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Psychological Intimate Partner Violence (IPV) and Child Adjustment in a Context of Previous Physical IPV

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Physical and psychological IPV often co-occur, and are both potential risk factors for child adjustment problems; however, their joint relation with child adjustment problems is not well understood. The current study examined whether previous physical IPV augmented the relation between current psychological IPV and child threat appraisals and child internalizing symptoms. Participants were 506 children aged 7-10 (M_{age} = 8.49; 48% female) and their mothers (M_{age} = 36.32) recruited from the community. Children reported on IPV between mothers and mothers' partners, child threat appraisals, and child internalizing symptoms. Mothers reported on child internalizing symptoms. Previous physical IPV, conceptualized based on its frequency, diminished the relation between current psychological IPV and child threat appraisals, but did not interact with current psychological IPV to predict mother- or child-reported internalizing symptoms. In exploratory analyses, previous physical IPV, conceptualized based on its harmfulness, diminished the relation between current psychological IPV and child threat appraisals. In addition, physical and psychological IPV exhibited additive effects with child-reported internalizing symptoms. The findings suggests that researchers, clinicians, and legal service providers should consider the unique risk posed by physical and psychological IPV, as well as the moderating role of contextual factors.

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CHAPTER 1

INTRODUCTION

Physical intimate partner violence (IPV) is often defined by minor (e.g., throwing objects) and severe (e.g., choking) acts of physical aggression directed at one's intimate partner. Approximately 15.5 million American children have been estimated to live in families in which physical IPV occurred in the past year (McDonald et al., 2006). Several meta-analytic reviews have indicated that children's exposure to physical IPV is a risk factor for child adjustment problems (Evans et al., 2008; Kitzmann et al., 2003; Vu et al., 2016). Although prominent scientific bodies, such as the Centers for Disease Control and Prevention, have defined IPV broadly to include acts of physical, psychological, and sexual violence (e.g., Breiding et al., 2015), physical IPV has received greater attention from researchers, clinicians, and legal service providers, relative to other types of IPV (Greene et al., 2018; Katz, 2016; Stark, 2009).

Psychological IPV, often operationalized as isolation, domination, and emotional or verbal abuse directed at one's intimate partner (Follingstad & DeHart, 2000), is both more prevalent and occurs more frequently in the population than physical IPV (e.g., McMahon et al., 2011; Renner & Boel-Studt, 2013). Similar to physical IPV, children's exposure to psychological IPV has been identified as a risk factor for child adjustment problems (Jouriles et al., 1996). However, in a field historically focused on physical IPV, empirical evidence is lacking on

whether psychological IPV is a risk factor for child adjustment problems independent of physical IPV, and in what contexts this may be the case. This is potentially useful information forresearchers, clinicians and legal service providers seeking to identify and assist at-risk children following IPV exposure (Katz, 2016; Stark, 2012).

Physical and psychological IPV often co-occur (Coker et al., 2002), but research examining the joint effects of physical and psychological IPV on child adjustment is limited. Much of the empricial literature has examined the effects of physical IPV alone (see Vu et al., 2016, for review), or has examined the effects of physical and psychological IPV by combining them into a latent or total score (e.g., El-Sheikh et al., 2008; Harding et al., 2013; Kernic et al., 2003; Zarling et al., 2013). Some studies have examined them as separate, potentially additive, constructs in contributing to child adjustment problems, with mixed results. That is, there have been findings indicating that only physical IPV (Ferguson et al., 2012), only psychological IPV (Jouriles et al., 1996), both physical and psychological IPV (Levendosky & Graham-Bermann, 1998; McMahon et al., 2011), or neither physical nor psychological IPV (Jouriles & McDonald, 2015) are associated with child adjustment problems while accounting for the effects of the other. However, to our knowledge, there are no studies that have examined potential interactive effects of physical and psychological IPV on child adjustment, or more specifically, whether a context of prior physical IPV alters the relation between psychological IPV and child adjustment.

To better understand the interplay of physical and psychological IPV in associations with child adjustment, research is needed on their potential interactive effects. Akin to stress-sensitization hypotheses (Hammen et al., 2000), high levels of physical IPV might engender cognitive or affective diatheses in children that sensitize them to later psychological IPV, subsequently strengthening the association between incidents of psychological IPV and child

adjustment problems. Theory, and a handful of empirical studies, suggest that psychological IPV may have stronger associations with child adjustment problems in a context of high levels of physical IPV (Davies & Cummings, 1994; Grych & Fincham, 1990). However, there is also theoretical and empirical evidence from the broader literature that indicates desensitizing effects of violence (e.g., Ng-Mak et al., 2002), suggesting that high levels of previous physical IPV may mitigate the relation between psychological IPV and child adjustment problems. An examination of interactive effects between physical and psychological IPV in predicting child adjustment problems would contribute to a greater understanding of how these two forms of IPV operate together in contributing to child adjustment problems. Thus, the current study examines the moderating effects of previous physical IPV on the association between psychological IPV and child adjustment problems.

Background Theory and Research

The emotional security hypothesis (Davies & Cummings, 1994) and the cognitive-contextual framework (Grych & Fincham, 1990; Fosco et al., 2007) posit that children's adjustment following exposure to interparental conflict depends in part on children's subjective evaluations of the meaning of the conflict. Much of the empirical literature guided by these theories has utilized community samples in which destructive interparental conflict involves mild forms of verbal and/or physical aggression between parents, although this theorizing has also been extended to more severe forms of IPV (Fosco et al., 2007).

According to the emotional security hypothesis, children with secure representations of their parent's relationship will perceive their family as a dependable resource for their emotional functioning; in a sense, children form an attachment to their parent's relationship (Davies & Cummings, 1994; Davies & Sturge-Apple, 2007). Children's emotional security is theorized to

be adversely affected if children interpret interparental conflict as threatening to the security of their parents' relationship. In some contexts, children may interpret interparental conflict as non-threatening or as a temporary nuisance that may bring about some short-lived impediments. In extreme situations, such as when interparental conflict is frequent or intense, children may interpret interparental conflict as having dire implications. For example, children may worry that their parents will be physically or emotionally hurt, will become unable to meet their children's needs, or that their parents may separate or divorce (Cummings & Davies, 1996). Children's emotional insecurity may contribute to their heightened emotional arousal, hypervigilance, and negative expectancies about their family relations. Sustained emotional insecurity is hypothesized to place children at risk for adjustment problems, such as anxiety and social withdrawal (Cummings & Davies, 1996).

In comparison with the emotional security hypothesis, the cognitive-contextual framework places greater emphasis on the explanatory role of children's cognitive appraisals in the relation between IPV and child adjustment (Fosco et al., 2007). According to the cognitive-contextual framework, children attend to interparental conflict and extract information from it in order to understand and cope with its effects on their family and their own individual well-being. Children's primary responses to interparental conflict involve appraisals of its negativity, threat, and self-relevance, which may then lead to secondary, more elaborated processing, in which children attempt to understand how the conflict may affect them, why it is happening, who is responsible, and what they can do in response (Grych & Fincham, 1990). Similar to the emotional security hypothesis, the cognitive-contextual framework predicts that children who appraise interparental conflict as threatening to the well-being of themselves, their parents, or their family will experience greater distress (Grych & Fincham, 1990; Fosco et al., 2007).

Children who experience threat appraisals about interparental conflict over an extended period of time may be at risk for developing adjustment problems in general (Fosco et al., 2007), and internalizing symptoms in particular (Grych et al., 2000; Jouriles et al., 2014; Rhoades, 2008).

According to both the emotional security hypothesis and the cognitive-contextual framework, the intensity of interparental conflict is an important determinant of children's experience of the conflict (Davies & Cummings, 1994; Grych & Fincham, 1990). Interparental conflict that involves physical aggression is conceptualized as more intense than conflict that does not involve physical aggression (Grych & Fincham, 1990). In line with this conceptualization, a laboratory-based investigation found that, when school-aged children watched videos of a male and a female adult actor disagree about various topics, the children reported experiencing more anger and distress, and rated the actors' emotions as more negative, in disagreements involving physical aggression (i.e., pushing each other) compared to disagreements with no physical aggression (Cummings, Vogel, et al., 1989). However, these effects were not consistent across child age and gender, leading Cummings, Vogel and colleagues (1989) to point out that it may be unwarranted to conclude that disagreements involving physical aggression will always be more emotionally distressing to children than other forms of conflict.

In a related, earlier study, mothers provided narrative descriptions of incidents of anger between family members, as well as their child's affective and behavioral responses to the conflict, over a 9-month timeframe. Mothers' descriptions indicated that young children responded with greater distress to conflicts in which one family member hit another, compared to conflicts that did not involve hitting. In this study, children exhibited distress by crying, expressing concern verbally or non-verbally, or attempting to ignore or hide from the conflict

(Cummings et al., 1981). Cummings and colleagues (1981) theorized from these findings that children are likely to interpret physical aggresssion as threatening to the functioning of their family and themselves.

The emotional security hypothesis and the cognitive-contextual framework both posit that children's experiences of interparental conflict at one time point may influence their responses to later conflict. Given conceptualizations of physical IPV as more negative and distressing than psychological IPV, children may experience physical IPV as a particularly threatening form of IPV, and psychological IPV as a relatively less threatening form of IPV. However, when psychological IPV occurs in families in which high levels of physical IPV occurred previously, the high threat of physical IPV may predispose children to also interpret later psychological IPV as highly threatening to the functioning of their family and their own-well-being. In short, previous physical IPV might moderate associations between psychological IPV and indices of child adjustment, so that associations are stronger in families in which high levels of physical IPV occurred previously, as compared to families in which physical IPV had not occurred.

