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Harsh Parenting As a Potential Mediator of the Association Between Intimate Partner Violence and Child Disruptive Behavior in Families With Young Children

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Abstract

Young children living with intimate partner violence (IPV) are often also exposed to harsh parenting. Both forms of violence increase children's risk for clinically significant disruptive behavior, which can place them on a developmental trajectory associated with serious psychological impairment later in life. Although it is hypothesized that IPV behaviors may *spillover* into harsh parenting, and thereby influence risk for disruptive behavior, relatively little is known about these processes in families with young children. The current study examines the overlap of the quality and frequency of psychological and physical forms of IPV and harsh parenting, and tests whether harsh parenting mediates the relationship between IPV and child disruptive behavior in a diverse cross-sectional sample of 81 children ages 4 to 6 years. Results suggest that mothers reporting a greater occurrence of psychologically aggressive IPV (e.g., yelling, name-calling) more often engage in psychological and physical aggression toward their children (odds ratios [ORs] = 4.6–9.9). Mothers reporting a greater occurrence of IPV in the form of physical assault more often engage in mild to more severe forms of physical punishment with potential harm to the child (ORs = 3.8–5.0). Psychological and physical forms of IPV and harsh parenting all significantly correlated with maternal reports of child disruptive behavior (r = .29–.40). Psychological harsh parenting partially mediated the association between psychological IPV and child disruptive behavior. However, a significant direct effect of psychological IPV on preschool children's disruptive behavior remained. Implications for child welfare policy and practice and intervention, including the need for increased awareness of the negative impact of psychological IPV on young children, are discussed.

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Keywords

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Intimate partner violence (IPV) and harsh parenting, including behavior that rises to the level of child maltreatment, commonly co-occur and each has damaging effects on children's emotional and behavioral development (Briggs-Gowan, Carter, & Ford, 2012; Edelson, 1999; Hartley, 2002; Herron & Holtzworth-Munroe, 2002; Simmons, Lehmann, & Dia, 2010). Children exposed to IPV are more likely to experience harsh parenting, such as corporal punishment and verbal aggression (Holden & Ritchie, 1991; Levendosky, Lynch, & Graham-Bermann, 2000; Simmons et al., 2010), as well as more severe forms of harsh parenting and maltreatment that lead to involvement with child protective services (CPS; Appel & Holden, 1998; Colletti et al., 2008; Hartley, 2002; Nelson & Gold, 2012; Streisand, Braniecki, Tercyak, & Kazak, 2001). Both forms of violence increase children's risk for clinically significant disruptive behavior (Evans, Davies, & DiLillo, 2008; Ferguson, 2013; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). However, less is known about the specific overlap of psychological and physical forms of IPV and harsh parenting and risk for child disruptive behavior, especially in young children.

One explanation for the substantial overlap between IPV and harsh parenting is a *spillover* mechanism, whereby conflictual behavior between parents *spills over* into their behaviors toward their children, with an increase in parenting strain and harsh parenting practices (Graham-Bermann & Levendosky, 1998; Holden & Ritchie, 1991; Levendosky, Lynch, & Graham-Bermann, 2000; Simmons et al., 2010). Examples of spillover include a mother generalizing the negative affect experienced in her conflictual relationship with her partner to her relationship with her child, responding to her child in similarly harsh ways, a mother becoming too emotionally drained by her conflictual relationship with her partner and having too few personal resources to respond to her child in sensitive ways, or a mother developing psychological health problems that then compromise parenting (Graham-Bermann & Levendosky, 1998). A number of studies of school-age children provide evidence of spill-over. Several studies have shown heightened risk for harsh or abusive parenting by both male and female perpetrators of IPV (Edelson, 1999; Hartley, 2002; Herron & Holtzworth-Munroe, 2002; Simmons et al., 2010); less optimal parenting in maternal victims of IPV, including more physical/verbal aggression and conflict with their children (Holden & Ritchie, 1991; Margolin, Gordis, Medina, & Oliver, 2003); and various indicators of less optimal parenting, including inconsistent parenting, less maternal warmth/support, and ineffective parenting practices in maternal victims (e.g., permissiveness, control tactics; Holden & Ritchie, 1991; Levendosky & Graham-Bermann, 2000; McCloskey, Figueredo, & Koss, 1995; Rossman & Rea, 2005).

Although this work begins to support a spillover model, there is a gap in knowledge of these processes in young children and about spillover of specific types of IPV to parenting behavior. For example, do both physical and psychological forms of IPV spillover to parenting behavior? If so, is there any specificity to the patterns, with physical begetting physical and psychological begetting psychological? As a first step in elucidating these

processes, we draw on cross-sectional data from a methodological substudy to examine the association between psychological and physical forms of IPV and harsh parenting in a sample of young children. In contrast to a majority of the studies on this topic and in this age group, we present data at the level of broad-based categories reflecting the presence of "any" IPV and harsh parenting, as well as behaviors captured at the item-level. By examining and presenting the individual behaviors that constitute both psychological and physical IPV, as well as psychologically and physically harsh parenting (which at the extreme may constitute maltreatment) we hope to promote a deeper understanding of the context of violent behavior within families with young children.

