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Family Adversity, Positive Peer Relationships, and Children's Externalizing Behavior: A Longitudinal Perspective on Risk and Resilience

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Abstract

Peer acceptance and friendships were examined as moderators in the link between family adversity and child externalizing behavioral problems. Data on family adversity (i.e., ecological disadvantage, violent marital conflict, and harsh discipline) and child temperament and social information processing were collected during home visits from 585 families with 5-year-old children. Children's peer acceptance, friendship, and friends' aggressiveness were assessed with sociometric methods in kindergarten and grade 1. Teachers provided ratings of children's externalizing behavior problems in grade 2. Peer acceptance served as a moderator for all three measures of family adversity, and friendship served as a moderator for harsh discipline. Examination of regression slopes indicated that family adversity was not significantly associated with child externalizing behavior at high levels of positive peer relationships. These moderating effects generally were not qualified by child gender, ethnicity, or friends' aggressiveness, nor were they accounted for by child temperament or social information-processing patterns. The need for process-oriented studies of risk and protective factors is stressed.

Introduction

It is well established that children exposed to hostile, stressful, and aversive early family experiences are at elevated risk for the development of adjustment problems. Myriad experiential factors have been linked to children's behavior problem development, including economically disadvantaged circumstances, homes characterized by high levels of interparental conflict and violence, and physically punitive parental discipline (for reviews, see Cummings, Davies, & Campbell, 2000; Deater-Deckard & Dodge, 1997; McLoyd, 1998). Of course, exposure to adverse family experiences does not foreordain adjustment difficulties. Many children raised in very difficult family circumstances show good adjustment later in life. How this happens has been a question for models of child “resilience” and the search for countervailing experiences that might offset early experiential risks (Luthar, Cicchetti, & Becker, 2000; Masten et al., 1999). Children's peer relationships represent one such set of ameliorative experiences. The present study evaluated two key forms of children's peer relationships in the early grade school years—children's overall acceptance by the peer group and the extensivity of children's friendship networks—as factors that might protect or buffer children from the risks associated with an array of negative family experiences.

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Positive Peer Relationships as Buffers: Empirical Evidence

Both historical (e.g., Sullivan, 1953) and more contemporary (e.g., Price, 1996) theoretical accounts of the socialization significance of children's peer relationships have stressed their possible role in attenuating the negative effects of harsh and punitive family experiences. There is evidence that positive peer relationships statistically moderate the relation between indexes of family adversity and indexes of child adjustment. Patterson, Cohn, and Kao (1989) found that among school-age children of low-warmth mothers, those who were accepted by their peers had fewer behavior problems than did rejected children. Gauze, Bukowski, Aquan-Assee, and Sippola (1996) found that the link between family adaptability and cohesion and young teens' self-reported adjustment and well-being was moderated by the teens' positive peer relationships. In the absence of reciprocated best friendships, the association between adaptability/cohesion and adolescent adjustment was positive and significant. However, for teens with a best friend, the relation between the family factors and teen well-being was not significant. Similarly, Bolger, Patterson, and Kupersmidt (1998) showed the possible protective function of friendship among children who had experienced maltreatment. Among children who had reciprocated best friends or had high-quality friendships, the association between maltreatment and child self-esteem was attenuated. In a recent study drawing from the same sample as the current investigation, Schwartz, Dodge, Pettit, Bates, and The Conduct Problems Prevention Research Group (2000) found that the relation between negative family experiences and victimization was positive and significant among those children who had few or no friends. However, this association was nonsignificant among children with more numerous friendships. Collectively, these studies suggest that aspects of positive peer relationships may serve ameliorative functions for experientially at-risk children.

Unique/Overlapping Moderating Effects of Peer Acceptance and Friendship

Contemporary conceptualizations of children's peer relationships distinguish between the socialization provisions afforded by peer group acceptance on the one hand, and reciprocated dyadic friendships on the other hand (see Asher, Parker, & Walker, 1996; Ladd, Kochenderfer, & Coleman, 1997). The social provisions attributed to friendship consist of intimacy, trust, and support, and those attributed to peer acceptance include companionship and having a sense of connection to the larger group (Ladd & Kochenderfer, 1996). Although these features of peer experience overlap to some degree, they nonetheless may play distinct roles in children's social development, both in terms of main-effects contributors to well-being, and in terms of their ameliorative functions for at-risk children. Main-effects studies have shown that peer acceptance and friendship were additively and incrementally associated with indexes of children's adjustment (e.g., loneliness, academic competence), suggesting that children benefit from being accepted by the group and from having friendships (Ladd et al., 1997; Parker & Asher, 1993).

With respect to their possible role as moderators of family adversity, it is unclear whether peer acceptance and friendship are interchangeable, or whether each might serve a unique function in offsetting the effects of family risk. If friendship and acceptance were interchangeable, then one type of relationship (e.g., acceptance) would be sufficient to counteract the influence of early family adversity, and the other type (e.g., friendship) would not add appreciably to this moderating effect. Alternatively, if the two types of relationships were not redundant in their compensatory or ameliorative functions, then one type might moderate the impact of family adversity independently of the moderating impact of the other type. This would suggest that the best outcomes for at-risk children would be found among those who were able to forge friendships and achieve acceptance by the group as a whole. These possibilities were investigated in the present study by considering the moderating role of peer acceptance and friendship in the link between three key indexes of early family adversity—ecological risk (socioeconomic disadvantage, single-parent status, and family stress); interparental conflict;

and exposure to harsh, physical discipline—and children's subsequent externalizing behavior problems. Next, a series of analyses was conducted to determine whether the previously significant moderators remained significant after controlling for the alternative peer variables.

The measures of family adversity and child behavioral adjustment were chosen for three major reasons. First, externalizing behavior is one of the most comprehensive indicators of children's behavioral adjustment and has been linked to various family and peer factors as well as other indicators of child well-being (Coie & Dodge, 1998). Because little attention has been paid to this adjustment domain in research that has examined the moderating role of peer relationships, it is unclear whether the protective function of positive peer relationships extended to the deterrence of externalizing behavioral problems, such as aggression. These family risk variables were chosen because they previously have been shown to be robust concurrent and longitudinal predictors of child adjustment and well-being in prior research using this sample (Dodge, Bates, & Pettit, 1990; Pettit, Bates, & Dodge, 1997; Strassberg, Dodge, Bates, & Pettit, 1992). Also, to some extent, these factors represent a proximal to distal continuum of risk, with harsh discipline at the most proximal level, marital conflict at an intermediate level, and ecological risk at a comparatively more distal level.

Gender and Ethnic Differences

Because of the well-documented gender differences in qualities of children's peer relationships (e.g., that girls are more socially skilled than are boys), and in children's behavioral adjustment (e.g., that boys are rated higher on externalizing problems than are girls), it seemed important to consider whether similar or different aspects of peer relationships serve as moderators of family risk for boys and girls. For example, girls' friendships might be more important in buffering them from family risk because girls' friendships tend to be characterized by more affection, validation, and support compared with boys' friendships (Belle, 1989; Parker & Asher, 1993). On the other hand, because boys' social groups tend to be larger and more activity oriented than girls' groups (Ladd, 1999), and because peer group membership in elementary school often is driven by shared activities and interests (Brown, 1990), the overall level of peer acceptance may be especially important as a protective factor for at-risk boys.