This hypothesized moderator effect of previous physical IPV on children's responses to later psychological IPV may occur in several ways. In response to previous physical IPV, children may become emotionally insecure about their parents' relationship with one another, and this felt insecurity may persist across time, thus priming children to feel more threatened by later acts of psychological IPV that occur between parents (Cummings & Davies, 1996). That is, children's exposure to high levels of previous physical IPV may increase children's negative representations of their parent's relationship and reduce children's capacity for regulating their emotions and behaviors, which may in turn predispose children to experience distress and fear during later psychological IPV (Davies & Cummings, 1994).

Children may also develop cognitive expectations that incidents of psychological IPV will escalate to physical IPV. Theory on social cognition suggests that individuals form expectations about the course of social interactions based on their exposure to repeated or shocking events; these expectations then guide individuals' interpretations of later similar social interactions (Baldwin, 1992; Janoff-Bulman, 1989). For most couples in community samples, physical IPV occurs when verbal arguments escalate into physical acts (Kelly & Johnson, 2008). When verbal arguments frequently escalate into physical acts, or if someone is hurt during physical IPV, children may form expectations such as, "If my parents start to argue, then this argument might lead to one of my parents hitting or physically hurting the other." That is, children who were previously exposed to scenarios in which psychological IPV escalated into physical IPV may interpret psychological IPV as a precursor or warning sign for physical IPV (Fosco et al., 2007).

Initial evidence that past physical IPV may augment children's negative responses to psychological IPV has been indicated in several laboratory-based studies. In one such study by Cummings, Pellegrini and colleagues (1989), children were present during a simulation of verbal conflict between an actor and their mother. Parent's history of physical IPV was positively related to children's attempts to protect, comfort, or aid the mother during the simulated verbal conflict (Cummings, Pellegrini, et al., 1989). Similar findings have been indicated in laboratory-based studies in which children listened to or watched simulated conflict between a male and a female actor. These studies indicated that children whose parents had a history of physical IPV exhibited more physiological arousal (O'Brien et al., 1991) and a greater intensity of sadness (Adamson & Thompson, 1998) in response to simulated verbal conflict, compared to children

whose parents did not report a history of physical IPV. These findings suggest that physical IPV may increase children's negative responses to later stressors, such as psychological IPV.

In contrast to the theory and research suggesting that previous physical IPV might strengthen associations between psychological IPV and indices of child adjustment, there is also literature suggesting that high levels of previous physical IPV may mitigate children's negative responses to psychological IPV. These mitigating effects may occur in several ways. The risk saturation model, also referred to as the stress autonomy model, suggests that stressors may at first bring about negative responses, but as the stressor reaches high levels, children's negative responses reach a saturation point. That is, children may become overwhelmed by physical IPV and in turn avoid attending and reacting to later interparent conflict, including acts of psychological IPV (Davies et al., in press; Davies & Sturge-Apple, 2007). Alternatively, the challenge model, also referred to as the stress-inoculation model or the steeling effect, posits that stressors may enhance individuals' development of emotion regulation, problem-solving, and other coping skills, and in turn may decrease their reactivity to later stressors (Davies & Sturge-Apple, 2007; Repetti & Robles, 2016). This is particularly likely when stressors occur only occasionally or are mild in intensity, which is commonly the case for IPV in community samples (Davies et al., in press; Kelly & Johnson, 2008). The risk saturation and challenge models converge with the observations of other researchers that children who are exposed to violence may learn that some violence is safe to "tune out," and in turn may become desensitized to later violence (Ng-Mak et al., 2002).

In the broader empirical literature on the consequences of children's exposure to violence, several studies have indicated that children's exposure to violence may diminish their negative responses to later violence or conflict. For example, male youth's repeated exposure to

real-life violence, such as seeing somebody else get punched, hit, or slapped, mitigated the effect of later exposure to violent movie clips on their emotional distress (Mrug et al., 2015). Additionally, children's previous exposure to high levels of community violence has been found to attenuate the relation between interparental conflict and child internalizing symptoms (Rosenfield et al., 2014). Cummings and colleagues (2007) also found that children's previous exposure to high levels of IPV mitigated the relation between mothers' use of destructive tactics during later interparental conflict and children's fear responses. Thus, the extant theoretical and empirical literature is conflicting. While there is considerable theoretical and empirical evidence suggesting that earlier physical IPV increases children's negative responses to later psychological IPV, decreases in children's negative responses to later psychological IPV have also been observed.

Who Should Tell Us About the IPV?

The measurement of IPV has a long and controversial history, and one of the controversies stems from discrepancies among family members' reports of IPV. These discrepancies have been observed across reports of romantic partners (see Armstrong et al., 2002, for review) as well as reports of parents and children (Peisch et al., 2016; O'Brien et al., 1994; Harding et al., 2013; McDonald et al., 2012; Kolko et al., 1996). There are many potential reasons for discrepancies in reports across parents and their children. For example, children's exposure to the IPV may depend on whether children were out of the home or asleep at the time of the IPV (Holden, 2003). Parents and children also may not disclose IPV to researchers, due to fears of potential legal repercussions (Kruttschnitt & Domfeld, 1992) and a variety of reporting biases (e.g., social desirability). Despite potential discrepancies between parents' and children's reports of IPV, children's perceptions of IPV may be more relevant to their own threat appraisals

and subsequent adjustment (Peisch et al., 2016). That is, when children report IPV occurred, it indicates they are aware of the IPV. Parents' reports of occurrences of IPV do not necessarily guarantee children's awareness.

Context of IPV

Physical IPV rarely occurs in the absence of psychological IPV, whereas the reverse is relatively common (Coker et al., 2002). Empirical evidence has indicated that individuals first perpetrate only psychological IPV, and over time, some individuals progress to also using physical IPV (Cadely et al., 2020). Empirical evidence has also indicated that individuals may be more likely to begin to use physical IPV if they perpetrated higher levels of earlier psychological IPV (Salis et al., 2014), and if they are young and low income (Stets, 1990).

In addition, parent-to-child physical aggression frequently co-occurs with physical IPV and may also be related to higher levels of children's negative appraisals of interparental conflict and their internalizing symptoms (Appel & Holden, 1998; Hennessy et al., 1994; Maneta et al., 2017). Similar to physical IPV, parent-to-child physical aggression may engender a threatening home environment that interferes with children's cognitive and affective development (e.g., Kim-Spoon et al., 2013).

The characteristics of IPV may also differ based on racial and ethnic contexts. For example, Black women have been found to experience more frequent and severe physical IPV (Campbell et al., 2008) and greater barriers to seeking help following IPV than White women (Flicker et al., 2011). These racial and ethnic differences may be attributable to economic and social disparities, such as Black individuals' experiences of inadequate cultural competence of police and mental health professionals (Nash, 2005).

In summary, contextual factors such as levels of earlier psychological IPV, mothers' and mothers' partners' age, family income, parent-to-child physical aggression, and mothers' and mothers' partners' ethnicity may confound the hypothesized moderating effects of physical IPV on the relation between psychological IPV and indices of child adjustment.

Current Study

The current study builds upon prior research by examining whether previous physical IPV moderates relations of later psychological IPV with child threat appraisals and child- and mother-reported internalizing symptoms. These associations were examined with children between 7 and 10 years of age; this is a crucial developmental period for children as they begin to interact with a wide range of peers in school settings. The study design has several methodological strengths. First, we utilized a study design that allowed us to establish temporal precedence of previous physical IPV and later psychological IPV. Second, we included both mother and child reports of child internalizing symptoms based on previous findings that these reporters may have different yet informative perspectives on child adjustment; this multi-method approach allows us to investigate whether our findings replicate across reporters (De Los Reyes & Kazdin, 2015). Third, in line with prior theorizing on the importance of children's experiences of IPV, we utilized child reports of physical and psychological IPV in our main analyses. Fourth, we controlled for contextual factors that may correlate with children's adjustment to IPV. Specifically, in our main analyses, we controlled for previous psychological IPV, current physical IPV, mothers' and mothers' partners' age and ethnicity, family income, parent-to-child physical aggression, and child age and gender.

We hypothesized that, after controlling for potentially important contextual factors, previous physical IPV would moderate the association between psychological IPV and indices of child adjustment. Despite mixed findings in the literature suggesting that previous violence may

either increase or decrease children's responses to later violence, we hypothesized, consistent with sensitization hypotheses, that (1) child-reported current psychological IPV would be more strongly related to children's threat appraisals of interparental conflict in a context of frequent child-reported previous physical IPV, compared to absent or infrequent child-reported previous physical IPV, and (2) child-reported current psychological IPV would be more strongly related to child- and mother-reported internalizing symptoms in a context of frequent child-reported previous physical IPV, compared to absent or infrequent child-reported previous physical IPV. We also explored whether child reports of the harmfulness of previous physical IPV moderated the association between psychological IPV and indices of child adjustment, in order to examine whether our main findings replicated across alternative conceptualizations of previous physical IPV. Additionally, we explored whether physical and psychological IPV had additive effects with indices of child adjustment, in order to extend on mixed findings in the existing literature on the potential additive effects of physical and psychological IPV.

