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Interparental Conflict, Community Violence, and Child Problems: Making Sense of Counterintuitive Findings

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Abstract

Objective—This research examines children's exposure to community violence as a potential moderator of the link between destructive interparental conflict (IPC) and child adjustment problems. In addition, this research extends the literature by evaluating children's threat appraisals of IPC as a process that might help explain moderator effects.

Method—Participants were 539 mothers and their 7-10 year old children. Children reported on their exposure to community violence and IPC, their threat appraisals of IPC, and their adjustment outcomes. Mothers reported on children's adjustment outcomes as well.

Results—Exposure to community violence mitigated the association between IPC and children's self-reported internalizing problems. Children's threat appraisals helped explain this effect.

Discussion—Exposure to high levels of community violence may weaken the extent to which children feel threatened by IPC, which may attenuate the relation between children's exposure to IPC and their self-reported internalizing problems.

Interparental conflict (IPC) is associated with child adjustment problems, such as anxiety and oppositional/aggressive behavior (see Cummings & Davies, 2010, for a review). Destructive IPC—frequent, intense, or unresolved conflict—is especially problematic for children. The relation between destructive IPC and child adjustment problems is very robust, and it has been documented in families sampled from many different community contexts. Among children, exposure to destructive IPC (especially IPC that includes physical violence) is also correlated with exposure to community violence, such as seeing someone in the neighborhood being beaten up or shot (e.g., Kennedy, Bybee, Sullivan, & Greeson, 2010; Margolin et al., 2009). Like exposure to destructive IPC, exposure to community violence is associated with child adjustment problems (see Foster & Brooks-Gunn, 2009; Lynch, 2003, for reviews). There has been much discussion on how experiences in the community and in the family work in tandem to influence child adjustment (e.g., Bronfenbrenner, 1979; Cicchetti & Lynch, 1993; Finkelhor, Ormond, & Turner, 2007; Margolin et al., 2009). However, it is not yet clear how exposure to community violence might affect the way that children experience IPC. This research examines children's exposure to community violence as a moderator of the link between IPC exposure and child adjustment problems.

Studies examining how exposure to community violence might moderate relations between IPC and child adjustment problems have yielded inconsistent results. Some have found no evidence of moderation (e.g., Kennedy, Bybee, Sullivan, & Greeson, 2009, 2010). Other findings are consistent with cumulative or additive stress models, showing that more stressors (e.g., community violence, violence in the home) are related to greater risk for specific child adjustment problems or the co-occurrence of child problems. For example, Margolin and colleagues (2010) found support for a threshold model, in which the magnitude of the relation between IPC and the number of comorbid child adjustment problems increased after a particular threshold of exposure to adverse events had been reached. Yet others have found greater community violence exposure to *mitigate* relations between IPC and adolescent adjustment difficulties. These findings have emerged most consistently for depression and anxiety (Mrug, Loosier, & Windle, 2008; Mrug & Windle, 2008), but there is also evidence that community violence exposure attenuates associations between IPC and adolescents' externalizing problems (Mrug & Windle, 2010). Community violence exposure also has been found to mitigate the relation between family conflict (which included, but was not limited to, IPC) and adolescent girls', but not boys', depression/anxiety (McKelvey et al., 2011).

That exposure to community violence might lessen the impact of IPC on child adjustment seems counterintuitive, and at least on the surface, inconsistent with other research in the areas of victimization and child psychopathology. For example, research on poly-victimization indicates that children exposed to violence across multiple settings (e.g., home and community) fare worse than those exposed to violence in a single setting (e.g., Finkelhor et al., 2007; Margolin, Vickerman, Oliver, & Gordis, 2010; Mrug et al., 2008). Similarly, research on cumulative risk models for child psychopathology often suggests either additive or multiplicative effects of family and community problems on child mental health (e.g., Appleyard, Egeland, van Dulmen, & Sroufe, 2005; Evans & English, 2002; Forehand, Biggar, & Kotchik, 1998; Rutter, 1979; Sameroff, Seifer, & Todd, 1997). On the other hand, there is also evidence in the cumulative risk literature that the effects of multiple risk factors on child psychopathology level off after a certain point (Morales & Guerra, 2006). In addition, a number of studies have found that some youth in high-crime communities exhibit lower than expected levels of *internalizing* problems, and researchers often explain such findings by hypothesizing that these youth have either habituated or become desensitized to adverse events over time (e.g., Fitzpatrick, 1993; Ng-Mak, Salzinger, Feldman, & Stueve, 2004).