A separate question is whether harsh parenting serves as a mediator between children's exposure to IPV and development of behavior problems. Disruptive behavior in early childhood is a defining feature of many common childhood-onset disorders (Krieger, Leibenluft, Stringaris, & Polanczyk, 2013) and predicts severe forms of psychopathology across the life span (Karalunas et al., 2014; Leibenluft & Stoddard, 2013). A limited number of studies support a mediation model. One prospective study of young children and their mothers identified spanking at 3 years of age as a partial mediator of the relationship between IPV when children were in their first year of life and externalizing behavior problems at 5 years of age (Huang, Wang, & Warrener, 2010). In another study, mothers who were victims of IPV were observed to display more hostility and disengagement and less warmth and sensitivity toward their infants than non-victimized mothers, and these behaviors partially mediated the relationship between IPV and subsequent externalizing behavior in toddlerhood (Levendosky, Leahy, Bogat, Davidson, & von Eye, 2006). More evidence of mediation comes from a study of infants and toddlers demonstrating full mediation of IPV and effortful control in young children by sensitive parenting (Gustafsson, Cox, & Blair, 2012).

However, not all studies have supported full mediation. Two supported only partial mediation (Huang et al., 2010; Levendosky et al., 2006), suggesting that exposure to IPV confers risk for developing disruptive behavior problems above and beyond that conferred by its influence on harsh parenting. Another study failed to find significant mediation of harsh disciplinary practices on violence exposure and young children's behavior problems (Mitchell, Lewin, Rasmussen, Horn, & Joseph, 2011). Direct effects could be explained by sensitization models, whereby increased exposure and severity of family conflict intensifies children's emotional and behavioral reactivity to subsequent stressors (Goeke-Morey, Papp, & Cummings, 2013; Grasso, Ford, & Briggs-Gowan, 2013) or social learning models, whereby children who witness IPV may adopt aggressive behavior through modeling (Crick & Dodge, 1996). Thus, additional research is needed to extend our understanding of whether psychological and physical forms of harsh parenting and IPV confer differential risk of child disruptive behavior in young children.

To this end, the purpose of the current study was to examine the overlap between specific forms of psychological and physical IPV and mothers' harsh parenting behaviors and their relationship to child disruptive behavior in a sample of mothers and their preschool-age children. Drawing upon this literature, three hypotheses were tested:

Hypothesis 1 (H1): Psychological and physical IPV would be positively associated with mothers' self-reported psychological and physical harsh parenting behaviors toward their children.

Hypothesis 2 (H2): Both psychological and physical harsh parenting and IPV would be positively associated with disruptive behavior in children.

Hypothesis 3 (H3): Psychological and physical harsh parenting would mediate the relationship between psychological and physical IPV, respectively, and child disruptive behavior.

Enhanced understanding of the potential spillover effects of IPV into parenting and ultimately early disruptive behavior could aid efforts to deflect maladaptive developmental trajectories that result from violence exposure at this young age.

Method

Participants

Participants in the current analyses were randomly selected from a large (N = 1,491) sample of preschool-age children recruited in five pediatric primary care clinics in the greater Chicago area. The larger study was designed to investigate preschool disruptive behavior within a normative context (see Wakschlag et al., 2012). Parents eligible for the larger study had a 3- to 5-year-old child, were the child's legal guardian, and could complete the survey in English or Spanish. The sample was also stratified to achieve roughly even distributions with respect to poverty status and race/ethnicity (non- Hispanic White, African American/ Black, and Hispanic). Parents were recruited in pediatric primary care waiting rooms by research assistants who approached all parents who were accompanied by a young child. A total of 4,136 were approached for screening and 3,960 (96%) agreed to the screen. Eligibility criteria were met by 1,814 families. A total of 1,605 consented to participate and 1,517 completed the initial survey (84% of all eligible).

A subsample of 120 families was randomly selected to participate in a methodological substudy designed to investigate the psychometric properties of measures used in the larger sample when employed with children at-risk of violence exposure. Eligibility for the substudy was restricted to biological mothers who had completed the initial survey in English, and had a partner at the time of the initial survey. By design, 50% of the subsample had reported physical IPV or threatening behaviors in their relationship with their partner in the preceding year in the initial survey and 50% had not. IPV was assessed with a four-item screener concerning physical violence and threats between partners. Each item began with *Have you/your partner* followed by a descriptor (e.g., *pushed, grabbed, or shoved … Threatened to hit or throw something at partner/you*). Items were similar in content to items from the Conflict Tactics Scale (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) and rated on a 6-point scale (0 = *never*, 1 = *seldom*, 2 = *occasionally*, 3 = *frequently*, 4 = *very often*, 5 = *always*). Parents who reported any IPV in their relationship (1 or higher) were eligible. The prevalence of IPV in the initial sample was approximately 21%.