CHAPTER 2

METHOD

Participants

Families were recruited from the community as part of a larger study on IPV and child adjustment. The sample was recruited by calling randomly drawn phone numbers within urban census tracts. Inclusion criteria included (a) a mother who had been in an intimate relationship with a partner for at least 5 of the previous 6 months, (b) the mother currently lived in the same household with her own biological child between the ages of 7 and 10 years, (c) the child had never been diagnosed with an intellectual disability or developmental delay, and (d) the mother and child were both fluent in English. Eligible mothers were informed that participation would involve three assessments lasting 3- to 4-hours each, with each assessment spaced 6-months apart. Of the 1,099 community families who were contacted and satisfied these screening criteria, 539 (49%) participated in the baseline assessment. This participation rate is comparable to other lab-based longitudinal studies on interparental conflict and child adjustment (e.g., Fosco & Grych, 2008).

Of the 539 families that participated in the baseline assessment, 506 families had complete data on variables of interest for the current study. Those with missing data were

missing completely at random, $x^2 = 43.47$, $p = .73$, and did not differ from those without missing data on child- or mother-reported demographics. Children in the current sample were between 7 and 10 years old (M = 8.49 years, SD = 1.13). Approximately half of the children were male, 52% (261/506) and half were female, 48% (245/506). The racial/ethnic breakdown of children in the sample was as follows: 51% (257/506) White, 25% (127/506) Black, 14% (72/506) Hispanic, and 10% (50/506) multi-ethnic or "other."

Mothers were between 21 and 56 years old (M = 36.32, SD = 6.49), and mothers' partners were between 21 and 61 years old (M = 38.63, SD = 7.41). The sample of mothers was 57% (286/506) White, 24% (120/506) Black, 15% (75/506) Hispanic, and 5% (25/506) multi-ethnic or "other." Mothers' partners were 53% (270/506) White, 28% (143/506) Black, 14% (72/506) Hispanic, and 4% (21/506) multi-ethnic or "other." Mothers had an average of 14.23 (SD = 2.95) years of education. The median family income was US $4,000.00 per month ($M$ = US $4,539.74, SD = US $2,898.29). For 91% (461/506) of the families, the mother and her partner were married, 8.5% (43/506) were cohabiting but unmarried, 0.5% (2/506) were unmarried and not living together or "other." The average length of mothers' relationship with their partners was 13.32 years (SD = 6.5). In 79% (399/506) of the families, the partner was the biological father of the participating child.

Procedures

All procedures were approved by the Institutional Review Board of the institution where the research was conducted. For the current study, data from the first two assessment points were used. The two assessments were spaced 6 months apart. All interviews were approximately 3.5 hours long. Prior to the initial interview, mothers provided informed consent and children provided verbal assent. Children and mothers were interviewed in separate rooms at a university

research lab. The study measures were read aloud to the participants to ensure that all questions were understood. Interviewers engaged the children in games before beginning the interviews and took play breaks as needed in order to maintain rapport. Following the interviews, interviewers assessed the participants' levels of emotional distress and concerns about family conflict that might have emerged as a consequence of participation. All mothers were provided with a list of agencies offering family services. Families received $100 per session for participating.

Measures

Only measures used in the current study are described below.

Predictor Variables

Physical IPV. At the first and second assessments, children completed an abbreviated 7-item version of the physical assault subscale of the Conflict Tactics Scale (CTS; Straus, 1979) on the frequency of their mothers' and mothers' partners' perpetration of physical IPV over the past six months. Physical IPV at the first assessment was used as a predictor variable, and physical IPV at the second assessment was used as a control variable. Minor acts included: throwing something that could hurt; pushing, grabbing or shoving; slapping. Severe acts included: kicking, biting, or hitting with a fist; hitting or trying to hit with something; beating up; using a knife or firing a gun. Responses were collected on a 4-point scale (0 = *never*, 1 = *once or twice*, 2 = *sometimes*, 3 = *all the time*) and summed into a total score, aggregating across mothers' and mothers' partners' perpetration of physical IPV. Similar aggregation methods have been used in previous research (Jouriles & McDonald, 2015; McDonald et al., 2012). Child reports on the abbreviated CTS have previously exhibited small-to-moderate positive relations with child reports of their internalizing problems, indicating criterion validity of child reports on the

abbreviated CTS (McDonald et al., 2012). In the current study, child reports on the physical assault subscale of the CTS had an alpha of .89 at the first assessment and .88 at the second assessment. At the first assessment, children also completed one-item assessing whether anyone was hurt during the physical IPV (0 = *no exposure to harmful IPV*, 1 = *exposure to harmful IPV*).

Psychological IPV. At the first and second assessments, children completed an 8-item abbreviated version of the Index of Psychological Abuse (IPA; Sullivan et al., 1991) on the frequency of their mothers' and mothers' partners' perpetration of psychologically abusive acts over the past six months. Psychological IPV at the first assessment was used as a control variable, and psychological IPV at the second assessment was used as a predictor variable. Psychologically abusive acts included yelling or screaming at one's partner, ignoring or not speaking to one's partner, name calling, insulting one's partners' parenting abilities, and threatening to hurt one's partner, take the children away, or get a divorce. Responses were collected on a 4-point scale (0 = *never*, 1 = *rarely*, 2 = *sometimes*, 3 = *often*) and summed into a total score, aggregating across children's reports of their mothers' and mothers' partners' perpetration of psychological IPV. In the current study, children's reports on the IPA were moderately-to-strongly related to children's reports of physical IPV (r = .39 - .45), which aligns with previous theoretical and empirical evidence for the co-occurrence of physical and psychological IPV (e.g., Coker et al., 2002). In the current study, child reports on the abbreviated version of the IPA had an alpha of .82 at the first assessment and .85 at the second assessment.

Dependent Variables

Child Appraisals of IPV. At the second assessment, children completed the 6-item perceived threat subscale of the Children's Perception of Interparental Conflict scale for younger children (CPIC-Y; Grych, 2000) on whether they appraised conflicts between their mother and

any partner over the past six months as threatening (0 = *no*, 1 = *yes*). Responses were summed into a total score. The CPIC-Y threat subscale has previously exhibited relations with children's reports of the characteristics of interparental conflict and anxious symptoms, indicating criterion validity of the CPIC-Y (McDonald & Grych, 2006). In the present sample, the perceived threat subscale had an alpha of .83.

Child Internalizing Symptoms. At the second assessment, mothers completed the 32-item internalizing scale of the Child Behavior Checklist (CBCL; Achenbach, 1991). The internalizing subscale assesses children's anxiety/depression, withdrawal, and somatic complaints over the past 6 months. Responses were collected on a 3-point scale (0 = *not true,* 1 = *somewhat or sometimes true,* 2 = *very true or often true*) and summed into a total internalizing score. Children exposed to IPV have previously exhibited higher problems on the CBCL (McFarlane et al., 2003). Mother-reports on the CBCL have previously exhibited strong associations with their reports on an alternative measure of child internalizing symptoms (i.e., the Strengths and Difficulties Questionnaire; Goodman & Scott, 1999), indicating convergent validity of the CBCL. In the current study, the CBCL internalizing subscale had an alpha of .83.

At the second assessment, children also completed the Children's Depression Inventory (CDI; Kovacs & Beck, 1983) and the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978) as indices of their internalizing symptoms. The CDI is a 27-item self-report measure that assesses children's cognitive, behavioral, and affective symptoms of depression over the past two weeks. Responses were collected on three graded statements of increasing severity (e.g., 0 = *I am sad once in a while,* 1 = *I am sad sometimes,* 2 = *I am sad all the time*) and summed into a total score. The CDI has previously exhibited relations with physical and psychological IPV (Harding et al., 2013), indicating criterion validity, and strong

associations with an alternative measure of child depressive symptoms (i.e., Beck Depression Inventory for Youth; Smith et al., 2004), indicating convergent validity. In the present sample, the CDI had an alpha of .76.

The RCMAS is a 37-item self-report measure that assesses whether children have ever experienced physiological anxiety, worry/oversensitivity, and social concerns/concentration (0 = *no*, 1 = *yes*). The RCMAS has previously exhibited relations with children's exposure to physical IPV (Lam et al., 2009), suggesting criterion validity, and strong associations with alternative measures of anxious symptoms (Reynolds, 1982), indicating convergent validity. In the present sample, the RCMAS had an alpha of .90.

Control Variables

Parent-to-Child Aggression. At the first assessment, mothers completed the 13-item physical assault subscale of the Conflict Tactics Scale – Parent-to-Child (CTS-PC; Straus et al., 1998). Mothers reported on their own and their partners' physical aggression toward the child in the past six months. Responses were collected on a 7-point scale (0 = *never*, 1 = *once*, 2 = *twice*, 3 = *3-5 times*, 4 = *6-10 times*, 5 = *11-20 times*, 6 = *more than 20 times*) and summed into a total score. The CTS-PC has previously exhibited associations with child internalizing and externalizing problems (McKinney et al., 2011), indicating criterion validity of the CTS-PC. Straus and Hamby (1997) review additional evidence for the validity of the CTS-PC, such as moderate relations found between caregiver and child reports. In the present sample, the CTS-PC had an alpha of .72 at the first assessment.

Demographics. At the first assessment, mothers provided demographic information. Mothers reported on their child's age and gender (0 = *female*, 1 = *male*), as well as on their own, their partners, and their child's ethnicity (1 = *White*, 2 = *Black,* 3 = *Hispanic*, 4 = *Other*).