Grych and Fincham's (1990) cognitive contextual framework was developed originally to explain how exposure to IPC might lead to child adjustment problems. It also offers some ideas about how and why exposure to community violence might influence the association between IPC and child adjustment problems. The cognitive contextual framework emphasizes the importance of children's appraisals of IPC, with threat appraisals deemed to be important for internalizing problems in particular. The more that children perceive IPC to threaten themselves, other family members, or the stability of the family, the more likely they are to experience internalizing problems. Numerous empirical studies have documented that threat appraisals do indeed help explain the link between exposure to IPC and child

adjustment problems, particularly internalizing problems (e.g., Grych, Fincham, Jouriles, & McDonald, 2000; Grych, Harold, & Miles, 2003).

The cognitive-contextual framework also focuses on factors that shape how children appraise IPC, such as characteristics of the conflict itself (e.g., frequent, intense, and unresolved conflict is more likely to be appraised as threatening) as well as the context in which the conflict occurs. Evidence is mounting to show that the broader family context (e.g., emotional climate of the family) interacts with characteristics of IPC to influence children's appraisals of the conflict (e.g., DeBoard-Lucas, Fosco, Raynor, & Grych, 2010; Fosco & Grych, 2007). Beyond the family context, the community context and children's exposure to community violence in particular may also influence how children appraise IPC. Presently, however, little is known about how community-level variables might influence the extent to which children appraise IPC as threatening.

Theoretically, there are many ways that children's exposure to community violence might alter their appraisals of IPC. One possibility is that community violence provides a context against which conflict in the home is compared. For example, children who live in very violent neighborhoods may view the real threat to their safety and wellbeing to lie outside, rather than within, the home. As a result, IPC might be perceived as less salient, or more easily dismissed or ignored, and consequently appraised as less threatening. In short, the greater the community violence, the less threatening IPC may seem. This reasoning is consistent with the finding that exposure to community violence *mitigates* relations between IPC and child adjustment problems, particularly internalizing problems (McKelvey et al., 2011 [for females but not for males]; Mrug et al., 2008; Mrug & Windle, 2010). However, it also suggests that the association between IPC and child internalizing problems should weaken or disappear only at relatively high levels of community violence.

A related possibility, which builds upon findings showing that youth in high-crime communities sometimes exhibit lower than expected levels of internalizing problems (Fitzpatrick, 1993; Ng-Mak et al., 2004), involves the principles of habituation/desensitization and stimulus generalization. High levels of exposure to community violence might result in habituation or desensitization, so that community violence becomes less threatening and, consequently, less anxiety provoking over time (after repeated exposures). Furthermore, this habituation or desensitization effect might generalize to other, similar stimuli, such as IPC. The opposite effect also seems possible. That is, community violence might *sensitize* children to violence and conflict in general, making IPC seem more threatening. This reasoning is consistent with findings indicating that exposure to IPC sensitizes children to later conflict, leading them to appraise it as even more threatening and react to it more negatively (e.g., Cummings, Pellegrini, Notarius, & Cummings, 1989; Grych, 1998). If sensitization operates across settings or types of conflict, exposure to community violence could presumably *potentiate* the relation between IPC and child adjustment problems.

This study examines exposure to community violence as a potential moderator of the link between the destructiveness of IPC and child adjustment problems. We hypothesized that IPC and exposure to community violence would both correlate positively with child

internalizing and externalizing problems. Furthermore, consistent with research on poly-victimization, we hypothesized additive effects for IPC and community violence. That is, when considered simultaneously, we expected that both would relate to child adjustment difficulties. We also evaluated whether exposure to community violence moderates the link between IPC and child internalizing and externalizing problems, but given the inconsistent findings in the literature regarding moderating effects, we offered no hypotheses regarding their direction. In examining the moderating effects, we considered several additional possibilities. First we examined whether exposure to community violence might moderate the relation between IPC and children's threat appraisals. Second, given that threat appraisals have been found to mediate the relation between IPC and child internalizing problems, we evaluated whether the moderated effect of IPC on child internalizing problems would be partially transmitted through (mediated by) children's threat appraisals. Finally, because findings in this literature sometimes vary as a function of demographic variables (e.g., child sex, McKelvey et al., 2011), we explored whether demographic variables moderated effects of community violence, IPC, or their interaction, on child adjustment problems.