Of the 120 children sampled, 2 were later determined to be ineligible for this substudy, 1 due to completing the original survey multiple times, and 1 due to learning the child was diagnosed with autism/pervasive developmental disorder (PDD). Of the remaining 118 eligible families, 85 participated (72%). The 33 remaining families did not participate. Only 5 of these formally declined. Remaining families were either lost to follow-up or did not return surveys. After participation, four surveys were excluded (one due to missing data on key study variables, three because the parent erroneously completed the survey about a different child). The analyzed sample ($n = 81$) was similar to those who did not participate or were excluded from analyses ($n = 39$) in terms of poverty status, interparental violence exposure, child age, and child gender (χ^2 ranged from 0.04 to 2.89, *ns*). They were also similar in terms of overall disruptive behavior reported on the multidimensional assessment of disruptive behavior (MAP-DB; $t = 1.11$, *ns*). Parents who participated ($M = 31.1$, $SD = 5.4$), however, were slightly older than those who did not participate ($M = 28.8$, $SD = 4.5$), $t = -2.21$, $p = .026$.

The mean age of child participants was 4.74 years ($SD = 0.91$) and most were boys ($n = 50$, 61.7%). Some children had turned 6 years of age by the time of the substudy. The sample was racially and ethnically diverse (39% European American, 28% African American, 32.9% Hispanic). All respondents were biological mothers. Five percent of parents had not attained a high school education, 17.5% had earned a high school diploma, 52.5% had some education beyond high school, and 25.0% had completed college or beyond. All parents had a partner within the year prior to the initial survey and most, 91.4%, still had a current spouse/partner. Sixty-seven percent were cohabitating (married or living with) with the child's biological father, 11% were cohabitating with a partner who was not the child's biological father, 15% had a partner who was not the child's biological father with whom they did not cohabitate, and 7% were separated or single. Finally, approximately 40.5% of families were living in poverty, defined using Federal guidelines based on household income and size and/or receipt of public income assistance. This sample was comparable with the families (mothers with partners) in the remainder of the initial sample ($n = 1,107$) with respect to child sex, ethnicity, education, and poverty status ($p > .05$) but was less well educated (37.1% vs. 22.5% high school education or less), $\chi^2(1, 1177) = 7.38$, $p < .01$.

Procedures

Mothers were invited into the follow-up survey substudy by mail and by follow-up phone call. Surveys were mailed to participant homes. Study staff contacted mothers by phone and/or in-person to answer participant questions, encourage participation, and obtain informed consent for the substudy. Surveys were completed as self-reports or, if preferred, as a structured interview. Mothers received US$20 for their time. All procedures were approved by the Institutional Review Boards at three universities and additional hospitals as required by primary care clinics.

Measures

IPV—The CTS2 (Straus et al., 1996) was used to determine the presence and chronicity of IPV in the forms of psychological aggression and physical assault between the mother and her partner in their home in the past year. For the CTS2, we included 40 items that queried

the parents' own acts of psychological aggression and physical assault toward her partner and vice versa. For example, "I beat my partner up" and its counterpart "My partner beat me up" were a set of questions that were included in the questionnaire. Composite variables reflecting the presence of IPV irrespective of perpetrator were created because 98% of mothers who reported any psychological IPV reported that both mother and partner displayed these behaviors and physical IPV rates were too low to support separation of perpetrator (8 both mother and partner, 3 mother only, 8 partner only). This combined approach is in line with evidence that individuals tend to under-report their own IPV behaviors and over-report their partners' behaviors (Jouriles & O'Leary, 1985). Furthermore, several studies implicate female victims of IPV as aggressing toward their partners at comparable rates, with sex differences in perpetration only emerging at higher levels of violence (Archer, 2000). For each item, the maximum response reported by the mother regarding mother- or partner-perpetrated behavior was used. Psychological Aggression and Physical Assault subscales were scored by first applying a frequency value for each response, using the midpoint for responses defined by a range (i.e., *never* = 0, *once* = 1, *twice* = 2, *3–5 times* = 4, *6–10 times* = 8, *11–20 times* = 15, *>20 times* = 25), then summing the frequency responses to produce a chronicity score. "Any" IPV was present if any item within a scale was endorsed as having occurred in the past year. Cronbach's alphas in the current sample are .79 for Psychological Aggression and .85 for Physical Aggression.

Harsh parenting—The Conflict Tactics Scales Parent–Child version (CTSPC; Straus, Hamby, Finkelhor, & Moore, 1998) was used to assess harsh parenting by the mother toward her preschool child. Five items from the CTSPC Psychological Aggression scale and 8 items from the CTSPC Physical Assault scales were used, for example, "You shook your child" and "You swore or cursed at your child." Items from the Physical Assault scale that reflect very severe and rare behaviors (e.g., regarding beating child up, burning) were not included in the larger study because of anticipated low base rates of endorsement and concern that asking parents to report on these behaviors might compromise the reliability of mothers' reporting. Scoring followed the same method as is described above for the CTS to yield variables reflecting "any" harsh parenting and chronicity of harsh parenting. Unlike the conventional Child Physical Assault subscale of the CTSPC in which all physical harsh parenting types are grouped together, resulting in a subscale with a large range of severity (e.g., from spanked to punch/kick), Child Physical Assault items were divided into two smaller subscales reflecting severity: Mild/Moderate (e.g., shook, pinched, slapped, spanked) and Severe Child Physical Assault (e.g., punch/kick, hit with object, hit on face or head, and belt on bottom). Bivariate correlations among variables were examined. Cronbach's alphas in the current sample are .61 for Psychological Aggression, .59 for Mild/Moderate Child Physical Assault, and .54 for Severe Child Physical Assault. The size of these alphas is likely affected by the relatively small number of items within each subscale and the limited sample size.