Children's ethnicity also was examined as a potential qualifier of the moderating role of positive peer relationships. Relatively little research has addressed ethnic differences in patterns of social preference or friendship (Robinson, 1998), so specific predictions were not advanced. However, indicators of family adversity, such as those used in the present study (e.g., ecological disadvantage), may be elevated in African American families compared with European American families (e.g., Patterson, Vaden, & Kupersmidt, 1991). Because families living in low-SES neighborhoods may restrict their children's social activities due to safety concerns (Kupersmidt, Griesler, DeRosier, Patterson, & Davis, 1995), their children may not be afforded the positive benefits of peer relationships, such as practicing appropriate social skills. Thus, it is possible that the ameliorating role of positive peer relationships may be less in African American children compared with European American children.

Underlying Processes

A closer look at the emerging literature reveals a clear gap in the current understanding of the processes that may underlie the positive adaptation of at-risk children (Luthar et al., 2000; Pettit, 2000), especially concerning the involvement of children's preexisting characteristics and competencies. This issue harkens back to earlier discussions in the literature aimed at drawing attention to the complex, transactional processes that likely underlie the association between peer relationship constructs and subsequent child adjustment (Parker & Asher, 1987). It could be argued that to determine the unique socialization functions of peer relationships it is necessary to control for earlier appearing skills and competencies that may

contribute both to success in peer relationships and to subsequent patterns of adjustment. Such controls are necessary to rule out the possibility that success or problems in peer relationships merely serve as correlated “leading indicators” of the relative adjustment of the child (Newcomb & Bagwell, 1996; Parker & Asher, 1987). More generally, this issue reflects the absence of a process-oriented approach in risk and resilience research (Pettit, 2000), and the interpretive ambiguity that follows when presumed protective factors are studied in isolation from the broader matrix of characteristics and competencies that may cooccur with such factors.

In the current study, the process issue was addressed in the following manner. Two types of child attributes that have been linked to family life, peer relationships, and child adjustment were identified: temperament and social information processing. Resistant temperament describes a temperament style characterized by unmanageability and lack of self-regulation. Previous research using this data set has indicated that children rated high on this temperamental characteristic by their mothers subsequently showed higher levels of externalizing problems at school compared with other children (Bates, Pettit, Dodge, & Ridge, 1998). Because children with challenging temperament characteristics often experience difficulties in social relationships—including relationships with age-mates (Rothbart & Bates, 1998)—resistant temperament may serve as one kind of “preexisting” characteristic that underlies the presumed protective functions of positive peer relationships. That is, at-risk children who are low in this temperamental characteristic may be behaviorally well adjusted, and better able to ingratiate themselves into the peer group, and successfully establish friendships.

A similar argument can be made for children's social information-processing patterns. Social information processing refers to the cognitive operations that are thought to underlie children's behavioral responding in social situations. One prevailing model of social information processing (Dodge, Pettit, McClaskey, & Brown, 1986) describes these operations in terms of the sequential steps of encoding relevant cues, making attributions about other's motives, and generating and evaluating possible responses. Accumulating evidence (e.g., Dodge et al., 1990) indicates that individual differences in social information processing covary with family interaction patterns and predict children's subsequent behavioral adjustment and peer status at school. Social information-processing encoding (i.e., detecting relevant social cues) is among the most robust social information-processing components in terms of its relation to social and behavioral competence (Dodge et al., 1990) and therefore was selected for examination as a second kind of “pre-existing” characteristic that might account for the moderating effects of positive peer relationships. To address this issue, the present study tested what Baron and Kenny (1986) referred to as a mediated moderation—whether the mediator (i.e., child characteristics) explained the effect of the moderator (i.e., positive peer relationships). Each analysis controlled for both the main effect of the child characteristic (temperament or social information processing) as well as the relevant two-way interaction terms (e.g., Social Information Processing × Family Adversity). If interactions between the indexes of family adversity and positive peer relationships continued to be significant in such analyses, it would provide substantial support for the inference that peer relationships serve a protective function that cannot be accounted for by pre-existing child characteristics. Because these attributes were assessed prior to kindergarten, it is unlikely that they were influenced by children's relative degree of success in school-based peer relationships.

The Role of Friends' Aggressiveness

As pointed out by Hartup (1996) and others (e.g., Ladd, 1999), an understanding of the implications of peer relationships in children's development requires one to look beyond the mere presence of such relationships and specify in greater detail the characteristics of the individuals comprising the relationship. In the present context, this suggests the importance of

considering not only whether children have established friendships, but whether these "friends" are themselves behaviorally well adjusted. There is evidence that antisocial children have more contentious and less satisfying friendships compared with their peers, which tends to fuel subsequent aggressive encounters (Capaldi, Dishion, Stoolmiller, & Yoerger, 2001). Therefore, additional analyses were conducted to examine the possibility that the moderating effect of friendship might be qualified or accounted for by the level of aggressiveness shown by the peers comprising the network of friends. In the extant literature, no study of the moderating role of friendship has evaluated the social-behavioral characteristics of the identified "friends."

Summary

In summary, in the present study, four research objectives were addressed: (1) whether peer acceptance and friendship, examined individually and simultaneously, were moderators of the link between early family adversity and children's subsequent externalizing problems; (2) whether the moderating links between family adversity and peer relationships differed by child gender and ethnicity; (3) whether the protective function of positive peer relationships was explained by, or independent of, children's temperament and encoding patterns; and (4) whether the aggressiveness of children's friends qualified or accounted for the moderating role of friendship.

Method

Participants and Overview

This investigation was conducted as part of the Child Development Project, a multisite, longitudinal study of the socialization factors involved in child development (e.g., Pettit, Laird, Dodge, Bates, & Criss, 2001). Families with children entering kindergarten were recruited from two cohorts in 1987 and 1988 from three sites: Knoxville and Nashville, Tennessee and Bloomington, Indiana. Most of the families (85%) were recruited during the spring at kindergarten pre-registration; the remaining families were contacted during registration at the beginning of the school year. Research assistants randomly approached parents and asked them if they would participate in a longitudinal study of child development. Approximately 75% of families contacted agreed to participate in the study.

Family and child characteristics were assessed the summer prior to kindergarten through parent questionnaires and interviews (described later). Positive peer relationship data (i.e., friendship, peer acceptance) were collected during kindergarten and grade 1. Teacher ratings of the children's externalizing behavior were collected in the spring of grade 2. This research design was adopted for two reasons. First, because peer relationships of younger children are not particularly stable (Berndt & Hoyle, 1985) and because children in early elementary grades may need a substantial amount of time to adjust to the school environment, it was felt that averaging across the first 2 years of grade school would reflect more accurately the children's peer relationships during this time period. Second, although it is possible that the status of the children's relationships with peers may have changed by the time the child's externalizing behavior was assessed, the protective factors (i.e., positive peer relationships) were conceptualized as indicative of something corrective that occurred during the intervening years (Kokko & Pulkkinen, 2000).