Method

Participants

Families were recruited as part of a larger study on IPC and child adjustment. The larger study included a domestic violence shelter sample and a community sample drawn from a large urban area in Texas, USA. The community sample forms the basis for the present study. Families in the community sample were recruited from randomly drawn lists of phone numbers within the census tracts in which the shelter families had lived prior to shelter entry. Families were recruited by inviting mothers in the families to participate in a phone screening for a longitudinal study on families and family conflict. Families were eligible if the mother had a biological child between the ages of 7 and 10 years, the child had not been previously diagnosed with mental retardation or developmental delay, both the mother and child spoke English well enough to take part in an interview conducted in English, and the mother had been in a relationship with a male intimate partner for at least five of the six months prior to the screening. If there was more than one eligible child in the family, the oldest was invited to participate.

Of the 1,099 eligible families, 539 (49%) completed the assessment; this participation rate is comparable to that of other research examining interparental conflict in a community sample, in which both a parent and child are required to visit a lab to participate (e.g., Fosco & Grych, 2008). On average, children (277 male, 262 female) were 8.5 ($SD = 1.16$) years old, and the sample of children was 49.5% White, 26.3% Black, 14.3% Hispanic, and 9.8% multiethnic or "other." Mothers, on average, were 36.2 ($SD = 6.45$) years old and completed 14.5 ($SD = 2.59$) years of education; mothers' male partners, on average, were 38.6 ($SD = 7.46$) years old and completed 14.2 ($SD = 2.96$) years of education. In 91.3% of the families the mothers and the male partners were married, in 8.2% of the families they were cohabiting but not married, and in 0.5% of the families, they were neither married nor cohabiting. The average length of the relationship between the mother and her husband/male partner was 13.3 ($SD = 6.42$) years, with 95.0% in a relationship for 3 years or more,

and 99.6% in a relationship for one year or more. The partner was the child's biological father in 78.7% of the families, and the child's step father in 12.6% of the families. The median family income was \$3,900 per month, with 22.3% of families earning less than \$30,000 annually and 56.1% of families earning less than \$50,000 annually.

Assessment Procedures

The larger study was approved by the institutional review board of the institution where the research was conducted. Mothers and children completed assessments in separate rooms, and assessment staff members read measures aloud to mothers and to children. All measures were completed in reference to the 6-month period preceding the assessment.

Measures

Interparental conflict—Children completed the 11-item conflict properties subscale of the Children's Perception of Interparental Conflict Scale for Young Children (CPIC-Y; Grych, 2000). The subscale assesses the extent to which children perceive interparental conflict to be destructive (frequent, intense, and unresolved). Sample items include “_(what the child calls the mother's partner) and your mom have broken or thrown things during an argument” and “Even after _ and your mom stop arguing they stay mad at each other.” Responses were scored dichotomously (0 = *no*, 1 = *yes*). The subscale correlates with mothers' reports of interparental psychological and physical aggression on the Conflict Tactics Scales (McDonald & Grych, 2006). Coefficient alpha in the present sample was .62.

Community violence—Children reported their exposure to community violence on a 9-item scale derived from the measure Children's Exposure to Community Violence (Richters & Martinez, 1990). Children indicated on a 4-point scale (0 = *never*, 1 = *once or twice*, 2 = *sometimes*, 3 = *all the time*) how often they had witnessed violent or dangerous acts in their neighborhoods. Sample items include hearing gunshots, seeing someone arrested, and seeing someone beaten up. Coefficient alpha in the present sample was .73.

Children's threat appraisals—Children completed the threat subscale of the Children's Perception of Interparental Conflict Scales for Young Children (CPIC-Y; Grych, 2000). The subscale includes 6 dichotomously-scored items (0 = *no*, 1 = *yes*) that measure children's fears and worries in response to IPC, such as “When _ (what the child calls the mother's partner) and your mom argue you are afraid something bad will happen” and “When _ and your mom argue you worry about what will happen to you.” In addition, children completed two additional items indicating how often (0 = *never*, 1 = *once in a while*, 2 = *sometimes*, 3 = *all the time*) they feel “scared when mom and (mother's partner) have arguments or fights” or “worried when mom and (mother's partner) have arguments or fights.” Total scores for the CPIC-Y threat scale and the additional 2-item measure were converted to z-scores and summed to form a single index of threat appraisals. Coefficient alpha across the 8-items in present sample was .81.