MAP-DB—The MAP-DB is a parent-report measure designed to characterize disruptive behavior dimensionally in preschool-age children (Wakschlag et al., 2014). The disruptive behavior total score, used in analyses, encompasses temper loss, non-compliance, aggression, and low concern for others' distress. The MAP-DB is designed to capture the

frequency and severity of disruptive behavior along a normal:atyipcal continuum. The MAP-DB employs a frequency response format, asking the parent to report their child's behavior over the past month and give frequency ratings based on a 6-point scale (0 = *never*; 1 = *rarely, less than once per week*; 2 = *some [1–3] days of the week*; 3 = *most [4–6] days of the week*; 4 = *every day of the week*; 5 = *many times each day*). Internal consistency is strong (α = .92), with item loadings ranging between 0.24 and 0.74. These items encompass both normative and problematic indicators and include variations in severity, quality, and context. Cronbach's alpha in the current sample is .97.

Analytic Approach

The proportion of overlap between dichotomous indicators of the IPV and harsh parenting categories was examined by calculating bivariate odds ratios (ORs) and 95% confidence intervals (CIs). Mediation analyses were conducted with IBM SPSS (Version 19) using the Preacher and Hayes (2008) SPSS macro (www.quantpsy.org). For conducting mediation analyses, CTS2 and CTSPC subscales were included as chronicity scores (described in "Measures" section), allowing us to fully capture the frequency dimension of each scale and thus better estimate children's degree of exposure. Specifically, to test the hypothesis that harsh parenting mediates the relationship between IPV and child disruptive behavior, we employed methods outlined by Preacher and Hayes (2004, 2008) for assessing indirect effects in a model with multiple parallel mediators.

Two analyses were conducted, one with IPV psychological aggression as the independent variable, and one with IPV physical assault. For each analysis, the total indirect effect for the three harsh parenting variables (i.e., child psychological aggression, mild/moderate child physical assault, severe child physical assault) combined was computed, as well as specific indirect effects, with each mediator examined independently while controlling for the other two harsh parenting variables. Statistics yielded by this approach include beta coefficients, standard errors, and *Z* scores for the total and individual indirect effects. Bootstrapping is employed to account for deviations from normality typically associated with indirect effects and a 95% CI is computed to test for indirect effects. In both analyses, child sex, child age, caregiver age, and poverty status were entered as covariates.

Results

IPV

Table 1 presents the proportion of the sample endorsing psychological aggression and physical assault and specific forms of IPV by frequency. Seventy percent of the sample endorsed some form of psychological aggression with their partners in the past year. A substantial portion of mothers reported psychological aggression as having occurred more than 10 times in the past year, with 8.6% reporting 11 to 20 instances and 14.8% reporting more than 20 instances. Shouting/yelling (63%) had the highest rate and being called a lousy lover (7.4%) or ugly/fat (8.6%) had the lowest rate. Physical assault was reported by almost a quarter (23.5%) of the sample, with pushing/shoving (13.6%) having the highest rate, use of a knife/gun (1.2%) and kicking (1.2%) having the lowest rate.

Harsh Parenting

Table 1 also presents the proportion of the sample endorsing the three harsh parenting categories and specific forms of harsh parenting by frequency. More than two thirds (85.2%) of the sample reported engaging in some form of psychological aggression toward the child, with shouting/yelling (81.5%) having the highest rate and threatening to send the child away (2.5%) having the lowest rate. Similarly, 69.1% of the sample reported mild/moderate physical assault with spanking (59.3%) having the highest rate and shaking the child (6.2%) having the lowest rate. Finally, 22.2% of the sample reported severe physical assault, with hitting the child with a belt on the bottom (17.3%) having the highest rate, hitting the child with an object somewhere other than the child's bottom (2.5%) having the lowest rate, and punching/ kicking the child not endorsed.

Co-Occurrence of IPV and Harsh Parenting

Table 2 presents a correlation matrix of the variables. Consistent with H1, both forms of IPV correlated significantly with one another, as well as with the indicators of harsh parenting toward the child. There was substantial overlap between the presence of "any" IPV (psychological aggression and physical assault) and children's exposure to harsh parenting (see Table 3). Specifically, mothers who endorsed IPV psychological aggression were substantially more likely, relative to mothers who did not, to engage in all forms of harsh parenting including child-directed psychological aggression (95% vs. 64%), mild/moderate physical assault (82% vs. 40%), and severe physical assault (29% vs. 8%). Notably, although psychologically harsh parenting was common in this sample, it was nearly 10 times more likely among mothers who reported psychological IPV than among those who did not. In addition, a greater proportion of mothers endorsing IPV physical assault, relative to those who did not, reported mild/moderate child physical assault (89% vs. 63%) and severe child physical assault (42% vs. 16%). Although the presence of physical IPV did not significantly increase the odds of psychological harsh parenting above and beyond psychological IPV, the base rate of "any" psychological harsh parenting was quite high (85.2%) relative to physical IPV (23.5%) and in all cases where there was physical IPV, there was also psychological harsh parenting.

No significant differences emerged between girls and boys in the likelihood of experiencing either form of IPV and any harsh parenting (psychological, mild/moderate physical, or severe physical assault; all $ps > .05$).