Mothers reported on the family's monthly income, including their own and their partners' monthly income from social services or financial aid, worker's compensation or unemployment, allowance/income from relatives/parents, other income (alimony, child support), and employment earnings. All sources of income were summed into a total score of family income.

Data Analysis and Sample Size Justification

Before conducting analyses, the distributions of the study variables were examined for outliers and skewness greater than one. Child-reported physical and psychological IPV, parent-to-child physical aggression, and family income were skewed greater than one, and were transformed using the procedure that best reduced skewness. Square root transformations were used for parent-to-child physical aggression and family income. Log transformations were used for child-reported physical and psychological IPV.

To examine our hypotheses, we conducted multiple linear regression analyses using child-reported previous physical IPV, current psychological IPV, and Previous Physical IPV × Current Psychological IPV as predictors, and current physical IPV, previous psychological IPV, mother-reported previous parent-to-child aggression, family income, mothers' and mothers' partner's age and ethnicity, and child age and gender as controls, in models with child threat appraisals and mother-reported internalizing symptoms, child-reported depressive symptoms, and child-reported anxious symptoms as dependent variables. We report the semi-partial correlations squared (sr^2) to reflect the amount of unique variance explained by each variable, over and above other variables in the analysis. The sr^2 is equal to the *R*-squared change obtained when adding the variable as the last step in a hierarchical regression analysis. The Benjamini-Hochberg procedure (Benjamini & Hochberg, 1995) was used to correct for multiple comparisons of child internalizing symptoms.

We conducted exploratory analyses using multiple linear regressions to examine alternative conceptualizations of previous physical IPV. That is, we examined whether child reports of the harmfulness of previous physical IPV (0 = *no exposure to harmful IPV*, 1 = *exposure to harmful IPV*) moderated the relation between current psychological IPV and mother- and child-reported child adjustment problems.

We also conducted exploratory analyses to examine whether physical and psychological IPV have additive effects on indices of child adjustment, with a focus on the relations that were significant in bivariate associations. We conducted hierarchical regression analyses to be able to examine the effects of a given type of IPV across previous and current variables. First, we conducted analyses with previous and current psychological IPV and control variables in step 1, to examine whether adding previous and current physical IPV to the model in step 2 contributes unique variance to child adjustment indices. Second, we conducted analyses with previous and current physical IPV and control variables in step 1, to examine whether adding previous and current psychological IPV to the model in step 2 contributes unique variance to child adjustment indices. We used the *R*-squared change as an indicator of whether step 2 contributes unique variance to child adjustment indices.

Previous meta-analyses on the effects of IPV on child adjustment problems (Evans et al., 2008; Kitzmann et al., 2003; Vu et al., 2016), suggest a small- to medium-sized effect. A power analysis using G*Power (Faul et al., 2007) indicated that with the 13 predictor and control variables used in main analyses, alpha set at .05, and our sample size of 506, power exceeded .99 to detect a small-to-medium sized effect using a linear regression (f^2 = .08).

CHAPTER 3

RESULTS

Descriptive Analyses

Means, standard deviations, and correlations for the study variables are summarized in Table 1. In the present sample, 26% (133/506) of children reported previous physical IPV and 69% (350/506) of children reported current psychological IPV. Majority of children (84%; 112/133) who experienced previous physical IPV also experienced current psychological IPV; 68% (238/350) of children experienced current psychological IPV without previous physical IPV.

When children reported previous physical IPV, the most commonly reported physical IPV behaviors included: pushing, grabbing, or shoving (53%; 71/133), slapping (34%; 45/133), and hitting or trying to hit with something (30%; 40/133). When children reported current psychological IPV, the most commonly reported behaviors included: yelling or screaming (79%; 278/350), calling names (53%; 187/350), and ignoring (56%; 197/350).

Among the children in the sample, 66% (335/506) reported experiencing threat appraisals, 10% (52/506) reported experiencing clinically elevated anxious symptoms, and 8% (38/506) reported experiencing clinically elevated depressive symptoms; 6% (29/506) of mothers reported clinically elevated child internalizing symptoms.

Results of correlation analyses indicated that higher levels of current psychological IPV were related to higher levels of child threat appraisals, $r = .51$, $p < .001$, child-reported depressive symptoms, $r = .26$, $p < .001$, and child-reported anxious symptoms, $r = .28$, $p < .001$; current psychological IPV was not related to mother-reported internalizing problems, $r = .00$, $p = .98$.

Hypothesis Tests

Does previous physical IPV strengthen the relation between current psychological IPV and child threat appraisals? (Hypothesis 1)

Child-reported previous physical IPV moderated the relation between child-reported current psychological IPV and child threat appraisals; the relation between current psychological IPV and child threat appraisals was stronger at lower levels of previous physical IPV, compared to higher levels of previous physical IPV, $b = -0.30$, $t(492) = -2.60$, $p = .01$, $sr^2 = .01$.

To further probe these interactive effects, we plotted simple slopes of the relation between current psychological IPV and child threat appraisals at different levels of previous physical IPV, using the approach recommended by Aiken and West (1991). We plotted the moderating effects of previous physical IPV at absent, infrequent (.5 *SD* below the mean) and frequent levels (1 *SD* above the mean; see Figure 1), because most scores (85%) were within this range. At absent levels of previous physical IPV, greater current psychological IPV was related to higher levels of child threat appraisals, $b = 1.07$, $t(492) = 10.20$, $p < .001$, $sr^2 = .18$. At infrequent levels of previous physical IPV, greater current psychological IPV was related to higher levels of child threat appraisals, $b = 1.06$, $t(492) = 10.22$, $p < .001$, $sr^2 = .18$. At frequent levels of previous physical IPV, greater current psychological IPV was related to higher levels of child threat appraisals, $b = 0.73$, $t(492) = 5.34$, $p < .001$, $sr^2 = .05$.

We also calculated the level of previous physical IPV in which the relation between current psychological IPV and child threat appraisals is significant using the Johnson-Neyman technique (Pedhazur, 1982). This approach indicated that for scores ≤ 6.17 on the CTS physical assault subscale (range: 0-21), the relation between current psychological IPV and child threat appraisals is statistically significant, and for scores above that, it is not. Among the other variables in the model, greater child age was related to lower child threat appraisals, b = -0.31, $t(492) = -4.19$, $p < .001$, $sr^2 = .04$. No other variables in the model were related to child threat appraisals.

Does previous physical IPV strengthen the relation between current psychological IPV and mother- and child-reported child internalizing symptoms? (Hypothesis 2)

Child-reported previous physical IPV did not moderate the relation between child-reported current psychological IPV and mother-reported child internalizing symptoms, $b = 0.55$, $t(492) = 0.94$, $p = .35$, $sr^2 = .00$, child-reported depressive symptoms, $b = 0.03$, $t(492) = 0.011$, $p = .91$, $sr^2 = .00$, and child-reported anxious symptoms, $b = -0.26$, $t(492) = -0.62$, $p = .54$, $sr^2 = .00$.

Exploratory Analyses

We conducted exploratory analyses to examine alternative conceptualizations of physical IPV. The frequency of previous physical IPV was strongly related to the harmfulness of previous physical IPV, $r = .50$, $p < .001$. We examined whether child reports of the harmfulness of previous physical IPV moderated the relation between current psychological IPV and child adjustment problems. Child reports of the harmfulness of previous physical IPV moderated the relation between child-reported current psychological IPV and child threat appraisals, b = -0.84, $t(492) = -2.25$, $p = .02$, $sr^2 = .01$ (see Figure 2). We then further probed these interactive effects.

When children were not previously exposed to harmful physical IPV, greater current psychological IPV was related to higher levels of child threat appraisals, $b = 1.01$, $t(492) = 10.08$, $p < .001$, $sr^2 = .17$. When children were previously exposed to harmful physical IPV, current psychological IPV was not related to child threat appraisals, $b = 0.17$, $t(492) = 0.46$, $p = .46$, $sr^2 = .00$. Among the other variables in the model, greater child age was related to lower child threat appraisals, $b = -0.32$, $t(492) = -4.39$, $p < .001$, $sr^2 = .04$. No other variables in the model were related to child threat appraisals.

Child-reported harmfulness of previous physical IPV did not moderate the relation between child-reported current psychological IPV and mother-reported child internalizing symptoms, $b = -0.70$, $t(492) = -0.37$, $p = .71$, $sr^2 = .00$, child-reported depressive symptoms, $b = -0.84$, $t(492) = -0.85$, $p = .40$, $sr^2 = .00$, and child-reported anxious symptoms, $b = -1.68$, $t(492) = -1.25$, $p = .21$, $sr^2 = .00$.

Exploratory analyses were also conducted to examine additive effects of physical and psychological IPV in the prediction of child-reported child threat appraisals, depressive symptoms, and anxious symptoms. First, for each of these dependent variables, a separate hierarchical regression analyses was conducted to examine whether previous and current physical IPV contribute unique variance to child adjustment indices, after accounting for psychological IPV (see Table 4). The model in step 1 included previous and current psychological IPV and control variables. In step 2, adding previous and current physical IPV to the overall model did not account for additional variance in child threat appraisals, $\Delta F(2, 493) = 1.38$, $p = .25$, whereas previous and current physical IPV did account for an additional 2% of the variance in child-reported depressive symptoms, $\Delta F(2, 493) = 4.85$, $p = .02$ and in child-reported anxious symptoms, $\Delta F(2, 493) = 4.79$, $p = .02$.