Child internalizing and externalizing problems—Children completed the 28-item Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978), indicating whether each item was true for them or not (0 = *no*, 1 = *yes*). Sample items

include “I am nervous,” and “I am afraid of a lot of things”. The RCMAS has good test-retest reliability (Reynolds & Paget, 1981) and correlates with measures of depression and anxiety (Muris, Merckelbach, Ollendick, King, & Bogie, 2002). Coefficient alpha in the current sample was .86.

Children reported on their externalizing problems on the 9-item Children's Disruptive Behavior Scale (CDBS; McDonald & Jouriles, 1999). Responses are made on a 3-point scale (1 = *none of the time*, 2 = *some of the time*, 3 = *all of the time*), with higher scores reflecting more externalizing problems. Sample items include “Do other people think that you don't do what you are told to do at home or don't follow the rules?” and “Do other people think you break other people's things on purpose?” The CDBS correlates with mothers' reports on the CBCL externalizing problems scale (McDonald & Grych, 2006; Skopp, McDonald, Jouriles, & Rosenfield, 2007). Coefficient alpha for the present sample was .75.

Mothers completed the internalizing and externalizing problems subscales of the Child Behavior Checklist (CBCL; Achenbach, 1991). The CBCL is a widely used measure of adjustment difficulties with well-demonstrated psychometric properties (Achenbach, 1991). For each item, mothers indicate the extent to which a given attribute (e.g. “complains of loneliness”) is true of their child in the past 6 months. Responses are made on a 3-point scale (0 = *not true*, 1 = *sometimes or somewhat true*, 2 = *very true or often true*). T-scores were used in the analyses. Coefficient alpha in this sample was .81 for internalizing problems and .83 for externalizing problems.

Results

Means, standard deviations, and correlations among the study variables are presented in Table 1. Nineteen percent of the children in the sample reported on the CPIC-Y that they had been exposed to hitting or pushing during a parental argument, and 15% indicated that one or the other parent had broken or thrown something during a parental argument. Approximately two-thirds of the children (67%) reported exposure to community violence: 25% reported seeing someone “beaten-up” and 24% reported having heard gunshots. IPC and community violence were both correlated positively to our four measures of child adjustment, with one exception: IPC did not correlate with mother reports of child internalizing problems.

Community Violence, IPC, and Child Adjustment: Additive and Moderator Effects

To investigate whether IPC and community violence exert additive effects on child adjustment problems, and whether community violence moderated the relation between IPC and adjustment problems, we performed an omnibus multivariate multiple regression analysis with the four measures of child adjustment problems as dependent variables, followed by separate univariate analyses. The predictors in these analyses were exposure to community violence, IPC, and their interaction. Exposure to community violence and IPC scores were converted to z-scores and centered at their respective means prior to analysis. Child age, sex, ethnicity, and mothers' education were included as control variables in all the analyses. Although child age and sex are accounted for in the CBCL T-scores, we

controlled for them because they were related to the other measures of child adjustment problems: Child age ($r = -.09, p < .05$) and sex ($r = -.13, p < .01$) were related to child-reported internalizing problems, and child sex was related to child-reported externalizing problems ($r = .09, p < .05$), with younger children reporting greater internalizing problems than older children, girls reporting greater internalizing problems than boys, and boys reporting greater externalizing problems than girls. Ethnicity (white/non-Hispanic, African-American, Hispanic, and other/biracial) was coded with three dummy variables, each contrasting one of the 3 minority groups to the white/non-Hispanic group. The Hispanic and “other” groups did not differ from the white group in any of the analyses, so these dummy variables were dropped.

The multivariate results indicated that exposure to community violence, IPC, and their interaction were all related to child adjustment problems, Wilk's $\Lambda = .94, F(4,526) = 7.60, p < .001$, partial $\eta^2 = .06$; Wilk's $\Lambda = .91, F(4,526) = 13.26, p < .001$, partial $\eta^2 = .09$; and Wilk's $\Lambda = .97, F(4,526) = 3.73, p = .005$, partial $\eta^2 = .03$, respectively. The results of the univariate analyses, summarized in Table 2, indicate that exposure to community violence was positively associated with each of the four measures of child adjustment problems. IPC was related to children's reports of internalizing and externalizing problems and to mothers' reports of externalizing problems, but was only marginally associated with mothers' reports of internalizing problems. Finally, exposure to community violence moderated the relation between IPC and one of the measures of children's adjustment problems: children's reports of internalizing problems. The sign of the coefficient for the interaction effect indicates that the relation between IPC and children's reports of internalizing problems decreases as exposure to community violence increases.