Mediational Models of Harsh Parenting on IPV and Child Disruptive Behavior

As expected, all measures of IPV and harsh parenting correlated significantly ($p < .05$) with preschool children's disruptive behavior ($r = .29–.40$; Table 2). Two models tested whether harsh parenting variables statistically mediated the relationship between IPV psychological aggression and IPV physical assault and child disruptive behavior (Tables 4 and 5, respectively). The first model revealed a significant indirect effect of psychological IPV on child disruptive behavior (Table 4). Specifically, child-directed psychological aggression mediated the effect of IPV psychological aggression on child disruptive behavior controlling for mild/moderate child physical, severe child physical, and covariates child sex, child age, maternal age, and poverty status. However, as can be seen in the second row from the bottom

of Table 4, IPV psychological aggression remained significantly associated with children's disruptive behavior, even with harsh parenting in the model ($t = 2.18$, $p < .05$). The direct effect from child psychological aggression to child disruptive behavior, controlling for other variables, was significant; however, direct effects from physical forms of harsh parenting to child disruptive behavior, controlling for other variables, were not significant. Overall, the model accounted for an estimated 21% of the variance in child disruptive behavior (adjusted $R^2 = .21$).

The omnibus test of harsh parenting variables as mediators of the relationship between IPV physical assault and child disruptive behavior, also controlling for covariates child sex, child age, maternal age, and poverty status, was not significant (see Table 5). However, the direct effect from IPV psychological to child psychological aggression, as well as the direct effect from child psychological aggression to child disruptive behavior, controlling for other variables, were both significant. Thus, although these effects do not indicate a mediated relationship in the strict sense, these results do suggest a meaningful indirect effect (Mackinnon, Lockwood, Hoffman, West, & Sheets, 2002). Direct effects from physical forms of harsh parenting to child disruptive behavior, controlling for other variables, were not significant. In total, this model accounted for an estimated 17% of the variance in child disruptive behavior (adjusted $R^2 = .17$).

Discussion

The present study provides partial support for the spillover hypothesis as a mechanism by which IPV contributes to elevated risk of young children's disruptive behavior. Consistent with studies suggesting harsher maternal parenting in families with IPV (Holden & Ritchie, 1991; Levendosky & Graham-Bermann., 2000; Margolin & Gordis, 2003; McCloskey et al., 1995; Rossman & Rea, 2005), the current findings demonstrate a positive association between characteristics of IPV in mothers' relationships with their partners and characteristics of their harsh parenting behaviors toward their preschool-age children, with direct parallels in how caregivers behave with their partners and their children. Further evidence of unique associations between IPV and harsh parenting and mothers' reports of children's disruptive behaviors adds to an increasing literature indicating that young children are not immune to the effects of psychological and physical IPV within their families.

In the current sample, aggression among family members was quite common. Most mothers (~70%) reported psychological aggression with their partner and toward their children (~85%). Physical aggression occurred in approximately 24% of partner relationships. Mothers' aggression toward children was more common, with 69% of mothers reporting mild/moderate aggression and 22% reporting severe physical aggression toward children. Even with these high rates of occurrence, it appears that IPV may be an important red flag for aggression toward young children as the likelihood of psychological or physical aggression toward children was significantly and markedly greater in families with IPV compared with those without. Most children in families with either form of IPV experienced psychological aggression or physical assault, underscoring the potential value of screening for child-directed aggression when IPV is suspected. Moreover, although physical IPV

generally triggers concern about children's well-being, our findings point to psychological IPV as another salient marker for child-directed aggression.

Furthermore, the types of behaviors that most commonly characterized mothers' intimate relationships with their partners also occurred commonly in their parenting behaviors toward their children. For example, the most common psychologically aggressive behaviors between intimate partners were *shouted/yelled, insulted/swore*, and *left the room*. Mothers' behaviors toward their children appear to mirror these behaviors, as the most common psychologically harsh parenting behaviors were *shouted/yelled, threatened to spank*, and *swore/cursed.* Similar parallels emerged for physical forms of both IPV and harsh parenting. Between intimate partners, the most common forms of physical assault behaviors were *grabbing, threatening to hit/throw, destroying property, twisting arm, slamming, punching/hitting*, and *slapping*. This was paralleled by *using a belt on the child's bottom*, which was the most common form of severe physical aggression toward children. Other forms of severe physical aggression were rare (<4%) and thus difficult to interpret in this small sample. These associations between IPV and harsh parenting were equally relevant for boys and girls. Although needing replication and extension in a longitudinal design, these parallels in mothers' IPV behaviors with their partners and aggression toward their children support and extend the spillover hypothesis by providing evidence that psychological aggression between partners may beget psychological aggression toward the child and physical aggression between partners may beget physical aggression toward the child.