During the first assessment prior to kindergarten, data were collected from 585 families with young children (52% male, 48% female; 81% European American, 17% African American, 2% other ethnic groups; 26% single-parent headed families). Based on the Hollingshead (1979) Four-Factor Index of Social Status, the sample was predominantly middle class (M = 40.4, SD = 14.0), with 26% of the families classified into the lower two of Hollingshead's five

classes. At the time of the grade 2 externalizing behavior assessment, 517 participants (88.4%) were retained who generally were representative of the original sample: 51.9% male, 16.9% ethnic minorities, and a mean Hollingshead SES score of 39.76 (*SD* = 13.98). Most of the attrited participants either had moved out of the area or had dropped out due to a lack of interest. Attrited participants were no different from ongoing participants in either family characteristics or peer relationships: ecological disadvantage, $F(1, 584) = .05$, *ns;* violent marital conflict, $F(1, 489) = .29$, *ns;* harsh discipline, $F(1, 579) = .05$, *ns;* friendship, $F(1, 576) = .26$, *ns;* or peer acceptance, $F(1, 575) = .09$, *ns.*

Procedure and Measures

Predictors—During the summer preceding the children's entry into kindergarten, families were interviewed by two trained researchers. One researcher interviewed the mother (and father, if he was available) and the other researcher interviewed the child. While one parent was being interviewed, the other parent filled out questionnaires. The 90-min interview included both structured and open-ended questions about each of three childhood eras (the first 12 months, 12+ months until 1 year ago, and the past year). Only the latter two periods were considered in the current study. Parents were asked questions concerning issues such as family stressors, the child's developmental history, and parenting behavior.

Based on responses given by the parents during the interviews and on the questionnaires, three measures of family adversity (ecological disadvantage, violent marital conflict, and harsh discipline) were constructed. Ecological disadvantage reflected the additive risk of low SES, high family stress, and single-parent status. SES was based on the occupation and education level of both mothers and fathers (Hollingshead, 1979). As recommended by Hollingshead, the mothers' scores were double weighted when fathers (or adult male partners) did not reside in the home. Family life stress was based on responses given during the home interviews. Using the two developmental eras, parents were asked to recall specific stressors that occurred in the family (e.g., death, family moves, legal problems). Based on the responses to these questions, the interviewer rated the extent of stressful, challenging events faced by the child and the family using a 5-point rating scale ranging from “minimal challenge” to “severe frequent challenges,” interrater $r = .79$. The ratings from the two eras were averaged, $r = .47$, $p < .001$, to yield a score for family life stress. For each ecological disadvantage component, families were assigned a “1” if they were at risk (i.e., single-parent, above the median on stress, and lower two Hollingshead classes) and a “0” if they were not at risk (i.e., married or cohabitating, below the median on stress, and upper three Hollingshead classes). The scores were summed to compute the final ecological disadvantage variable (*range* = 0–3).

Violent marital conflict was assessed using the eight-item violence subscale (e.g., “pushed or shoved,” “threw something”) of the Conflict Tactic Scale (Straus, 1979). Both mothers and fathers were asked to rate the conflict tactics that they and their spouses used during the two developmental periods. Based on the reports of both parents, two scores were computed: mother-to-father and father-to-mother violent marital conflict, $\alpha s = .92$ and .91, respectively. The data for mother and father violent behavior were averaged, $r = .59$, $p < .001$, to create the final violent marital conflict variable. Because of differences in the ratings scales used in Cohorts 1 and 2, the conflict data were standardized by cohort before the data were combined (see Strassberg et al., 1992). It should be noted that the marital conflict measure reflected violent tactics reported by married or cohabitating dyads ($N = 491$) and did not include single-parent families ($N = 94$).

Harsh discipline was based on an interviewer rating of harsh, physical discipline (Pettit et al., 1997). Using the two developmental periods as reference, the interviewer asked the mother to respond to the following open-ended questions: “Who usually disciplined your child?,” “Was your child ever physically punished?,” and “How was your child disciplined?” Possible

answers to the last question included isolation, withdraw privileges, grab/shake, spank, talk to, scold, yell, and other. Rating scale points ranged from "nonrestrictive mostly prosocial" (1) to "severe, strict, often physical" (5). A rating of harsh discipline was created by averaging across the two eras, α = .61, interrater *r* = .80.

Moderators—Individual sociometric interviews were administered in each child's class to all peers whose parents consented to participation (over 80%). Each child was given a class roster and asked to nominate up to three peers they liked and three peers they disliked. Peer acceptance was based on the standardized difference between the liking and disliking nomination scores (Coie, Dodge, & Coppotelli, 1982) and was collected in kindergarten (*M* = .17, *SD* = .97) and grade 1 (*M* = .21, *SD* = .96). Scores from both years, *r* = .49, *p* < .001, were averaged to yield an index of peer acceptance. Children also were asked to rate each peer on a 5-point rating scale with higher ratings indicating higher liking. Children who reciprocally rated each other with the highest possible liking rating (i.e., reciprocal rating of "5") were classified as friends (Schwartz et al., 2000; Schwartz, McFadyen-Ketchum, Dodge, Pettit, & Bates, 1999), and the total number of friends was calculated separately in kindergarten (*M* = 4.43, *SD* = 2.68) and grade 1 (*M* = 3.11, *SD* = 2.19). Data from both years, *r* = .32, *p* < .001, were averaged to compute the final friendship variable.

Although the validity of reciprocated "like most" ratings as a measure of friendship has been established in the literature (Erdley, Nangle, & Gold, 1998; Schwartz et al., 1999, 2000), the measure used in the present study differed somewhat from those used by other investigators. For instance, whereas Hodges, Malone, and Perry (1997) assessed friendship utilizing "liked most" nominations, Parker and Asher (1993) used a reciprocated "best friend" measure. However, in the present study, friendship was assessed using reciprocated "liked most" ratings for three primary reasons. First, it was felt that the reciprocated nomination approach was limited by the constrained variability due to the limited-choice procedure (e.g., children are only able to nominate three children; Erdley et al., 1998; Furman, 1996). With reciprocated ratings, however, the number of friends who can be identified is only restricted by the classroom size. Second, compared with nomination scales, rating scales display better test–retest stability, especially with younger children (Parker & Asher, 1987). Third, using this approach, separate items were used in the creation of the peer acceptance and friendship variables, which made it possible to construct two separate, yet related, peer relationship variables.

Behavioral outcome—During the spring of grade 2, the child's teacher completed the 112-item Child Behavior Checklist–Teacher Report Form (CBCL-TRF; Achenbach, 1991). This scale includes a checklist of behavioral problems, with items such as "gets in many fights" and "disobedient at school." For each item, teachers noted whether the statement was not true for the child (0), somewhat or sometimes true (1), or very true or often true (2). The externalizing behavioral problems summary score was used as a measure of the child's behavior problems in grade 2. This score included 35 items for boys and girls. The teacher response rate for the CBCL-TRF was approximately 88% of the sample.

Qualifiers—The friends' mean level of aggression also was assessed during the sociometric interview. In addition to nominating children they liked and disliked, each child was asked to nominate three children who "start fights," "are mean," and "get mad." The number of nominations for each category was calculated for each child and averaged to create the child's total aggression nomination score, α = .94. Finally, the friends' level of aggressiveness was based on the average aggression nominations of peers who earlier were designated as "friends" (i.e., those who reciprocated a liking rating of "5"). Data collected in kindergarten (*M* = −.19, *SD* = .50) and grade 1 (*M* = −.19, *SD* = .59) were averaged, *r* = .13, *p* < .01, to compute the final friends' aggression variable. Children with no reciprocated positive ratings in both kindergarten and grade 1 (*N* = 26) did not receive a score for friends' aggressiveness.