Second, hierarchical regression analyses were conducted to examine whether previous and current psychological IPV contributed unique variance in the prediction of child-reported threat appraisals, depressive symptoms, and anxious symptoms, after accounting for physical IPV (see Table 5). The model in step 1 included previous and current physical IPV and control variables. In step 2, adding previous and current psychological IPV to the overall model accounted for an additional 17% of the variance in child threat appraisals, $\Delta F(2, 493) = 59.96$, $p < .001$, 2% of the variance in child-reported depressive symptoms, $\Delta F(2, 493) = 6.03$, $p = .003$, and 3% of the variance in child-reported anxious symptoms, $\Delta F(2, 493) = 10.53$, $p < .001$.

Additionally, given the pattern of findings, we compared the magnitude of the correlation between current physical IPV and child threat appraisals and that between current psychological IPV and child threat appraisals using Fisher's *r*-to-Z transformation (Raghunathan et al., 1996). The correlation between current physical IPV and child threat appraisals ($r = .30$) was lower than the correlation between current psychological IPV and child threat appraisals ($r = .51$), Fisher's *r*-to-Z = 5.11, $p < .001$.

CHAPTER 4

DISCUSSION

In the current study, we examined whether previous physical IPV augmented relations between current psychological IPV and child threat appraisals, as well as between current psychological IPV and child- and mother-reported child internalizing problems. Counter to our first hypothesis, high levels of previous physical IPV mitigated the relation between current psychological IPV and child threat appraisals. These mitigation effects were found when conceptualizing previous physical IPV based on its frequency as well as its harmfulness, suggesting that this finding is robust across conceptualizations of physical IPV. In addition, counter to our second hypothesis, previous physical IPV did not moderate relations between current psychological IPV and child- and mother-reported child internalizing problems. This pattern of results is inconsistent with theories on interparental conflict and child adjustment that suggest that high levels of previous physical IPV may engender cognitive or affective diatheses in children that increase their negative responses to later psychological IPV (Davies & Cummings, 1994; Grych & Fincham, 1990). It is also inconsistent with the findings of several laboratory-based studies in which children exhibited more negative responses to verbal aggression in a context involving previous physical aggression between parents (Adamson & Thompson, 1998; Cummings, Pellegrini, et al., 1989; O'Brien et al., 1991). On the other hand,

our finding that high levels of previous physical IPV weakened the relation between current psychological IPV and child threat appraisals aligns with theory suggesting that prior exposure to high levels of previous violence desensitize children to later violence (e.g., Davies et al., in press; Ng-Mak et al., 2002). This particular finding is also consistent with a handful of previous empirical studies that found that past violence mitigated the relation between future violence and child adjustment problems (Cummings et al., 2007; Mrug et al., 2015; Rosenfield et al., 2014).

It is interesting to consider why, in the current study, high levels of previous physical IPV did not augment children's negative responses to later psychological IPV, as hypothesized. We predicted these interactive effects based on previous theoretical and empirical evidence suggesting that (1) children's exposure to physical IPV brings about higher levels of children's negative cognitions and affect, relative children's exposure to psychological IPV (Cummings et al., 1981; Cummings, Vogel, et al., 1989), and (2) children's negative responses to previous physical IPV may in turn make children more vulnerable to negative responses to future occurrences of psychological IPV (Adamson & Thompson, 1998; Cummings, Pellegrini, et al., 1989; O'Brien et al., 1991). There is reason to believe that some or all parts of this theorized sequence of events may not have occurred.

In the current study, children who were exposed to high levels of previous physical IPV may have formed expectations that IPV is generally non-threatening or only a temporary nuisance, which may have decreased children's negative responses to later psychological IPV. In contrast, absent or low levels of previous physical IPV may not have predisposed children to experience decreased negative responses to later psychological IPV. Our exploratory findings provide some support for this reasoning, such that physical IPV was not related to children's threat appraisals, after accounting for psychological IPV and other control variables.

Additionally, the bivariate correlation between current physical IPV and child threat appraisals (r = .30) was weaker than that between current psychological IPV and child threat appraisals (r = .51). Thus, it seems unwarranted to conceptualize physical IPV as *more* threatening than psychological IPV in the current study; although this is counter to previous empirical findings (Cummings et al., 1981; Cummings, Vogel, et al., 1989), it is consistent with cautions advanced by some researchers that physical IPV may not always be the worst form of conflict from a child's perspective (Cummings, Vogel, et al., 1989; Jouriles et al., 1996).

It is also possible that, in a context of high levels of physical IPV, children may have learned how to cope with and adapt to later psychological IPV, in line with the challenge model (Davies et al., in press; Davies & Sturge-Apple, 2007; Repetti & Robles, 2016). It might also be hypothesized that high levels of previous physical IPV may have been overly taxing for children, for instance, by bringing about high levels of negative affect, leading children to tune out later psychological IPV, which is consistent with the risk saturation model (Davies et al., in press; Davies & Sturge-Apple, 2007). Children's diminished responses to violence may have important clinical implications; for instance, previous studies have indicated that individuals who are desensitized to violence may develop deficits in empathy, lack of awareness of cues of danger, or heightened aggression (Ng-Mak et al., 2002).

Study methodology may play a role in whether children's negative responses to psychological IPV increase or decrease in a context of previous physical IPV. Previous studies finding the former examined children's lifetime exposure to previous physical IPV between parents and children's responses to short stimulations of verbal conflict that involved loud or angry discussions between actors over topics such as finances and chores (Adamson & Thompson, 1998; Cummings, Pellegrini, et al., 1989; O'Brien, 1991). These previous studies

differ from the current study in several potentially important ways. First, physical and psychological IPV may share very different dynamics if they occur in the same context (i.e., between one's mother and her partner), compared to if psychological IPV is simulated by actors. For instance, coping skills that children develop in response to physical IPV may only generalize to psychological IPV that occurs in the same context. In contrast, if psychological IPV occurs in a different context, and particularly an experimental setting, it may appear as a novel threat, rather than as safe to "tune out." Second, when psychological IPV occurs in real-life, it may involve a greater variety of behaviors, such as name-calling and ignoring one's partner, may be ongoing rather than circumscribed to a short instance of conflict, and may involve content that directly pertains to the child (Follingstad & DeHart, 2000). These characteristics may decrease children's negative responses, for instance, by overwhelming their capacity to attend to psychological IPV. Third, Adamson and Thompson (1998) utilized a shelter sample, in which physical IPV is typically more frequent and severe than community samples, and therefore potentially more likely to augment the effects of psychological IPV (Anderson, 2008).

In the current study, physical and psychological IPV exhibited additive rather than interactive effects on child-reported depressive and anxious symptoms. Notably, in the current study, the effects of physical and psychological IPV on child depressive and anxious symptoms were small. These findings align with previous empirical studies that found that physical and psychological IPV were both uniquely, albeit weakly, related to youth adjustment (Levendosky & Graham-Bermann, 1998; McMahon et al., 2011). However, our findings are inconsistent with previous studies that did not find additive effects of physical and psychological IPV (Ferguson et al., 2012; Jouriles et al., 1996; Jouriles & McDonald, 2015). There may be methodological differences across studies that account for such mixed findings. For instance, the current study

utilized a relatively large, community sample, whereas some past studies that did not find additive effects utilized smaller samples recruited from domestic violence shelters (e.g., Jouriles & McDonald, 2015). There may also be important differences across samples in familial and cultural contextual factors. For instance, the negative effects of physical and/or psychological IPV may differ across studies depending on average levels of marital satisfaction and family cohesion in a given sample (Grych et al., 2003; Lindahl & Malik, 2011), or the extent to which given violent acts are considered culturally normative (Lindhorst & Tajima, 2008).

Although researchers, clinicians, and legal service providers have historically emphasized the risk posed by physical IPV on child adjustment (Greene et al., 2018; Katz, 2016; Stark, 2009), several scholars have urged professionals to also recognize psychological IPV as a distinctly important risk factor for child adjustment (Greene et al., 2018; Katz, 2016; Stark, 2009). For instance, scholars have recommended that professionals assess the harmfulness of IPV based on psychological harm as well as physical injuries and risk of lethality (Raphael Dudley et al., 2008), and that professionals develop clinical interventions for children exposed to IPV that can address the unique risks posed by both physical and psychological IPV (James & MacKinnon, 2010; Stark, 2009). The current study corroborates these recommendations, and indicates a need for greater understanding of the joint relation of physical and psychological IPV. For instance, children may perceive psychologically abusive acts as equally or more violent in a context without physical IPV, compared to when it occurs in a context with physical IPV.

It is interesting to consider why the observed interactive effects with child threat appraisals did not extend to any of the measures of child- and mother-reported child internalizing problems. One possibility is that previous physical IPV may be an important contextual factor for the relation between psychological IPV and child internalizing problems in the long-term, but

not in the cross-sectional relation examined in the current study. That is, in a context of high levels of previous physical IPV, children may first experience decreases in their threat appraisals, and over time, this may generalize to lower levels of depressive and anxious symptoms. Indeed, theory suggests that as children repeatedly experience threat appraisals, their negative cognitions and affect may generalize over time to internalizing symptoms (Fosco et al., 2007). It may instead be the case, however, that children's diminished threat appraisals do not ensure eventual reductions in their internalizing symptoms. Some previous studies suggest that children's desensitization may be more apparent in alternative symptomologies. For instance, the notion of pathologic adaptation suggests that children who are less responsive to violence may also perceive violence as normal and become less attuned to the emotions of others, thus exhibiting elevations in externalizing problems (Ng-Mak et al., 2002). Notably, empirical evidence for desensitization effects of violence on child externalizing symptoms has been mixed (Mrug & Windle, 2010; Rosenfield et al., 2014).