To better understand the nature of the interaction, we plotted the simple slopes of the relation between IPC and children's reports of internalizing problems. We followed the approach outlined by Akin and West (1991) to derive model-based estimates of the relation between IPC and child reports of internalizing problems at different levels of community violence. To determine the levels of community violence for which we would examine the simple slopes, we examined the distribution of scores on the measure. The scores ranged from 0-27 ($M = 2.65, SD = 3.40$), with almost a third of the sample (32.7%) reporting no exposure. Most scores (84%) were 1 standard deviation (SD) above the mean, and 95.5% were 2 SD above the mean. We reasoned that the slope for those with no exposure to community violence is a theoretically meaningful baseline from which to compare those with average and relatively high levels of exposure. We thus plotted the relation between IPC and children's reports of internalizing problems at three levels of exposure to community violence: no exposure, the mean level of exposure, and 1 SD above the mean (see Figure 1). For children who reported no exposure to community violence, the magnitude of the relation was $b = 2.09, t(529) = 6.26, p < .001, sr^2 = .07$. For those at the mean level of exposure, it was $b = 1.58, t(529) = 6.09, p < .001, sr^2 = .07$, and for those at 1 SD above the mean for exposure it was $b = 0.93, t(529) = 2.56, p = .010, sr^2 = .01$.

We also calculated the region of significance for this relation. The region of significance reflects the level of community violence exposure at which the relation between IPC and children's reports of internalizing problems is statistically significant. Employing the

Johnson-Neyman technique (Pedhazur, 1997), this value is 6.8 or below. Thus, for exposure scores ≤ 6.8 (approximately 1 *SD* above the mean), the relation between IPC and children's reports of internalizing problems is statistically significant, and for scores above that (the highest 12% in our sample), it is not.

To further understand the form of the interaction, we examined IPC as the moderating variable, rather than community violence. That is, we considered the relation of community violence to children's reports of internalizing problems at three different values of IPC: no IPC, the mean level of IPC ($M = 3.86$), and high IPC ($+1\ SD = 6.31$). We again followed the approach outlined by Akin and West (1991) to derive model-based estimates of the relation between community violence and children's reports of internalizing problems at these three levels of IPC. Results showed that community violence was related to internalizing problems among children in families with no IPC, $b = 2.06$, $t(529) = 3.70$, $p < .001$, $sr^2 = .02$, and families with mean levels of IPC, $b = 1.03$, $t(529) = 3.70$, $p < .001$, $sr^2 = .02$, but not families with high IPC, $b = 0.37$, $t(529) = 1.18$, $p = .238$, $sr^2 = .00$.

Children's Threat Appraisals

We hypothesized that children's threat appraisals would help explain the moderating effect of community violence exposure on the relation between IPC and child internalizing problems. The analytic model testing this hypothesis is illustrated in Figure 2 (the control variables [child age, sex, ethnicity, and mother's education] were included in the path analyses for the “a” and “b” paths, but are not shown in the figure for simplicity). Exposure to community violence, IPC, and their interaction (the “ a_n ” paths in the model) were all associated with children's threat appraisals, $b = 0.29$, $t(529) = 3.90$, $p < .001$, $sr^2 = .02$; $b = 0.69$, $t(529) = 10.05$, $p < .001$, $sr^2 = .15$; and $b = -0.17$, $t(529) = 2.46$, $p = .014$, $sr^2 = .01$, respectively. Consistent with the results for children's reports of internalizing problems, the sign of the coefficient for the interaction term indicates that the effect of IPC on children's threat appraisals decreased as community violence exposure increased. Children's threat appraisals, in turn, were positively related to their reports of internalizing problems (the “b” path in the model), after controlling for exposure to community violence, IPC, and their interaction, $b = 1.58$, $t(529) = 10.51$, $p < .001$, $sr^2 = .15$. We tested the statistical significance of each indirect pathway with the asymmetric distribution of products test using the program PRODCLIN (MacKinnon, Fritz, Williams, & Lockwood, 2007). This test has more power and more appropriate Type 1 error rates than most approaches to testing mediation (e.g., Baron & Kenny, 1986). PRODCLIN calculates the asymmetric 95% confidence intervals (CIs) for the indirect effects ($a*b$); CIs that do not include 0 are considered statistically significant. We also computed the proportion of the effect of each independent variable (IPC, exposure to community violence, and their interaction) on children's internalizing problems accounted for by children's threat appraisals (proportion mediated [P_M]). Threat appraisals accounted for a large and statistically significant proportion (41% to 69%) of the relation of all three independent variables with child reports of internalizing problems: IPC, $a*b = 1.09$, 95% CI: [.81, 1.40], $P_M = 69.0\%$; exposure to community violence, $a*b = 0.46$, 95% CI: [.23, .71], $P_M = 44.7\%$; and Community Violence $\times$ IPC, $a*b = -0.27$, 95% CI: [-.49, -.06], $P_M = 41.3\%$.

