tr>
<tr>
<td>Positive emotionality</td>
<td>0.03</td>
<td>0.11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conflict topic</th>
<th>Social</th>
<th>Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict expression</td>
<td>(gamma)</td>
<td>t</td>
</tr>
<tr>
<td><strong>Mother</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destructive tactics</td>
<td>-0.14</td>
<td>-1.75</td>
</tr>
<tr>
<td>Constructive tactics</td>
<td>.16</td>
<td>3.16**</td>
</tr>
<tr>
<td>Negative emotionality</td>
<td>-.77</td>
<td>-2.55**</td>
</tr>
<tr>
<td>Positive emotionality</td>
<td>.50</td>
<td>2.71**</td>
</tr>
<tr>
<td><strong>Father</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destructive tactics</td>
<td>-0.11</td>
<td>-1.32</td>
</tr>
<tr>
<td>Constructive tactics</td>
<td>.12</td>
<td>2.68**</td>
</tr>
<tr>
<td>Negative emotionality</td>
<td>-.59</td>
<td>-2.36*</td>
</tr>
<tr>
<td>Positive emotionality</td>
<td>.40</td>
<td>2.38*</td>
</tr>
</tbody>
</table>

Note. Maternal diary report.
* p < .05. ** p [less than or equal to] .01.
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