Limitations

Several limitations of the current study can be attributed to the timeframes in which we examined physical IPV and psychological IPV. First, we captured only a snapshot of the occurrence of physical and psychological IPV, over a one-year period. Children may have been exposed to physical and psychological IPV prior to the current study, which may also play a role in their threat appraisals and internalizing symptoms. Second, we considered previous physical IPV as occurring in a six-month interval prior to current psychological IPV. It is possible that, given a shorter interval between previous physical IPV and current psychological IPV, physical IPV would have augmented the effects of psychological IPV. Third, we examined the cross-sectional relation between psychological IPV and child threat appraisals and internalizing

problems, which prohibits conclusions about the directionality of this relation; for instance, children's greater threat appraisals may lead them to remember more negative qualities about the psychological IPV.

Several additional limitations of the current study should be noted. First, physical IPV is likely to occur in a context with an array of risk factors, such as substance abuse, parental psychopathology, and parental exposure to violence in their own family-of-origin (Stith et al., 2004); it is possible that these unmeasured contextual factors acted as confounds for the findings of the current study. Second, we used a measure of child threat appraisals of interparental conflict, rather than of psychological IPV specifically. Thus, children may have responded to our measure of child threat appraisals based on their appraisals of the psychological IPV, as well as of conflict involving constructive discussions or physical aggression. Future development of measures assessing appraisals specific to psychological versus physical IPV would further our understanding of children's experiences of different types of IPV. Third, given that majority of families in the current community sample experienced relatively infrequent, mild IPV, our broad assessment of both mild and severe IPV may not have best captured families' experiences of IPV. We may have better captured families' experiences of IPV by using an in-depth assessment of mild IPV, for instance, by assessing the content of yelling and name-calling, whether IPV involved overt hostility versus subtle aggression, and whether families experienced all violent behaviors in a single instance or across multiple instances of conflict. Fourth, limitations of the generalizability of our findings should be considered. Only about half of eligible families agreed to participate in the current study. Additionally, it is unclear whether findings from a community sample generalize to agency-recruited samples, such as samples from shelters and hospitals. This

is indicated in findings that IPV may be an entirely different experience for families from agency samples (Kelly & Johnson, 2008).

Conclusions

The current study contributes to literature on the joint relation of physical and psychological IPV with child adjustment. Our findings indicate that high levels of previous physical IPV diminished the relation between current psychological IPV and child threat appraisals. Additionally, our findings indicate that physical and psychological IPV are additively related to child-reported internalizing symptoms. Researchers, clinicians, and legal service providers may best serve at-risk children following IPV exposure by addressing the unique risk posed by psychological IPV, while also understanding the moderating role of contextual factors.

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TABLES

Table 1

Means, Standard Deviations, and Correlations among Study Variables (N = 506)

Variable	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*Mean (SD) n (%)*
1. Child threat appraisals	—															2.32 (2.10)
2. Internalizing Symptoms	.07	—														6.92 (5.39)
3. Depressive Symptoms	.38**	.11*	—													7.93 (4.88)
4. Anxious Symptoms	.55**	.15**	.67**	—												10.17 (6.81)
5. Physical IPV^{P}	.23**	.02	.16**	.21**	—											1.22 (3.17)
6. Physical IPV^{Cu}	.30**	.04	.23**	.24**	.48**	—										1.09 (3.00)
7. Psychological IPV^{P}	.27**	.03	.15**	.15**	.39**	.28**	—									4.75 (5.20)
8. Psychological IPV^{Cu}	.51**	.00	.26**	.28**	.31**	.45**	.55**	—								5.03 (5.83)
9. Physical aggression^{PC}	.13**	.28**	.11*	.11*	.12**	.09*	.11*	.12**	—							5.68 (6.03)
10. Family income	-.13**	.02	-.07	-.09*	-.15**	-.12**	-.09*	-.15**	-.11*	—						4539.74 (2898.29)
11. Mother age	-.12**	.01	-.05	-.10*	-.23**	-.20**	-.14**	-.19**	-.14**	.29**	—					36.32 (6.49)
12. Partner age	-.09	-.02	-.05	-.11*	-.17	-.14**	-.06	-.12**	-.13**	.29**	.78**	—				38.63 (7.41)
13. Mother ethnicity	-.02	.17**	-.09	-.06	-.08	-.05	-.07	-.12**	-.10*	.10*	.15**	.09*	—			120 (24%)
14. Partner ethnicity	-.05	.13*	-.09*	-.10*	-.09	-.08	-.08	-.13**	-.12**	.12*	.23**	.14**	.81**	—		143 (28%)
15. Child age	-.18**	-.01	-.09*	-.17**	-.13**	-.15**	.05	.03	-.16**	.08	.14**	.11*	-.01	.02	—	8.49 (1.13)
16. Child gender	-.04	-.04	.07	-.11*	.06	.04	-.06	-.02	.14**	.00	-.01	-.03	-.00	.04	-.05	261 (52%)

Note. Mother ethnicity: 0 = *Black*, 1 = *non-Black*; Partner ethnicity: 0 = *Black*, 1 = *non-Black*; Child gender: 0 = *female*, 1 = *male*; P = previous, Cu = current, PC = parent-to-child. Child reports were used for child threat appraisals (row/column 1), depressive and anxious symptoms (row/column 3-4), and physical and psychological IPV (row/column 5-8), and mother reports were used for all other variables. All means are for raw data, prior to any data transformations. For mother and partner ethnicity and child gender, we report the percentage of the sample who identified as black or male, respectively.

*$p < .05$, **$p < .01$

Table 2

Results of Multiple Regression Analyses Predicting Child Threat Appraisals (N = 506)

	β	*B (SE)*	sr^2
Physical IPV^{P} x Psychological IPV^{Cu}	-0.12*	-0.30 (0.12)	.01
Physical IPV^{P}	0.09	0.26 (0.14)	.01
Physical IPV^{Cu}	0.07	0.22 (0.14)	.00
Psychological IPV^{P}	-0.03	-0.05 (0.10)	.00
Psychological IPV^{Cu}	0.47***	0.95 (0.10)	.16
Physical $aggression^{PC}$	0.05	0.09 (0.08)	.00
Family income	-0.03	-0.00 (0.01)	.00
Mother age	0.05	0.02 (0.02)	.00
Partner age	-0.02	-0.01 (0.02)	.00
Mother ethnicity	0.06	0.30 (0.32)	.00
Partner ethnicity	-0.03	-0.12 (0.30)	.00
Child age	-0.16***	-0.31 (0.07)	.04
Child gender	-0.04	-0.18 (0.16)	.00

Note. P = previous. Cu = current. PC = parent-to-child. Ethnicity: 0 = *Black*, 1 = *non-Black*. Gender: 0 = *female*, 1 = *male*. Variables in the interaction are shown at average levels. F (13, 492) = 17.15, $p < .001$, R^2 =.31.
*$p < .05$, **$p < .01$, ***$p < .001$

Table 3

Results of Multiple Regression Analyses Predicting Mother- and Child-reported Child Internalizing Symptoms (N = 506)

Variable	*Mother Report Child Internalizing Symptoms*			*Child Report Child Depressive Symptoms*			*Child Report Child Anxious Symptoms*		
	β	*B (SE)*	sr^2	*β*	*B (SE)*	sr^2	*β*	*B (SE)*	sr^2
Physical IPV^{P} x Psychological IPV^{Cu}	0.05	0.55 (0.59)	.00	0.01	0.03 (0.31)	.00	-0.03	-0.26 (0.42)	.00
Physical IPV^{P}	-0.02	-0.27 (0.72)	.00	0.03	0.22 (0.38)	.00	0.12	1.07 (0.51)	.01
Physical IPV^{Cu}	0.04	0.52 (0.72)	.00	0.13	0.92 (0.38)	.01	0.08	0.76 (0.51)	.00
Psychological IPV^{P}	0.02	0.20 (0.50)	.00	-0.01	-0.05 (0.26)	.00	-0.05	-0.31 (0.36)	.00
Psychological IPV^{Cu}	-0.04	-0.35 (0.50)	.00	0.18**	0.83 (0.26)	.02	0.23***	1.53 (0.36)	.04
Physical $aggression^{PC}$	0.32***	2.73 (0.38)	.10	0.06	0.25 (0.20)	.00	0.05	0.33 (0.27)	.00
Family income	0.03	0.01 (0.02)	.00	-0.03	-0.01 (0.01)	.00	-0.01	-0.00 (0.02)	.00
Mother age	0.04	0.06 (0.10)	.00	0.10	0.07 (0.05)	.00	0.12	0.13 (0.07)	.01
Partner age	-0.05	-0.06 (0.09)	.00	-0.05	-0.03 (0.05)	.00	-0.12	-0.11 (0.06)	.01
Mother ethnicity	0.17	3.79 (1.60)	.01	-0.00	-0.03 (0.84)	.00	0.06	0.88 (1.13)	.00
Partner ethnicity	0.03	0.63 (1.54)	.00	-0.05	-0.58 (0.81)	.00	-0.10	-1.51 (1.09)	.00
Child age	0.04	0.35 (0.37)	.00	-0.05	-0.20 (0.19)	.00	-0.15**	-0.88 (0.26)	.02
Child gender	-0.08	-1.60 (0.81)	.01	0.06	0.55 (0.43)	.00	-0.13**	-1.80 (0.58)	.02