Our examination of mediation by harsh parenting of the psychological IPV–disruptive behavior relationship revealed partial mediation by psychological aggression toward the child. This is consistent with a previous study in which psychological aggression toward the child in the form of observed hostility, disengagement, and less warmth partially mediated the relationship between IPV and infant externalizing behavior (Levendosky et al., 2006). As in this earlier study, psychological IPV remained directly associated with children's disruptive behavior after accounting for harsh parenting. Thus, exposure to verbal and psychological conflict between partners may independently interfere with the emergence of behavioral and emotional regulation, a key developmental task of early childhood (Thompson, Lewis, & Calkins, 2008). A number of processes could explain this association, including sensitization in which increased exposure and severity of family conflict intensifies children's emotional and behavioral reactivity to subsequent stressors (Goeke-Morey et al., 2013; Grasso et al., 2013) or modeling in which children model aggressive behavior observed within the context of intimate partner conflict (Crick & Dodge, 1996), as well as gene–environment interactions or epigenetic changes that interfere with the development of stress regulation (Radtke et al., 2011; Taylor & Kim-Cohen, 2007)—all likely contributory processes in the intergenerational transmission of behavioral dysregulation.

In contrast, neither form of harsh parenting statistically mediated the relationship between physical IPV and disruptive behavior; however, it did provide some statistical evidence of an indirect effect from IPV physical to psychological harsh parenting to child disruptive behavior. These tentative findings suggest value in examining these interrelationships further

—preferably using a prospective design and in a sample with a higher rate of IPV physical aggression.

In both mediation tests, it was psychological harsh parenting that emerged as a potential mediator of the IPV–disruptive behavior relationship. There was no evidence of mediation by mild/moderate or severe physically harsh parenting. This was contrary to hypotheses, but perhaps reflective of a more robust effect of psychological harsh parenting on child disruptive behavior. Although this null finding seems contrary to Huang et al.'s (2010) evidence that spanking partially mediated the relationship between IPV and child internalizing and externalizing behavior problems, it is worth noting that their study did not test both forms of harsh parenting as potential mediators simultaneously. More research examining psychological and physical forms of harsh parenting together will be necessary to further explicate these patterns.

Taken together, our findings support the spillover model (Levendosky et al., 2006), which suggests that the stress associated with IPV or the hostility generated by the partnership may inhibit mothers' ability to parent in sensitive ways and lead to more hostile mother–child relations. In addition, our study extends prior research into the effects of IPV and harsh parenting on young children by investigating specific forms of each (physical, psychological) rather than broad indicators. Focusing on a range of harsh parenting, from yelling and screaming to more serious forms of harsh physical punishment, and not only physical but also psychological IPV, revealed both an indirect effect of psychological harsh parenting on the IPV–disruptive behavior relationship, as well as direct effects of psychological IPV on young children that would have been obscured had we examined IPV more broadly without attention to form. It will be important for future work to consider alternative or supplementary explanations for the relationships between IPV, harsh parenting, and child disruptive behavior problems. Specifically, risk for developing externalizing behavior problems is likely multiply determined by mother and child factors (e.g., adverse environment, genetic risk) such that these children may play an active role by behaving in ways (e.g., non- compliance, defiance, oppositionality) that elicit harsh parenting (Ammerman, 1991; Appel & Holden, 1998).

Findings from this study, in concert with others, have implications for how children's exposure to IPV is handled by child-serving professionals including law enforcement, mandated reporters, and CPS. The substantial overlap between IPV and moderate to severe forms of harsh parenting suggests that when IPV is identified by child-serving professionals, there is a need for further forensic evaluation to determine whether other forms of child-directed maltreatment are present. However, in many instances no further evaluation or referral occurs (Cross et al., 2012; Tonmyr, Li, Williams, Scott, & Jack, 2010). In addition, CPS caseworkers often are ineffective at identifying IPV when it exists or when it is identified often fail to refer families for IPV specific services (Kohl, Barth, Hazen, & Landsverk, 2005). Thus, children's exposure to IPV and its associated maltreatment risk remains largely unaddressed.

Moreover, regardless of whether child physical maltreatment is occurring, our findings and others' (Evans et al., 2008; Wolfe et al., 2003) suggest that young children exposed to IPV

are at an increased risk of significant impairment, above and beyond that associated with harsh parenting, and thus demonstrate a legitimate need for services. There is much variability within the United States and other industrialized countries in how child welfare agencies respond to children's exposure to IPV. One report observed that only three states in the United States and three provinces in Canada have added children's exposure to IPV as a formal maltreatment type necessitating a mandated report (Mathews & Kenny, 2008). Often mandated reports in the context of IPV are only made when a mandated reporter suspects that the target child has been physically or psychologically harmed by the exposure, which invites a high degree of subjectivity and potential for underidentified need for services (Cross et al., 2012). Such subjectivity in the decision process is particularly concerning with preschool children, given the challenge of distinguishing normative misbehavior from clinically concerning disruptive behavior (Wakschlag et al., 2007). A potential solution to the problem of underemphasized and unaddressed IPV exposure in children identified by CPS is the growing trend for a differential response framework in which children and families are identified as in need of services and are provided services without the need for a specified perpetrator and punitive action. This is particularly attractive given that it is often both maternal victims and their partners who are contributing to the IPV, as corroborated in our study. However, the advantages of a differential response framework still do not resolve the under-detection of children's exposure to IPV. Unless it is better assessed and raised to the level of CPS involvement, this new approach will still miss a significant portion of IPV-exposed children in need of services.