Confounders—Two personal attributes of children were assessed as possible "confounders" (i.e., third variable explanatory variables). Encoding relevancy, a component of the child's social information processing and a significant predictor of children's behavioral adjustment (Dodge et al., 1990) was assessed during home interviews prior to the children's entry into kindergarten (for a more detailed description of this procedure, see Harrist, Zaia, Bates, Dodge, & Pettit, 1997). The children were presented with several hypothetical vignettes that involved either provocation dilemmas (e.g., the child was asked to imagine being bothered by another child) or peer group entry dilemmas (e.g., the child was asked to imagine being rebuffed or ignored when trying to join a peer group engaged in a particular activity). Three types of vignettes (eight stories each) were presented: those in which the provocation was clearly accidental (e.g., the peers did not respond to the child because they did not hear him or her), those in which the provocation was ambiguous, and those in which the rebuff or provocation was clearly hostile (e.g., the peer intentionally bumped the child). The children were then asked a series of questions to assess how they progressed through the four social information-processing steps. The interviewer coded the children's verbal responses as they were given. Cross-site intercoder reliability estimates were based on independent coders' subsequent ratings of 30 written protocols for each cohort, mean intercoder reliability: $\kappa = .85$. To assess encoding relevancy, the interviewers asked each child to recount what happened in each videotaped story immediately after it was presented. Responses were scored as follows: 1 (not relevant), 2 (partially relevant), or 3 (totally relevant). The final encoding relevancy score was derived by calculating the mean relevance rating across the 24 stories, $\alpha = .76$.

Resistant temperament (Bates et al., 1998) was based on the mother's perception of the child's very early unmanageability. Temperament was assessed during the preschool interview using the Retrospective Infant Characteristics Questionnaire (Bates et al., 1998). The four-item measure included items such as "persist in playing with object when told to leave it alone" and "upset when removed from something he/she is interested in but should not be getting into." The four items were averaged, $\alpha = .83$, to create the temperament score. In previous investigations (e.g., Bates et al., 1998), children who were rated high on resistant temperament were found to display higher levels of externalizing behavior compared with children who were rated low on this characteristic.

Results

Overview

Analyses are presented in six sets. Intercorrelations and descriptive statistics among all study variables are presented first. This is followed by a series of regression analyses with interaction terms that were conducted to examine whether positive peer relationships moderated the association between family adversity and children's externalizing behavior. The third set of analyses tested whether previously significant Family Adversity × Positive Peer Relationship interactions remained significant after controlling for the alternative peer variable. Next, child gender and ethnicity were examined as potential qualifiers of the moderating role of positive peer relationships. The fifth set of analyses was directed toward an evaluation of whether children's temperament and/or social information-processing encoding patterns accounted for the moderating impact of positive peer relationships. This was done by rerunning the moderated regression analyses and controlling for the main effects and interaction terms that involved the child characteristic (temperament or encoding). The final set of analyses tested whether friends' aggressiveness levels accounted for, or qualified, the moderating impact of friendship.

Intercorrelations

Intercorrelations (two-tailed) among study variables indicated expected patterns of covariation within and between variable domains (see Tables 1 and 2 for bivariate correlations and

descriptive statistics respectively). As expected, the three indexes of family adversity were modestly and positively correlated. Likewise, children with higher peer acceptance also had significantly higher reciprocated friendship scores and had friends who were overall lower in levels of aggressiveness. The two prekindergarten child attributes also were very modestly but significantly correlated: Children rated by their mothers as more temperamentally resistant had lower encoding relevancy scores.

Turning to cross-domain relations, each of the family adversity measures was negatively related to children's peer acceptance scores, indicating that children growing up in harsh, maritally conflictual, and economically stressful homes were more likely to be poorly regarded by their peers. Friendship was associated only with ecological disadvantage (modestly and negatively) and friends' aggressiveness was associated only with harsh discipline (modestly and positively). Resistant temperament and encoding patterns were associated significantly with several family and peer variables, albeit in very modest ways. Specifically, more temperamentally resistant children came from homes characterized by high marital conflict, experienced more harsh discipline, and had lower peer acceptance scores and fewer friendships. Children with higher encoding relevancy scores experienced less ecological disadvantage and harsh discipline, and had higher peer acceptance scores compared with other children. Altogether, these patterns of correlations appear congruent with extant literature.

Children's externalizing behavior was significantly associated with every child, family, and peer variable except friends' aggressiveness. As would be expected, children rated by their teachers as having more externalizing behaviors had fewer friendships and lower peer acceptance scores, had previously been rated by their mothers as more temperamentally resistant, and were less skillful at encoding. In addition, externalizing behavior was positively correlated with ecological disadvantage, marital conflict, and harsh discipline. To examine whether each family risk factor contributed uniquely in the prediction of externalizing behavior, a set of partial correlations was computed. Whereas ecological disadvantage and harsh discipline were unique predictors of externalizing behavior, *prs* = .18 and .12, *ps* < .01, respectively, marital conflict was only marginally correlated with child behavior, *pr* = .09, *p* < .10, after controlling for ecological disadvantage and harsh discipline.

Gender differences were examined in terms of main effects (i.e., bivariate correlations with the dichotomous child gender variable) and in terms of gender-differentiated patterns of relations. Several main effects were apparent: Girls were more socially preferred by their peers, boys' mothers were rated as using more harsh discipline, and boys' friends were considerably more aggressive. In general, the pattern of relations was similar for boys and girls, with only 2 (out of 36) correlations showing significant gender differences via z test. First, ecological disadvantage was more strongly associated with violent marital conflict among boys, $r(256) = .45$, $p < .001$, than among girls, $r(235) = .28$, $p < .001$ (difference via z test significant at .05). Second, harsh parenting was more strongly correlated with teacher-rated externalizing behavior among girls, $r(248) = .27$, $p < .001$, than boys, $r(265) = .07$, *ns* (difference via z test significant at .05).

Ethnic differences were examined in terms of main effects and in terms of differentiated patterns of relations between African Americans and European Americans. The bivariate correlations indicated that African American children were exposed to higher levels of all three family risk factors, had lower levels of peer acceptance, had lower encoding relevancy scores, and had higher levels of teacher-rated externalizing behavior. The pattern of relations was very similar for African Americans and European Americans with only 3 (out of 36) correlations showing significant differences via z test: Violent marital conflict was more strongly associated with externalizing behavior among European Americans, $r(375) = .24$, $p < .001$, than among African Americans, $r(55) = -.07$, *ns* (difference via z test significant at .05); harsh discipline

was more strongly correlated with encoding for European American children, $r(447) = .20$, $p < .001$, than for African American children, $r(93) = -.08$, *ns* (difference via z test significant at .05); and harsh discipline was more strongly linked to externalizing behavior for European Americans, $r(415) = .23$, $p < .001$, than for African Americans, $r(89) = -.06$, *ns* (difference via z test significant at .05). Because the overall pattern was similar, principal analyses were conducted with the combined sample.

Positive Peer Relationships as Moderators

The bivariate correlations confirmed that children exposed to high levels of family adversity in early childhood displayed higher levels of externalizing behavior in the second grade. With regard to the first major research question—whether peer acceptance and friendship in the early elementary years moderated this association—a series of hierarchical regressions were computed in which teacher-rated externalizing behavior (grade 2) served as the dependent variable, and a family adversity variable (ecological disadvantage, violent marital conflict, or harsh discipline) and a positive peer relationship variable (peer acceptance or friendship) served as predictors and were entered in the first step (with the predictor and moderator centered). The two-way interaction was entered in the second step. Separate analyses were conducted for each independent variable and moderator. Significant two-way interactions were explored and interpreted using procedures described in Jaccard, Turrisi, and Wan (1990). Specifically, the association between family adversity and child externalizing behavior was examined at three levels of positive peer relationship: low (−1 *SD*), medium (*M*), and high (+1 *SD*).