Exploratory Analyses

We next explored whether demographic variables moderated the effect of community violence, IPC, or their interaction, on child adjustment problems. In addition to child sex, ethnicity, and age, and mothers' years of education, which had been included as control variables in all the previous analyses, we also examined family income as a potential moderator. We conducted five multivariate multiple regression analyses, one for each demographic variable that was tested as a potential moderator. Each analysis included all of the dependent variables and predictors in the original omnibus multivariate model, plus the interactions between the potential moderator and community violence, IPC, and the interaction of community violence and IPC. None of the demographic variables functioned as moderators in any of these analyses, all $ps > .10$.

We also considered whether habituation or desensitization to either community violence or IPC might have occurred with children's reports of their internalizing problems. If so, this could be manifest by a curvilinear relation of community violence or IPC with child adjustment, in which lower levels of either or both predictors are strongly related to adjustment but higher levels are weakly related to adjustment. To test this possibility, we added quadratic terms for both community violence and IPC to the regression model predicting children's reports of their internalizing problems. Although there was no evidence of a curvilinear relation for IPC ($p = .397$ for the quadratic term), there was for community violence exposure ($b = -.34$, $t(527) = 2.79$, $p = .005$). As can be seen in Figure 3, the effect of community violence exposure on children's reports of internalizing problems is less potent once community violence is relatively high. Given this, we recomputed our previous analyses, adding this quadratic term to the models. There were no differences in the results for any of the analyses.

Discussion

This study partially replicates the seemingly counterintuitive finding that exposure to community violence mitigates the relation between exposure to IPC and children's adjustment problems. Specifically, the relation between exposure to IPC and children's reports of their internalizing problems is lower when exposure to community violence is higher. This general pattern has now been documented in at least four separate investigations (this one plus McKelvey et al. [for females], 2011, Mrug et al., 2008, and Mrug & Windle, 2010). It is important to acknowledge, however, that the effect did not emerge for mothers' reports of child internalizing problems, or for mothers' or children's reports of child externalizing problems. In addition to the partial replication, our results also extend the literature by providing initial evidence for the role of children's threat appraisals in explaining the moderating effect. Threat appraisals accounted for a substantial proportion of the effect of community violence exposure on the relation between IPC and child internalizing problems.

One interpretation of our findings is that when exposed to higher levels of community violence, children perceive IPC as less threatening in comparison to what they see in their neighborhoods. That is, for children in dangerous communities, even a volatile and acrimonious home environment may feel non-threatening in comparison (Fick, Osofsky, &

Lewis, 1997). However, because our data did not allow us to examine which type of exposure, community violence or IPC, was more threatening to children, we can only speculate about this. Our replication of prior findings showing a curvilinear relation of child internalizing problems with community violence (Fitzpatrick, 1993; Ng-Mak et al., 2004) is consistent with theory that children may habituate or become desensitized to community violence once it reaches a certain threshold. Further, our moderator finding is consistent with the idea that this habituation or desensitization effect may extend beyond community violence, to also encompass IPC. That is, children who are exposed to high levels of community violence may come to view violence and conflict in the home as more normative. This process may be accompanied by changes in children's appraisals of IPC (e.g., hostility between parents is not viewed as very threatening), as well as other processes, such as their biological responses to it. Consistent with this, children exposed to higher levels of community violence have been found to be less physiologically aroused by subsequent exposure to violent media compared to children with less community violence exposure (Cooley-Quille, Boyd, Frantz, & Walsh, 2001).

Although community violence moderated the relation between exposure to IPC and children's reports of internalizing problems, it did not moderate the relation for externalizing problems. Prior studies examining whether there are community and family violence interaction effects on child outcomes are sparse, but moderating effects have emerged for externalizing problems as well as internalizing problems (e.g. Mrug & Windle, 2010). Mrug and colleagues' research on this topic examined slightly older children (12-13 year olds) than those in our sample. Perhaps moderating effects on externalizing problems do not emerge until children are older and begin to spend more time away from parents and with their friends, out in the community. The violence they see or experience in the community may be more salient to them for personal reasons (they may have to protect themselves, or navigate potentially dangerous situations) or social reasons (they want to fit in with certain groups), and it may exert proximal effects on adjustment that override those of IPC. Future research is needed to help clarify precisely how these forms of violence exposure operate in combination to affect children's lives.