Limitations

Interpretation of the study findings should be tempered by the limitations of the study design. These include the small sample size, the cross-sectional nature of the study, and our reliance on maternal report of maternal and partner IPV behavior, parenting, and child behavior. Shared method variance (e.g., bias toward negative responding) likely contributed to some of the associations observed. Clearly, future research investigating these processes will benefit if maternal reports are complemented with other methods, including direct observation of children's behavior and parent–child interactions, multi-informant reports, and in-depth interviews about violence and conflict within families.

Conclusion

In this young sample, IPV and harsh parenting behaviors demonstrated substantial interrelationships, underscoring young children's experience of psychological and physical aggression in the context of the family environment. Importantly, although there was some partial mediation by parenting behavior, evidence suggesting that IPV may have direct associations with preschool children's disruptive behavior underscores the need to shed light on the factors and processes underlying these associations across early childhood development and the relevance of addressing the well-being and direct victimization of young children exposed to psychological or physical IPV. Observed patterns suggest that IPV- and child-directed aggression within a family may be better conceptualized as part of a family *climate* of aggression characterized by the frequency and severity of aggressive behaviors (Briggs-Gowan et al., submitted). Implications for these patterns suggest early

detection and screening of harsh parenting and IPV and intervention with families aimed at preventing the development of disruptive behavior problems in children.

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Ricardo Nieto, BS, University of Texas at Austin, was the research coordinator responsible for recruitment of vulnerable families for this study.

Lauren S. Wakschlag, PhD, Northwestern University, professor, is a clinical psychologist with broad expertise in preschool disruptive behavior in high-risk families, with particular emphasis on research that disentangles normative misbehavior from clinically concerning patterns via developmentally sensitive dimensional assessment.

Margaret J. Briggs-Gowan, PhD, associate professor at the University of Connecticut School of Medicine, is a developmental psychologist whose research focuses on psychopathology in young children. Much of her work has centered on the influence of family violence and trauma exposure on developmental pathways beginning early in life.

Table 1

Rates of IPV and Harsh Parenting Categories ($n = 81$).

	Times in the Past Year (%)						
	0	**1**	**2**	**3–5**	**6–10**	**11–20**	**>20**
IPV variables							
IPV psychological aggression	30.9	3.7	9.9	21.0	11.1	8.6	14.8
Accused of being a lousy lover	92.6	1.2	2.5	2.5	1.2	0	0
Called fat or ugly	91.4	1.2	2.5	0	2.5	1.2	1.2
Did something to spite	76.5	4.9	4.9	6.2	6.2	1.2	0
Insulted or swore	50.6	4.9	13.6	12.3	4.9	6.2	7.4
Stomped out of room/house/ yard during disagreement	49.4	4.9	12.3	16.0	6.2	6.2	4.9
Shouted or yelled	37.0	4.9	8.6	21.0	6.2	7.4	14.8
IPV physical assault	76.5	7.4	7.4	7.4	0	0	1.2
Choked	100	0	0	0	0	0	0
Beat-up	100	0	0	0	0	0	0
Burned or scalded on purpose	100	0	0	0	0	0	0
Used knife or gun	98.8	1.2	0	0	0	0	0
Kicked	98.8	0	0	1.2	0	0	0
Slapped	97.5	2.5	0	0	0	0	0
Punched or hit with something that could hurt	97.5	0	1.2	1.2	0	0	0
Slammed against a wall	97.5	1.2	0	1.2	0	0	0
Twisted arm or hair	96.3	2.5	0	1.2	0	0	0
Threw something that could hurt	93.8	2.5	1.2	1.2	0	1.2	0
Destroyed something belonging to partner/mother	92.6	3.7	1.2	2.5	0	0	0
Threatened to hit or throw something	92.6	2.5	1.2	2.5	0	0	1.2
Grabbed	88.9	3.7	3.7	2.5	1.2	0	0
Pushed/shoved	86.4	6.2	3.7	2.5	1.2	0	0
Harsh parenting variables							
Child psychological aggression	14.8	7.4	6.2	12.3	14.8	14.8	29.6
Said would send away or kick out of house	97.5	0	1.2	1.2	0	0	0
Called dumb or lazy or some other name like that	88.9	4.9	1.2	3.7	1.2	0	0

	Times in the Past Year (%)						
	0	1	2	3–5	6–10	11–20	>20
Swore or cursed	72.8	2.5	11.1	8.6	4.9	0	0
Threat to spank or hit but did not actually do it	38.3	8.6	6.2	11.1	9.9	11.1	14.8
Shouted, yelled, or screamed	18.5	7.4	4.9	17.3	16.0	14.8	21.0
Mild/moderate child physical assault	30.9	12.3	12.3	24.7	12.3	4.9	2.5
Shook	93.8	3.7	1.2	1.2	0	0	0
Pinched	92.6	0	1.2	3.7	2.5	0	0
Slapped on hand, arm, or leg	67.9	7.4	6.2	8.6	6.2	1.2	2.5
Spanked on bottom with bare hand	40.7	11.1	12.3	19.8	9.9	6.2	0
Severe child physical assault	77.8	8.6	3.7	4.9	3.7	1.2	0
Hit with a fist or kicked hard	100	0	0	0	0	0	0
Hit on other part of body besides bottom with belt or other object	97.5	1.2	0	1.2	0	0	0
Slapped on face, head, or ears	96.3	1.2	0	0	1.2	1.2	0
Hit on bottom with belt or other object	82.7	6.2	3.7	4.9	2.5	0	0

Note. IPV = intimate partner violence.