First peer acceptance was tested as a moderator. As indicated in Table 3, family adversity and peer acceptance were significant, independent predictors of children's externalizing behavior —each family adversity measure was positively associated with child externalizing behavior, and peer acceptance was negatively related to externalizing behavior. In addition, the two-way interaction was significant in each case. The regression slopes at low, medium, and high levels of peer acceptance are listed in Table 4. Each family adversity variable was significantly associated with child externalizing behavior at low or medium levels of peer acceptance (except for marital conflict, for which the relation was significant only at low levels of peer acceptance). These associations all were attenuated at high levels of peer acceptance, with none of the family adversity measures being associated with child externalizing at high levels of peer acceptance.

As in the previous set of analyses, friendship and each measure of family adversity significantly and uniquely predicted child externalizing problems (see Table 3). A significant interaction effect was found only for harsh discipline. Examination of the regression slopes (shown at the bottom of Table 4) indicated that harsh discipline was significantly related to child externalizing behavior for children with average or below average number of friends, but harsh discipline was unrelated to later externalizing for children with relatively many friends.

The stronger role of acceptance (versus friendship) as a moderator also was examined using an alternative operationalization for each variable. In the present study, peer acceptance was based on the standardized difference between the liking and disliking nomination scores, and friendship was assessed using reciprocated positive ratings. Using an alternative strategy, peer acceptance was operationalized as average liking (i.e., average rating on the 1 to 5 scale received from peers), and friendship was operationalized as the number of reciprocated “like most” nominations; both alternative measures were averaged across kindergarten and grade 1. Using the alternative operationalization, the overall pattern of results was similar: There were significant interactive effects for Average Liking × Ecological Disadvantage, Standardized $\beta = -.09$, $p < .05$, and Average Liking × Harsh Discipline, Standardized $\beta = -.10$, $p < .01$, and a trend for Average Liking × Violent Marital Conflict, Standardized $\beta = -.08$, $p < .10$. However, reciprocated nominations did not serve as a significant moderator for the three family adversity variables, perhaps due to its restricted variability ($M = .88$, $SD = .72$).

In summary, positive peer relationships during early grade school moderated the association between early family adversity and subsequent child externalizing behavior. Peer acceptance served as a moderator for children experiencing ecological disadvantage, violent marital conflict, and harsh discipline. Friendship served as a moderator for children exposed to harsh, physical discipline.

Peer Acceptance and Friendship as Unique/Overlapping Moderators

Peer acceptance significantly interacted with each family adversity measure, and friendship significantly interacted with harsh discipline. Next, a series of analyses was conducted to determine whether the previously significant moderators remained significant after controlling for the alternative peer variables. In these analyses, the main effect of the alternative peer variable as well as the relevant two-way interactions were controlled for (e.g., Friendship × Ecological Disadvantage, Friendship × Peer Acceptance). The *Ns* for this series of regressions ranged from 433 to 512. After controlling for friendship, the Ecological Disadvantage × Peer Acceptance and Marital Conflict × Peer Acceptance interactions terms were still significant predictors of child externalizing behavior, Standardized $\beta = -.14$ and $-.23$, ps $< .001$, respectively. However, the previously significant Harsh Discipline × Peer Acceptance interaction term was no longer significant after controlling for friendship, Standardized $\beta = -.05$, *ns.* Likewise, the previously significant Harsh Discipline × Friendship Interaction was no longer significant after controlling for peer acceptance, Standardized $\beta = -.04$, *ns*. Interestingly, when the main effects for peer acceptance and friendship were entered simultaneously in Step 1, only peer acceptance was a significant predictor of child externalizing behavior. Thus, although friendship initially was associated with child externalizing behavior, this association was accounted for by peer acceptance.

In summary, peer acceptance appeared to be a unique moderator of ecological disadvantage and marital conflict (i.e., its moderating effect was not explained by its covariation with the friendship measure), but peer acceptance and friendship overlapped in their moderating impact on harsh discipline (i.e., their moderating effect was attributable to the variance shared by the two peer relationship measures rather than variance unique to one or the other).

Gender and Ethnic Differences

The results indicated that both peer acceptance and friendship moderated the impact of family adversity on child externalizing behavior. Next, a series of analyses was conducted to examine whether the moderating effects of positive peer relationships were qualified by child gender or ethnicity. First, turning to child gender as a potential qualifier, the original analyses (summarized in Table 3) were re-rerun while taking into account the main effect of child gender (in Step 1), the two-way interactions of child gender with the family adversity and positive peer relationship variables (in Step 2), and—central to the issue of gender differences—the three-way interaction among child gender, family adversity, and positive peer relationships (in Step 3). The *Ns* for these analyses ranged from 433 to 512.

There were no significant three-way interactions involving peer acceptance. There was, however, a significant three-way interaction involving friendship in relation to marital conflict, Standardized $\beta = -.20$, $p < .001$. It should be noted that the original Marital Conflict × Friendship interaction was not a significant predictor of externalizing behavior (see Table 3). To interpret this three-way interaction, separate regressions that examined the Marital Conflict × Friendship interaction term were calculated for girls and boys. Significant two-way interactions were found for both girls and boys after controlling for the main effects of marital conflict and friendship, Standardized βs $= -.25$ and $.16$, ps $< .05$, respectively. Whereas marital conflict was significantly associated with externalizing behavior among girls with relatively few friendships, slope = 5.71, $p < .001$, this association was not significant among girls with

relatively many friendships, slope = −1.19, *ns.* Among boys with more numerous friendships, marital violence was significantly related to externalizing behavior, slope = 4.22, $p < .01$. For boys with few or no friendships, marital conflict was not significantly associated with externalizing behavior, slope = −.09, *ns.*

Next, possible ethnic differences in the moderating effects of peer relationships were examined. This was done by computing a series of hierarchical regressions in which teacher-rated externalizing behavior was predicted by the main effects for a family adversity variable (ecological disadvantage, marital conflict, or harsh discipline), a peer variable (peer acceptance or friendship), and child ethnicity (Step 1); the relevant two-way interactions—Peer Variable × Ethnicity, Family Variable × Ethnicity, and Family Variable × Peer Variable (Step 2); and the three-way interaction—Child Ethnicity × Family Adversity × Positive Peer Relationship (Step 3). The Ns for these analyses ranged from 426 to 504.

There were no significant three-way interactions involving peer acceptance. There was one marginally significant three-way interaction involving friendship in relation to harsh discipline, Standardized $\beta = .12$, $p < .10$. To unpack this interaction, separate hierarchical regressions that analyzed the Harsh Discipline × Friendship interaction were computed for African Americans and European Americans. The results indicated that the two-way interaction was marginally significant for European Americans, Standardized $\beta = -.08$, $p < .10$, but was not significant for African Americans, Standardized $\beta = .11$, *ns.* Harsh discipline was more strongly associated with externalizing behavior among European American children with low levels of friendship, slope = 3.35, $p < .001$, compared with European American children with high levels of friendship, slope = 1.63, $p < .05$. Thus, in general, the moderating role of peer relationship was not qualified by child gender or ethnicity.