It is not clear why the moderating effect emerged for children's reports, but not mothers' reports, of internalizing problems. The child and mother measures differed: Children reported on their anxiety symptoms, whereas mothers reported on children's internalizing problems more broadly. Perhaps the moderating effect is specific to anxiety symptoms or to a narrow range of internalizing problems that includes anxiety symptoms. Alternatively, as others have concluded, perhaps children are simply better reporters of their internal states than are their mothers (Edelbrock, Costello, Dulcan, Conover, & Kalas, 1986; Herjanic & Reich, 1982; Kolko & Kazdin, 1993). It should be noted that the correlation between the mother and child measures of internalizing problems in our sample was small ($r = .09$). This is consistent with the above reasoning—as well as with much of the literature on measuring child adjustment problems (Achenbach, McConaughy, & Howell, 1987; Phares, Compas, Howell, 1989). Unfortunately, our data cannot disentangle these rater and specificity-of-measurement questions.

It is also important to note that both community violence and IPC were positively related to most of our measures of child adjustment problems in our analyses, and that their effects were additive. This is generally consistent with poly-victimization and cumulative risk models. What our findings highlight, however, is that the additive effects occurred at relatively low and average levels of community violence (with regard to our sample). When community violence exposure is relatively high (e.g., the top 12% in our sample), a cumulative risk model may no longer apply—additional risk factors (IPC, in this case) may no longer predict increased adjustment problems. This finding may help explain some of the discrepancies in the literature. For example, in some studies perhaps the level of community violence did not reach the threshold beyond which it would mitigate the effects of IPC. Unfortunately, the measures of community violence across studies that have evaluated this moderator effect differ, so this explanation cannot be evaluated with existing data.

The level of IPC might also be important for understanding some of the discrepancies in this literature. Notably, community violence exposure did not relate to child problems in families with high levels of IPC. Some of the investigators who have failed to find evidence for moderation (i.e., community violence moderating the association between IPC and child problems) specifically recruited families that experienced recent physical intimate partner violence—often from agencies, such as domestic violence shelters (Kennedy et al., 2009, 2010). Given the severity of the IPC they have often seen and heard, children in these families may not perceive it to be less threatening, in comparison to community violence. Thus, mitigating effects of community violence may not emerge. In contrast, those who have found community violence exposure to *mitigate* relations between IPC and child adjustment problems have recruited samples from the general community (present study; Mrug et al., 2008; Mrug & Windle, 2010). Others have also speculated that lack of convergence in the literature on youth exposure to different types of violence may be due, in part, to differences in samples and recruitment strategies across studies (McCart et al., 2007).

Several study limitations are worth noting. First, our data are cross-sectional, thus it is impossible to draw firm conclusions about causality or the temporal ordering of the variables in this study. For example, it is possible that IPC, community violence, and child adjustment are not causally linked, but rather, they are correlated with one another by virtue of their association with another, unmeasured variable. Related to this, an alternative, statistically-equivalent explanation of the observed moderating effect is that IPC moderates the relation between community violence and child internalizing problems, with the relation diminishing as IPC increases (see McKelvey et al., 2011 for an example of this interpretation). This would imply that exposure to community violence engenders less threat (and therefore lower levels of internalizing problems) among children exposed to higher levels of IPC. Indeed, IPC and community violence likely operate as dynamic, nonlinear forces, with each influencing the other's effects on children, and with the influences of each ebbing and flowing over time and across stages of child development.

Second, the extent to which our findings are generalizable to a nationally representative sample or other samples comprised primarily of urban youth is not clear. Indeed, the families who agreed to participate in this research (49% of those who were eligible) may

have differed from those who opted not to participate on some important variable or variables. Third, the moderator finding, and the finding that threat appraisals accounted for that moderator finding, were based on child report data alone. Although children's perceptions of IPC and community violence, and the threat they engender, may be particularly relevant to their adjustment outcomes, shared method variance may have inflated some of the associations. Finally, we only investigated one possible process (threat appraisals) to help explain the interaction between children's exposure to community violence and IPC in predicting child adjustment problems. Other processes (e.g., physiological habituation) may be operating as well.