Note. P = previous. Cu = current. PC = parent-to-child. Ethnicity: 0 = *Black*, 1 = *non-Black*. Gender: 0 = *female*, 1 = *male*. Variables in the interaction are centered at average levels. Child internalizing symptoms (M): F (13, 492) = 5.52, $p < .001$, R^2 =.13, Child depressive symptoms, F (13, 492) = 4.11, $p < .001$, R^2 =.10, Child anxious symptoms, F (13, 492) = 6.91, $p < .001$, R^2 =.15.
*$p < .05$, **$p < .01$, ***$p < .001$

Table 4

Results of Hierarchical Analyses with Physical IPV Predicting Child Adjustment (N = 506)

	Child Threat Appraisals						*Depressive Symptoms*						*Anxious Symptoms*					
Variable	β	*t*	sr^2	*R*	R^2	ΔR^2	β	*t*	sr^2	*R*	R^2	ΔR^2	β	*t*	sr^2	*R*	R^2	ΔR^2
Step 1				.55	.30	.30***				.28	.08	.08***				.37	.14	.14***
Psychological IPV^{P}	-0.00	-0.03	.00				0.01	0.14	.00				-0.01	-0.14	.00			
Psychological IPV^{Cu}	0.51	11.07***	.20				0.24	4.50***	.04				0.28	5.46***	.06			
Physical $aggression^{PC}$	0.05	1.21	.00				0.06	1.23	.00				0.05	1.23	.00			
Family income	-0.04	-1.05	.00				-0.03	-0.65	.00				-0.01	-0.32	.00			
Mother age	0.04	0.67	.00				0.08	1.12	.00				0.10	1.48	.00			
Partner age	-0.02	-0.39	.00				-0.05	-0.67	.00				-0.12	-1.82	.01			
Mother ethnicity	0.07	1.10	.00				0.00	0.02	.00				0.06	0.82	.00			
Partner ethnicity	-0.03	-0.50	.00				-0.06	-0.76	.00				-0.10	-1.42	.00			
Child age	-0.18	-4.72***	.04				-0.07	-1.57	.00				-0.17	-3.96***	.03			
Child gender	-0.04	-1.01	.00				0.07	1.49	.01				-0.12	-2.88*	.02			
Step 2				.55	.30	.00				.31	.10	.02*				.39	.15	.02*
Physical IPV^{P}	0.04	0.88	.00				0.04	0.69	.00				0.10	2.03	.01			
Physical IPV^{Cu}	0.05	0.97	.00				0.14	2.55	.01				0.07	1.39	.00			
Psychological IPV^{P}	-0.02	-0.34	.00				-0.01	-0.21	.00				-0.04	-0.82	.00			
Psychological IPV^{Cu}	0.48	9.85***	.17				0.18	3.17**	.02				0.24	4.38***	.03			
Physical $aggression^{PC}$	0.05	1.20	.00				0.06	1.25	.00				0.05	1.22	.00			
Family income	-0.04	-0.97	.00				-0.03	-0.55	.00				-0.01	-0.16	.00			
Mother age	0.05	0.82	.00				0.10	1.38	.00				0.12	1.78	.01			
Partner age	-0.02	-0.40	.00				-0.05	-0.72	.00				-0.12	-1.85	.01			
Mother ethnicity	0.07	1.08	.00				-0.00	-0.04	.00				0.06	0.81	.00			
Partner ethnicity	-0.03	-0.48	.00				-0.05	-0.71	.00				-0.10	-1.41	.00			
Child age	-0.17	-4.36***	.04				-0.05	-1.03	.00				-0.15	-3.41**	.02			
Child gender	-0.04	-1.14	.00				0.06	1.29	.00				-0.13	-3.14**	.02			

Note. P = previous. Cu = current. PC = parent-to-child. Ethnicity: 0 = *Black*, 1 = *non-Black*. Gender: 0 = *female*, 1 = *male*. *Step 2 child threat appraisals*: F (12, 493) = 17.81, $p < .001$; *Step 2 child depressive symptoms*, F (12, 493) = 4.46, $p < .001$; *Step 2 child anxious symptoms*, F (12, 493) = 7.46, $p < .001$.

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

Table 5

Results of Hierarchical Regression Analyses with Psychological IPV Predicting Child Adjustment (N = 506)

	Child Threat Appraisals						*Depressive Symptoms*						*Anxious Symptoms*					
Variable	β	*t*	sr^2	*R*	R^2	ΔR^2	β	*t*	sr^2	*R*	R^2	ΔR^2	β	*t*	sr^2	*R*	R^2	ΔR^2
Step 1				.36	.13	.13***				.27	.08	.08***				.34	.12	.12***
Physical IPV^{P}	0.08	1.69	.01				0.05	0.99	.00				0.11	2.28*	.01			
Physical IPV^{Cu}	0.23	4.82***	.04				0.20	4.08***	.03				0.16	3.26**	.02			
Physical $aggression^{PC}$	0.08	1.92	.01				0.07	1.53	.01				0.07	1.54	.01			
Family income	-0.07	-1.54	.01				-0.04	-0.78	.00				-0.02	-0.47	.00			
Mother age	-0.00	-0.05	.00				0.08	1.10	.00				0.10	1.43	.00			
Partner age	0.00	0.07	.00				-0.04	-0.57	.00				-0.11	-1.67	.01			
Mother ethnicity	0.04	0.56	.00				-0.01	-0.19	.00				0.04	0.61	.00			
Partner ethnicity	-0.04	-0.49	.00				-0.06	-0.73	.00				-0.10	-1.42	.00			
Child age	-0.12	-2.67*	.01				-0.03	-0.59	.00				-0.12	-2.86**	.02			
Child gender	-0.07	-1.54	.00				0.05	1.11	.00				-0.14	-3.27**	.02			
Step 2				.55	.30	.17***				.31	.10	.02**				.39	.15	.03***
Psychological IPV^{P}	-0.02	-0.34	.00				-0.01	-0.21	.00				-0.04	-0.82	.00			
Psychological IPV^{Cu}	0.48	9.85***	.17				0.18	3.17**	.02				0.24	4.38***	.03			
Physical IPV^{P}	0.04	0.88	.00				0.04	0.69	.00				0.10	2.03	.01			
Physical IPV^{Cu}	0.05	0.97	.00				0.14	2.55	.01				0.07	1.39	.00			
Physical $aggression^{PC}$	0.05	1.20	.00				0.06	1.25	.00				0.05	1.22	.00			
Family income	-0.04	-0.97	.00				-0.03	-0.55	.00				-0.01	-0.16	.00			
Mother age	0.05	0.82	.00				0.10	1.38	.00				0.12	1.78	.01			
Partner age	-0.02	-0.40	.00				-0.05	-0.72	.00				-0.12	-1.85	.01			
Mother ethnicity	0.07	1.08	.00				-0.00	-0.04	.00				0.06	0.81	.00			
Partner ethnicity	-0.03	-0.48	.00				-0.05	-0.71	.00				-0.10	-1.41	.00			
Child age	-0.17	-4.36***	.04				-0.05	-1.03	.00				-0.15	-3.41**	.02			
Child gender	-0.04	-1.14	.00				0.06	1.29	.00				-0.13	-3.14**	.02			

Note. P = previous. Cu = current. PC = parent-to-child. Ethnicity: 0 = *Black*, 1 = *non-Black*. Gender: 0 = *female*, 1 = *male*. *Step 2 child threat appraisals*: F (12, 493) = 17.81, $p < .001$; *Step 2 child depressive symptoms*, F (12, 493) = 4.46, $p < .001$; *Step 2 child anxious symptoms*, F (12, 493) = 7.46, $p < .001$.

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

FIGURES

Figure 1

Interactive Effects of Previous Physical and Current Psychological IPV on Child Threat Appraisals (N = 506)