Child Characteristics as Possible Explanations for the Moderator Role of Positive Peer Relationships

The next set of analyses examined whether personal characteristics of the children—namely their temperament and social–cognitive skill—could account for the moderating effects of positive peer relationships (i.e., whether child characteristics mediated the moderating role of positive peer relationships). To address this issue, a series of regressions were computed in which the main effects of the child characteristics (temperament or social information processing) were controlled, along with the relevant two-way interactions (i.e., Child Characteristic × Positive Peer Relationship, Child Characteristic × Family Adversity). Located in the right side of Table 5 are the unstandardized βs and 95% confidence intervals for the Family Adversity × Positive Peer Relationship interaction terms after controlling for temperament or encoding skill. The original unstandardized βs and 95% confidence intervals for the two-way interaction terms are listed in the left side of Table 5. To determine whether the child characteristics accounted for the previously significant Family Adversity × Peer Relationship interaction terms, a procedure used in Frome and Eccles (1998) and Kerr and Stattin (2000) was adapted. Evidence for mediated moderation would be found if the confidence intervals in the second set of analyses (in which a child characteristic was controlled) did not overlap with the confidence intervals from the original analyses.

As indicated in Table 5, none of the child characteristics accounted for or explained the previously significant Family Adversity × Positive Peer Relationships interactions (i.e., all of the confidence intervals overlapped with the confidence intervals from the original analyses). It should be noted that the Harsh Discipline × Peer Acceptance interaction term became only marginally significant after controlling for temperament, and the Harsh Discipline × Friendship interaction term was reduced to marginal significance after controlling for encoding skill. Moreover, the Harsh Discipline × Friendship interaction was nonsignificant after controlling for temperament. However, each confidence interval still overlapped with the original

confidence interval, and thus was not significantly reduced after controlling for the child attributes.

As a further check of whether the child characteristics served as moderators, an alternative method was used based on a procedure recommended by Baron and Kenny (1986). Evidence for mediated moderation requires that each of three criteria be met: (1) the two-way interaction (e.g., Ecological Disadvantage × Peer Acceptance) must be related to the dependent variable (i.e., externalizing behavior), (2) the mediator (e.g., temperament) must be associated with the dependent variable, and (3) the two-way interaction must be related to the mediator. Using this procedure for each previously significant two-way interaction term and for each potential mediator, the first two criteria were met. However, none of the Family Adversity × Peer Relationship interactions were significant predictors of temperament or encoding (in separate analyses) after controlling for the main effects. Thus, both methods of testing mediated moderation indicated that neither temperament nor encoding skills explained or accounted for the moderating role of positive peer relationships.

Friends' Aggressiveness and the Moderating Role of Friendship

Evidence from the preceding analyses indicated that friendship moderated the relation between at least some kinds of family adversity and children's externalizing behavior. The final research question was concerned with whether the moderating effect of friendship was qualified or accounted for by friends' aggressiveness. This question was examined by computing a series of regressions in which teacher-rated externalizing behavior was predicted by the main effects of a family adversity variable (i.e., ecological disadvantage, marital conflict, or harsh discipline), friendship, and friends' aggressiveness (Step 1); the relevant two-way interactions —Family Variable × Friends' Aggressiveness, Friendship × Friends' Aggressiveness, and Family Adversity × Friendship (Step 2); and the three-way interaction term—Family Adversity × Friendship × Friends' Aggressiveness (Step 3). Separate regressions were computed for each family adversity variable. The *Ns* for these analyses ranged from 423 to 500. The results indicated that the previously significant interaction between harsh discipline and friendship continued to be significant after controlling for friends' aggressiveness, Standardized $\beta = -.08$, $p < .05$. In addition, the three-way interaction was not significant for any family adversity measure. Thus, friends' aggressiveness did not qualify or account for the moderating impact of friends.

Discussion

The present study was designed to further the understanding of the role of positive peer relationships as protective factors in the link between negative family experiences and children's behavioral adjustment. Consistent with expectations, both peer acceptance and friendship attenuated the association between aspects of family adversity and child externalizing behavior. Peer acceptance appeared to serve a more potent role as a protective factor overall, insofar as it moderated the impact of all three indexes of family adversity, whereas friendship only moderated the impact of harsh discipline. Moreover, peer acceptance remained a unique and significant moderator of ecological disadvantage and marital conflict after controlling for friendship. With respect to harsh discipline, however, it appeared that the moderating effects of peer acceptance and friendship overlapped or were redundant. Importantly, neither child temperament nor social information-processing patterns accounted for the buffering effects of positive peer relationships, and the moderating impact of friendship was not qualified by friends' level of aggressiveness or by the child's gender or ethnicity. As a whole, then, the results are consistent with the premise that peer relationships can help to reroute the adjustment trajectories of at-risk children in more adaptive directions.

Possible Explanations for the Moderating Effect of Positive Peer Relationships

The results reported here converge with those of other investigations (Bolger et al., 1998; Gauze et al., 1996; Schwartz et al., 2000) in showing that positive peer relationships can serve as protective factors for at-risk children. The present study found that positive peer relationships moderated the link between family adversity and children's subsequent externalizing behavior. In particular, among children who were socially accepted by their peer group or who had an extensive friendship network, the association between family adversity and child externalizing was attenuated (i.e., not significant). An important issue that needs to be addressed, however, involves possible explanations for the moderating role of positive peer relationships. In other words, what are the underlying processes that characterize the moderating effect of peer acceptance and friendship? Although little empirical research has focused on this issue, it is postulated that there may be three major ways in which positive peer relationships serve as protective factors for experientially at-risk children. One explanation for the protective role of peer relationships involves the notion of relationship provisions (e.g., Furman & Robbins, 1985; Gauze et al., 1996; Ladd et al., 1997). The idea is that differing types of relationships—such as those with parents and those with peers—meet differing aspects of children's needs (e.g., security, concrete assistance, connectedness). It has been argued, however, that when needs are not being met in a particular relationship context, children may find other relationships that help to fill the void (Price, 1996). Thus, a child who lacks essential social skills due to the disruption in the parents' socialization responsibilities (e.g., the parents are too stressed to properly instruct the child) may be able to gain this experience through interactions with friends or the broader peer group. Indeed, a number of researchers have found that peer relationships can serve as a context for the development of self-esteem, social competence, and academic achievement (Hartup, 1996; Ladd, 1999; Rubin, Bukowski, & Parker, 1998). In essence, positive peer relationships may serve as a “remedial” socialization context in which children can learn and practice certain skills not picked up at home (Price, 1996).

Positive peer relationships also serve as buffers because peers may function as a form of “behavioral intervention” for both children and parents. For children, previous negative experiences and developmental trajectories may be modified and counteracted in the peer context (Price, 1996). For example, a child exposed to harsh, physical discipline may be at risk for the development of externalizing behaviors (e.g., Dodge et al., 1990). Outside of the home, however, friends (and perhaps the friends' parents) may advise the child that their methods of interpreting and acting on certain social situations are not appropriate. For parents, children's relationships with peers may serve indirectly as a behavioral intervention. Through children's relationships with peers, mothers and fathers may be able to interact or network with other parents and learn more effective means of disciplining their children or solving conflicts with their spouses (e.g., Fletcher, Darling, Steinberg, & Dornbusch, 1995). In other words, children's peer relationships may lead to improvements in marital relations and parenting strategies. The notion that children's peer relationships can influence parenting behavior received initial support in a recent 7-year longitudinal study by our research group (Lapp & Pettit, 1999). In this study, children who were socially accepted by their peer group in early childhood had mothers who reported a significant decrease in harsh discipline from kindergarten to grade 6 (Lapp & Pettit). Thus, positive peer relationships may serve as protective factors through the modification of child and parent behavior.

Third, it is possible that through their interactions with friends and other peers—which often occur in the school context—children may develop more positive impressions of and connections to teachers and school. Furthermore, this connection (or bond) between the children and the school may decrease the proclivity of social deviance (Hirschi, 1969), assuming that the school is a supportive and healthy environment. In other words, positive peer

relationships may help the child develop a bond with the social institution of school, which in turn may decrease their tendency toward social deviance.