A couple of potential study implications are also worth noting. First, the finding that exposure to IPC and community violence each contributed additively to child adjustment problems adds to a burgeoning corpus of research pointing to the need for researchers and clinicians to assess children's violence exposure broadly across multiple types and contexts. Second, our findings point to the importance of children's threat appraisals, as well as several other potential processes, for explaining why children's exposure to high levels of community violence may mitigate the effects of exposure to IPC. If children do indeed habituate or become desensitized to other conflict or violence in general, as a result of their exposure to community violence, this may have a variety of adverse consequences that warrant attention (e.g., greater acceptance of violence; diminished ability to recognize and/or appreciate danger in the environment).

In sum, we partially replicated previous findings that community violence mitigates the association between children's exposure to IPC and their internalizing problems. Our findings emerged using a large, ethnically diverse sample and after accounting for demographic factors. We were also able to extend the literature by exploring children's threat appraisals as a possible explanation for the moderator effect, an important step in developing theories to explain it. Our results indicate that threat appraisals play an important role in explaining the mitigating effects of community violence exposure on the relation between IPC and children's internalizing problems.

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Figure 1.
The relation between interparental conflict and children's reports of internalizing problems as a function of exposure to community violence.

Figure 2.

Analytic model and results of analyses examining the role of children's threat appraisals in explaining the moderating effect of community violence exposure on the relation between interparental conflict and children's internalizing problems. Dashed gray lines indicate paths that are not statistically significant; black solid lines reflect paths that are statistically significant. * $p < .05$, *** $p < .001$

Figure 3.

Curvilinear relation between community violence exposure and child reports of internalizing problems (RCMAS).

Table 1

Means, standard deviations, and correlations of the study variables

Variable	1	2	3	4	5	6	7	8	9	10	Mean (SD)
1. Interparental conflict	-										3.86 (2.45)
2. Exposure to community violence	.20	-									2.65 (3.40)
3. Threat appraisals	.42	.21	-								.00 (1.72)
4. Internalizing problems (RCMAS)	.27	.18	.49	-							12.40 (6.23)
5. Internalizing problems (CBCL)	.07	.09	.08	.09	-						55.10 (9.16)
6. Externalizing problems (CDBS)	.27	.27	.30	.42	.16	-					3.06 (2.90)
7. Externalizing problems (CBCL)	.16	.17	.10	.09	.63	.23	-				55.32 (9.84)
8. Child age	-.03	-.06	-.04	-.09	.01	.05	-.07	-			8.47 (1.16)
9. Child sex	-.03	.02	-.10	-.13	.00	.09	-.05	-.03	-		1.51 (0.50)
10. Child race	.06	.15	.00	.10	-.13	.06	-.08	.00	.01	-	0.26 (0.44)
11. Mother education	-.15	-.20	-.09	.01	.06	-.11	-.03	-.02	-.04	-.03	14.54 (2.59)

p .05 for correlations .09.

Note. Child sex: 1 = female, 2 = male; Child ethnicity: 1 = African American. 0 = all other ethnicities

Children's exposure to community violence as a moderator of the association between interparental conflict and children's adjustment problems.

Table 2

Variable	Child reports of adjustment problems			Mother reports of adjustment problems		
	—Internalizing— b(SE)	partial η^2	—Externalizing— b(SE)	—Internalizing— b(SE)	partial η^2	—Externalizing— b(SE)
Child age	-.46 (.25)	.01	.43 (.25)	.20 (.39)	.00	-.51 (.42)
Child sex	-.80 (.25)	.02	.60 (.25)	.02 (.39)	.00	-.49 (.42)
Mothers' education	.49 (.26)	.01	-.23 (.26)	.80 (.40)	.01	.13 (.43)
Child race/ethnicity	.40 (.26)	.01	.12 (.25)	-.31 (.90)	.02	-.107 (.42)
Community violence	1.03 (.28)	.03	1.23 (.27)	1.02 (.43)	.01	1.43 (.46)
Interparental conflict	1.58 (.26)	.07	1.38 (.26)	.66 (.40)	.01	1.32 (.43)
Community Violence $\times$ Interparental Conflict	-.65 (.26)	.01	.41 (.25)	-.00 (.40)	.00	.29 (.42)

Note. Child sex code: 1 = female, 2 = male; Child ethnicity code: 1 = African American, 0 = all other ethnicities. For t-tests examining statistical significance of regression parameter estimates, $df = 529$.

* $p < .05$
 ** $p < .01$
 *** $p < .001$.