Table 2

Correlation Matrix of IPV, Harsh Parenting, and Disruptive Behavior.

	1	2	3	4
1. Disruptive behavior				
2. IPV psychological aggression (CTS2)	0.35**			
3. IPV physical assault (CTS2)	0.29**	0.48**		
4. Harsh parenting—Psychological aggression (CTSPC)	0.40**	0.44**	0.27*	
5. Harsh parenting—Physical assault (CTSPC)	0.32**	0.57**	0.27*	0.57**

Note. All are Pearson correlations except correlations involving IPV Physical Assault, which use Spearman. IPV = intimate partner violence; CTS = Conflict Tactics Scales; CTSPC = Conflict Tactics Scales Parent–Child version.

* $p < .05$.

** $p < .001$ (two-tailed).

Table 3

Proportion of Overlap Between IPV and Harsh Parenting.

		IPV Psychological							IPV Physical						
		No			Yes				No			Yes			
Variable			% of Row	% of Column		% of Row	% of Column	OR (95% CI)		% of Row	% of Column		% of Row	% of Column	OR (95% CI)
						Harsh parenting									
Child psychological	No	9	75	36	3	25	5		12	100	19	0	0	0	
	Yes	16	23	64	53	77	95	9.94 [2.40, 41.16] **	50	72	81	19	28	100	*ns*
Child mild/ moderate physical	No	15	60	60	10	40	18		23	92	37	2	8	11	
	Yes	10	18	40	46	82	82	6.9 [2.41, 19.77] **	39	70	63	17	30	89	5.0 [1.06, 23.69] *
Severe physical	No	23	37	92	40	63	71		52	83	84	11	17	58	
	Yes	2	11	8	16	89	29	4.6 [0.97, 21.82] *	10	56	16	8	44	42	3.8 [1.22, 11.76] *

Note. IPV = intimate partner violence; OR = odds ratio; CI = confidence interval.

* $p < .05$.

** $p < .001$ (two-tailed).

Table 4

Mediation Analysis: Examining Whether Harsh Parenting Variables Mediate Association of IPV Psychological Aggression and Child Disruptive Behavior.

				Bootstrapping 95% CI[a]		
Mediator Variables and Paths	**Coefficient**	**SE**	**t**	**Point Estimate**	**Lower**	**Upper**
Child psychological (indirect path)				0.36*	0.05	0.97
a. IPV psychological to child psychological	0.37	0.12	3.07*			
b. Child psychological to child disruptive behavior	0.99	0.44	2.56*			
Mild/moderate child physical (indirect path)				−0.08	−0.51	0.34
a. IPV psychological to mild/moderate child physical	0.23	0.06	3.07*			
b. Mild/moderate child physical to child disruptive behavior	−0.39	0.86	−0.45			
Severe Child Physical (indirect path)				0.04	−0.12	0.45
a. IPV psychological to severe child physical	0.02	0.03	0.77			
b. Severe child physical to child disruptive behavior	2.20	1.55	1.42			
Total direct effect of IPV psychological to child disruptive behavior not controlling for mediators (c)	1.31	0.42	3.10*			
Total direct effect of IPV psychological to child disruptive behavior controlling for mediators (c')	0.98	0.45	2.18*			
Omnibus test (c - c')				0.32	−0.18	1.05

Note. IPV = intimate partner violence; CI = confidence interval.

[a]The mediator is significant at $p < .05$ if the CI does not contain 0.

*$p < .05$.

**$p < .001$ (two-tailed).

Table 5

Mediation Analysis: Examining Whether Harsh Parenting Variables Mediate Association of IPV Physical Assault on Child Disruptive Behavior.

				Bootstrapping 95% CI		
Variable	**Coefficient**	***SE***	***t***	**Point Estimate**	**Lower**	**Upper**
Child psychological (indirect path)				1.27	−0.05	3.48
a. IPV physical to child psychological	0.94	0.36	2.62*			
b. Child psychological to child disruptive behavior	1.13	0.44	2.56*			
Mild/moderate child physical (indirect path)				0.13	−0.98	2.21
a. IPV physical to mild/moderate child physical	0.34	0.18	1.84			
b. Mild/moderate child physical to child disruptive behavior	0.15	0.84	0.17			
Severe child physical (indirect path)				0.38	−1.36	4.15
a. IPV physical to severe child physical	0.51	0.07	6.94**			
b. Severe child physical to child disruptive behavior	1.15	1.96	0.59			
Total effect of IPV Physical to Child Disruptive Behavior not controlling for mediators (*c*)	2.94	1.27	2.31*			
Total direct effect of IPV Physical to Disruptive Behavior controlling for mediators (*c′*)	1.24	1.57	0.79			
Omnibus test (*c* - *c′*)				1.77	−1.80	4.90

Note. IPV = intimate partner violence; CI = confidence interval.

The mediator is significant at $p < .05$ if the CI does not contain 0.

*$p < .05$.

**$p < .001$ (two-tailed).

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