The personal attributes of children also may underlie the moderating role of positive peer relationships. The current investigation addressed this issue by examining whether selected attributes of the children (i.e., resistant temperament and encoding patterns), measured prior to their experiences with peers in kindergarten and first grade, could explain the protective function of peer acceptance and friendship. The rationale for selecting these particular attributes was based on literature that cited children's temperament and cognitive functioning as influential adaptive systems in at-risk children (e.g., Masten & Coatsworth, 1998), as well as on theoretical speculations that variations in peer relationship qualities may covary with or serve as “leading indicators” of children's adjustment (Newcomb & Bagwell, 1996; Parker & Asher, 1987). Neither temperament nor encoding accounted for the moderating impact of peer acceptance or friendship. Clearly, this was a limited test of the alternative processes; other child attributes, such as physical attractiveness, IQ, and even athletic skill, may explain why some at-risk children do not develop behavior problems. Still, showing that positive peer relationships continue to serve as moderators after controlling for temperament and social–cognitive patterns does provide a stronger basis for claims that peer acceptance and friendship are not simply proxies for characteristics that promote resilience in children (Pettit, 2000). In other words, the findings are consistent with the interpretation that at-risk children do not display more favorable outcomes because they are temperamentally more agreeable or because they are more skillful at encoding social cues; they have more favorable outcomes because they are accepted by their peer group or have an extensive friendship network.

Peer Acceptance and Friendship as Unique/Overlapping Protective Factors

The results reported here also indicate unique and overlapping moderating effects of peer acceptance and friendship. With respect to harsh discipline, both peer variables—which were significant moderators when analyzed individually—were not significant moderators when examined simultaneously. This suggests that, at least in this aversive family context, the protective function of peer acceptance and friendship overlaps or is redundant. This implies that the relational provisions that allow children to overcome exposure to harsh, physical discipline can be found in relationships with both friends and the peer group. For ecological disadvantage and violent marital conflict, however, peer acceptance (but not friendship) served as a unique moderator; that is, the two-way interactions remained significant after controlling for friendship. These results are surprising given the empirical evidence that indicates that friendship can be instrumental in the deterrence of maladaptive outcomes such as loneliness, peer victimization, and low academic competence in at-risk children (Bolger et al., 1998; Gauze et al., 1996; Schwartz et al., 2000). It is possible that the relational provisions or attributes necessary to counteract ecological and marital distress are more likely to be found in relationships with the broader peer group than in friendships. Perhaps the collective resourcefulness of the peer group provides greater opportunities than do friendships in receiving remedial social-skill training, either through interaction with peers or the parents of the peers.

It is also possible that in the presence of certain forms of family adversity, the function and saliency of friendship in the prevention of aggressive behaviors is minor compared with the prevention of other forms of adjustment difficulties. For instance, Schwartz and colleagues (1999, 2000) speculated that the social support offered by friendships could influence the development of social reputations that may minimize the later risk for victimization: having a friend, especially a big friend, might fend off potential victimizers. However, having a “big friend” might do little to prevent later aggressive behavior in children. Indeed, child resilience researchers have posited that there may be considerable heterogeneity in the functioning of

resilient children across various indicators of child adjustment (e.g., Luthar et al., 2000); a "resilient" child may display relative competence in one behavioral domain but not in another domain.

These findings also point to the possibility that the utility of protective factors may be context specific (Luthar & Cicchetti, 2000). For instance, it may be the case that specific forms of positive peer relationships effectively function as buffers for children exposed to certain negative family experiences, but not others. That is, peer acceptance may promote resilience under some circumstances, and friendship under other circumstances. Moreover, it is possible that the combination of both peer relationship domains may be necessary in ensuring good (or even adequate) development in some risky environments. Theoretically, the context specificity of peer relationships as protective factors may depend on whether a particular peer relationship domain contains the essential provision or attribute that is either lacking or deficient in the family environment.

Qualifiers of the Moderating Effect of Positive Peer Relationships

It appears that the moderating effects of positive peer relationships were comparable for boys and girls, with one exception. Whereas friendship attenuated the association between violent marital conflict and externalizing behavior for girls, it exacerbated this association in boys. This pattern of findings might be attributed to the characteristics of the friends—the friends of girls were less aggressive than were the friends of boys. Because parents are important models for children in the acquisition of interpersonal skills and behavioral scripts (Bandura, 1986), having friends who display lower levels of aggression may be especially important for children whose parents use violent tactics when resolving conflicts and disagreements. To explore whether friends' aggressiveness accounted for the differing moderation effect for boys and girls, the regression analyses were rerun and the interaction between marital violence and friendship was examined after controlling for friends' aggressiveness. As in the previous analyses, the results yielded comparable interactive effects, Standardized βs = .16 and −.25, respectively, *p*s < .05. However, it is still possible that there were friend characteristics (e.g., social skills) that were not assessed in the present study that might have accounted for the differing moderating effects in boys and girls.

Child ethnicity did not qualify the moderating role of positive peer relationships. Out of six regressions computed, only one (marginally) significant three-way interaction was found: friendship served as a buffer for European Americans but not for African Americans. These findings could be attributed to the differential risk of harsh discipline in these families. Specifically, the literature has indicated that harsh discipline is associated with higher levels of externalizing behavior in European American children but not in African American children (Deater-Deckard, Dodge, Bates, & Pettit, 1996). It is possible that because harsh discipline is not a risk factor for African American children (at least in the prediction of externalizing behavior), the necessity of having several friends to ameliorate the impact of negative home experiences may be lower in these children.

The moderating effect of friendship was not conditional on the aggressiveness of the friends. These findings suggest that although the friendships of highly aggressive children may be more contentious compared with the relationships of other children (Capaldi et al., 2001), it is possible that simply having a friend and the companionship that accompanies such a relationship may be all that is necessary to help children overcome early family disadvantage. The assessment of friendship may have contributed to the lack of significant findings. Although Hartup (1996) argued that having friends and the identity of the friends are important factors to consider, he also posited that qualities or features of friendships (e.g., intimacy, conflict) also need to be acknowledged. The present study assessed whether children had friends and the identity of these friends (at least with respect to their level of aggression), but did not assess

features of the friendship. When investigating whether peer characteristics qualify the moderating role of friendships, it may be more important to assess friendship qualities or attributes rather than the mere presence of friendships. Indeed, in a previous study (Laird, Pettit, Dodge, & Bates, 1999), friends' aggressiveness was found to be more strongly associated with adolescent externalizing behavior when the teen reported having friendships characterized by high levels of relational attributes, help, security, and companionship.

Conclusions, Limitations, and Future Directions

As mentioned earlier, the present study's measure of friendship differed somewhat from those used by other researchers. The decision to use this measure of friendship was guided by two major factors. First, it was felt that the designation of “friend” should be reciprocated by the other child, a criterion that has been accentuated in the literature (e.g., Parker & Asher, 1993). Second, to better represent the natural ecology of the peer context, measures of friendship should allow children unlimited choices when designating friends. Instruments that limit the selection of “friends” to only three peers (i.e., reciprocated nominations) or only one peer (i.e., reciprocated best friend) may exclude peers who are providing valuable social support to children, especially those from risky home environments.

Given the inconsistency in the use of the term “resilience” in the literature (Luthar et al., 2000), it is necessary to qualify its use in the present study. It is acknowledged that child resilience technically was not assessed in the current study. The hierarchical regression analyses only indicated whether positive peer relationships statistically interacted with the family adversity variable in the prediction of child externalizing behavior. Although peer relationships attenuated or weakened the association between family adversity and child externalizing behavior, the mere presence of a significant moderator may not necessarily ensure the resilience of a child. Second, it must be emphasized strongly that stating that a particular child is resilient does not necessarily mean that he or she will be completely free of adjustment difficulties. Although Luthar and Cicchetti (2000, p. 858) defined resilience as the “dynamic process wherein individuals display positive adaptation despite experiences of significant adversity or trauma,” what denotes “positive adaptation” may depend on potentially arbitrary cut-off points. In the literature, there has been some variation in the cut-off points used to discriminate resilient and nonresilient children including the 75th percentile (Kokko & Pulkkinen, 2000), one half *SD* above the mean (Masten et al., 1999), and the upper third of the sample (Wyman et al., 1999). In addition, as Luthar et al. (2000) argued and as was alluded to earlier, the resilience status of at-risk children may depend on the adjustment domain assessed in the investigation. Thus, the designation of resilience may not necessarily be inferred by the presence of a significant moderator and may vary according to the chosen cut-off point and behavioral adjustment measure.

Future research in this area would benefit from a consideration of the events that transpire within the child's near environment that directly serve to buffer the child. One line of research that could be explored further is to study whether children's relationships with peers lead to changes in parenting, the various processes that underlie this transformation (e.g., parent networking), and whether these changes account for the moderating role of positive peer relationships. Second, the context specificity of peer relationships as protective factors needs to be examined further. It would be informative to investigate whether peer acceptance and friendship are specialized protective factors for children from certain risky environments. Finally, although the present study's measures of temperament and social cognition did not account for the moderating effects of peer relationships, future research needs to investigate the possible role of other child characteristics, such as IQ and physical attractiveness.

In sum, the results from the current investigation support earlier work that highlighted the importance of positive peer relationships as buffers for children exposed to family risk and

adversity. The findings extend earlier research by showing that acceptance by the group plays a more salient role as a protective factor than does friendship, at least with respect to the prediction of externalizing behavior problems. Importantly, even after controlling for child attributes that covary with family functioning, peer relationship characteristics, and child externalizing behavior, positive peer relationships remained significant moderators of family adversity.

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Table 1

Bivariate Correlations

	2	3	4	5	6	7	8	9	10	11
1. Ecological disadvantage[a]	.36***	.22***	−.08*	−.19***	.00	.06	−.14***	.34***	.04	.30***
2. Violent marital conflict[a]		.22***	−.06	−.13**	−.01	.15***	.07	.21***	.01	.18***
3. Harsh discipline[a]			−.03	−.19***	.12**	.21***	−.18***	.18***	−.10*	.18***
4. Friendships[b]				.42***	.06	−.12**	.07+	.02	.01	−.21***
5. Peer acceptance[b]					−.09*	−.17***	.22***	−.12**	.14***	−.42***
6. Friends' aggression[b]						.05	−.02	.02	−.45***	.07
7. Child temperament[a]							−.10*	−.01	−.08+	.10*
8. Encoding skill[a]								−.21***	.07	−.14**
9. Child ethnicity[c]									.03	.19***
10. Child gender[d]										−.15***
11. Externalizing behavior[e]										

Note: Ns = 455 to 585.

[a]Assessed during summer interviews prior to kindergarten.

[b]Assessed during kindergarten and grade 1.

[c]Coded “0” for European Americans and “1” for African Americans.

[d]Coded “0” for boys and “1” for girls.

[e]Based on teacher report in grade 2.

*$p < .05$;

**$p < .01$;

***$p < .001$;

+$p < .10$.

Table 2

Descriptive Statistics

	N	M	SD
1. Ecological disadvantage[a]	586	.72	.90
2. Violent marital conflict[a]	491	.07	.77
3. Harsh discipline[a]	586	2.64	.82
4. Friendships[b]	578	3.88	2.14
5. Peer acceptance[b]	577	.19	.85
6. Friends' aggression[b]	560	3.58	1.12
7. Child temperament[a]	556	1.30	.24
8. Encoding skill[a]	555	−.19	.43
9. Child ethnicity[c]	574	.17	.38
10. Child gender[d]	585	.48	.50
11. Externalizing behavior[e]	517	7.02	10.42

[a] Assessed during summer interviews prior to kindergarten.

[b] Assessed during kindergarten and grade 1.

[c] Coded “0” for European Americans and “1” for African Americans.

[d] Coded “0” for boys and “1” for girls.

[e] Based on teacher report in grade 2.

Table 3

Regressions Examining Positive Peer Relationships as Moderators in the Link between Family Adversity and Children's Externalizing Behavior

		Moderators			
		Peer Acceptance		Friendships	
Step	**Predictor**	**Standardized β**	**ΔR^2**	**Standardized β**	**ΔR^2**
1	Ecological Disadvantage	.22***	.22***	.28***	.13***
	Positive Peer Relationship	−.37***		−.19***	
2	Ecological Disadvantage × Peer Relationship	−.12**	.01**	.05	.00
1	Violent Marital Conflict	.14**	.16***	.17***	.07***
	Positive Peer Relationship	−.36***		−.19***	
2	Marital Conflict × Peer Relationship	−.17***	.02***	−.05	.00
1	Harsh Discipline	.09*	.18***	.17***	.07***
	Positive Peer Relationship	−.40***		−.21***	
2	Harsh Discipline × Peer Relationship	−.08*	.01*	−.09*	.01*

Note: Ns = 449 to 517.

* $p < .05$;

** $p < .01$;

*** $p < .001$.

Table 4

Regression Slopes Depicting the Association between Family Adversity and Children's Externalizing Behavior at Different Levels of Positive Peer Relationship

		Levels of Positive Peer Relationship		
Predictor	**Moderator**	**High**	**Medium**	**Low**
Ecological disadv.	Peer acceptance	.92	2.27***	3.62***
Violent marital conflict	Peer acceptance	−1.30	.86	3.03***
Harsh discipline	Peer acceptance	.10	1.10*	2.10**
Harsh discipline	Friendships	.99	1.97***	2.94***

* $p < .05$;

** $p < .01$;

*** $p < .001$.

Table 5

Peer Acceptance and Friendship as Moderators: Controlling for Child Characteristics

	Control Variables					
	Original Analyses		Child Temperament		Encoding Skill	
Interaction	**β[a]**	**CI**	**β[a]**	**CI**	**β[a]**	**CI**
Ecological Disadvantage × Peer Acceptance	−1.58**	−2.60– −.55	−1.63**	−2.68– −.58	−1.78***	−2.84– −.71
Marital Conflict × Peer Acceptance	−2.54***	−3.97– −.11	−2.73***	−4.21– −1.24	−3.05***	−4.54– −1.55
Harsh Discipline × Peer Acceptance	−1.18*	−2.31– −.04	−1.37*	−2.59– −.15	−1.10+	−2.30 to .10
Harsh Discipline × Friendship	−.45*	−.98– −.02	−.32	−.78–.14	−.41+	−.86–.04

Note: Ns ranged from 414 to 493.

[a]Reflects the unstandardized β for the relevant Family Adversity × Peer Relationship interaction term. There was a 95% confidence interval (CI) for the unstandardized βs.

*$p < .05$;

**$p < .01$;

***$p < .001$;

+$p < .10$.