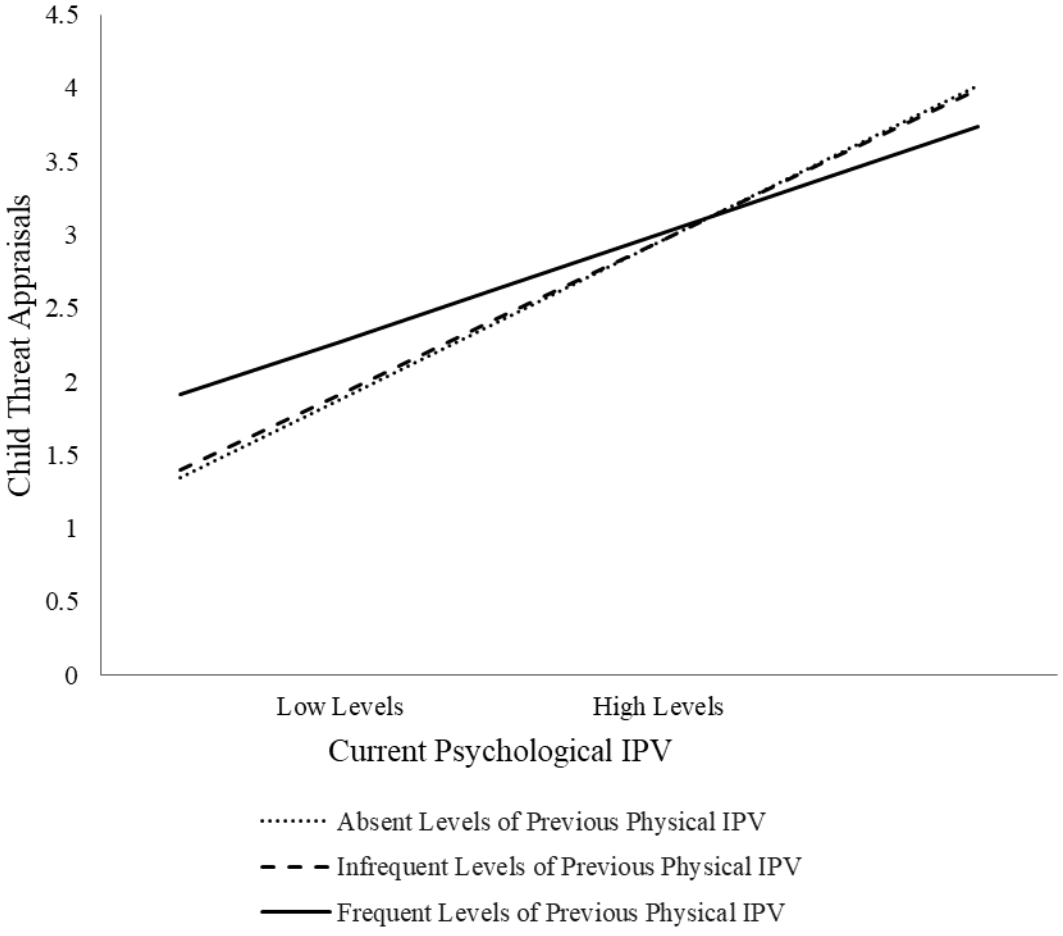
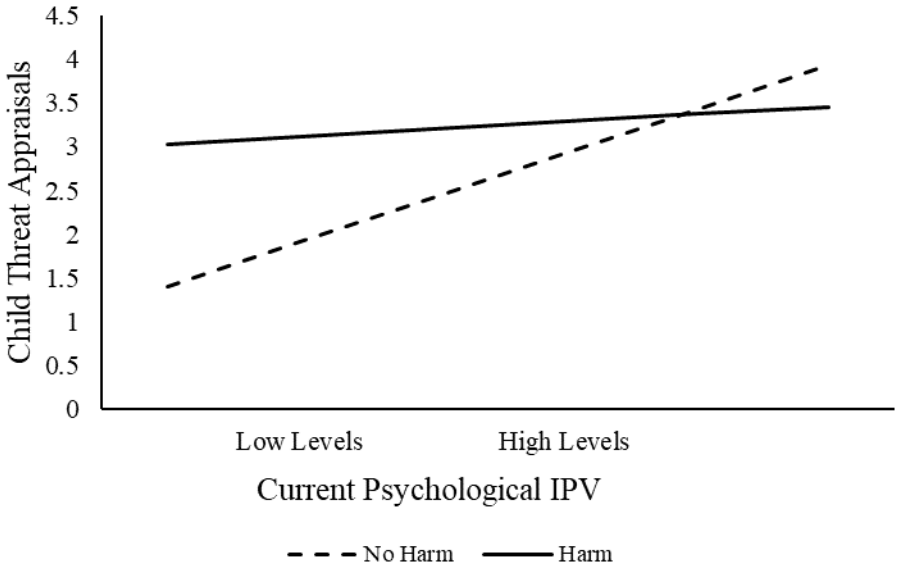


Figure 2

Interactive Effects of the Harmfulness of Previous Physical IPV and Current Psychological IPV on Child Threat Appraisals (N = 506)



APPENDICES TABLE OF CONTENTS

Appendix A1: Index of Psychological Abuse

All parents have disagreements or arguments sometimes. Here is a list of things that adults sometimes do or say to each other when they argue. I want to know if your mom and ____ (*any partner*) have done or said those things to each other when they were having an argument in the **past 6 months**.

When your mom and _____ (*any partner*) argue, does _____ (*any partner*) ever:	*Never*	*Once or twice*	*Sometimes*	*All the time*
1. Call your mom names?				
2. Yell or scream at your mom?				
3. Stop talking to your mom or ignore her?				
4. Say that he is going to hurt your mom?				
5. Punish or yell at you because he is mad at your mom?				
6. Say that he is going to take you or your brothers or sisters away from your mom?				
7. Tell your mom that he is going to move out of the house or get a divorce?				
8. Tell your mom that she is not a very good mother to you or your brothers or sisters?				
When your mom and _____ (*any partner*) argue, does your mom ever:	*Never*	*Once or twice*	*Sometimes*	*All the time*
1. Call _____ (*any partner*) names?				
2. Yell or scream at _____ (*any partner*)?				
3. Stop talking to _____ (*any partner*) or ignore him?				
4. Say that she is going to hurt _____ (*any partner*)?				
5. Punish or yell at you because she is mad _____ (*any partner*)?				
6. Say that she is going to take you or your brothers or sisters away from him?				

7. Tell _____ (*any partner*) that she is going to move out of the house or get a divorce?				
8. Tell _____ (*any partner*) that he is not a very good dad to you or your brothers or sisters?				

Appendix A2: Conflict Tactics Scale-Revised, Physical Assault

Here is a list of things that sometimes happen when parents have arguments, fights, or disagreements. I want to know if these things happen in your family and how often.

How often did _____ (*any partner*) do these things to your mom in the <u>past 6 months</u>?	*Never*	*Once or twice*	*Sometimes*	*All the time*
1. Throw something at your mom that could hurt?				
2. Push, grab, or shove your mom?				
3. Slap your mom?				
4. Kick, bite, or hit your mom with a fist?				
5. Hit, or try to hit your mom with something?				
6. Beat up your mom?				
7. Use a knife or fire a gun at your mom?				
How often did your mom do each of the following to _____ (*any partner*) in the <u>past 6 months</u>?	*Never*	*Once or twice*	*Sometimes*	*All the time*
1. Throw something at _____ (*any partner*) that could hurt?				
2. Push, grab, or shove _____ (*any partner*)?				
3. Slap _____ (*any partner*)?				
4. Kick, bite, or hit _____ (*any partner*) with a fist?				
5. Hit, or try to hit _____ (*any partner*) with something?				
6. Beat up _____ (*any partner*)?				
7. Use a knife or fire a gun at _____ (*any partner*)?				
1. Was anyone hurt when _____ ?	No		Yes	

Appendix A3: Child Behavior Checklist, Internalizing Symptoms

Below is a list of items that describe children. Please indicate whether the statement is **very true or often true** of *(target child)*, **somewhat or sometimes true** of *(target child)*, or **not true** of *(target child)* now or within the **PAST 6 MONTHS.** Please answer all items as well as you can, even if some do not seem to apply.

	Not true (as far as you know)	*Somewhat or sometimes true*	*Very true or often true*
1. Likes to be alone			
2. Refuses to talk			
3. Secretive, keeps things to self			
4. Shy or time			
5. Stares blankly			
6. Sulks (pouts) a lot			
7. Underactive, slow moving, or lacks energy			
8. Unhappy, sad, or depressed			
9. Withdrawn, doesn't get involved with			
10. Worrying			
11. Feels dizzy			
12. Overtired			
13. Physical problems without known medical cause:			
13a. Aches or pains			
13b. Headaches			
13c. Nausea, feels sick			
13d. Problems with eyes			
13e. Rashes or skin problems			
13f. Stomach aches or cramps			
13g. Vomiting, throwing up			
14. Complains of loneliness			
15. Cries a lot			
16. Feels s/he has to be perfect			
17. Fears s/he might think or do something bad			

18. Feels or complains that no one loves			
19. Feels others are out to get him/her			
20. Feels worthless or inferior			
21. Nervous, high-strung, or tense			
22. Too fearful or anxious			
23. Feels too guilty			
24. Self-conscious or easily embarrassed			
25. Suspicious			
26. Unhappy, sad, or depressed			

Appendix A4: Children's Depression Inventory

Kids sometimes have different feelings and ideas. This form lists the feelings and ideas in groups. From each group, pick one sentence that describes you best for the **past two weeks**. After you pick a sentence from the first group, we will go on to the next group. There is no right answer or wrong answer. Just pick the sentence that best describes the way you have been recently.

Here is an example of how this form works. Let's try it. Pick the sentence that describes you best.

EXAMPLE: ☐ 0 I read books all the time. ☐ 1 I read books once in a while.
☐ 2 I never read books.

Remember, pick out sentences that describe your feelings and ideas in the past **two weeks**.

1.	☐ 0	I am sad once in a while.	15.	☐ 0	I have to push myself all the time to do my schoolwork.
	☐ 1	I am sad many times.		☐ 1	I have to push myself many times to do my schoolwork.
	☐ 2	I am sad all the time.		☐ 2	Doing schoolwork is not a big problem.
2.	☐ 0	Nothing will ever work out for me.	16.	☐ 0	I have trouble sleeping every night.
	☐ 1	I am not sure if things will work out for me.		☐ 1	I have trouble sleeping many nights.
	☐ 2	Things will work out for me O.K.		☐ 2	I sleep pretty well.
3.	☐ 0	I do most things O.K.	17.	☐ 0	I am tired once in a while.
	☐ 1	I do most things wrong.		☐ 1	I am tired many days.
	☐ 2	I do everything wrong.		☐ 2	I am tired all the time.
4.	☐ 0	I have fun in many things.	18.	☐ 0	Most days I do not feel like eating.
	☐ 1	I have fun in some things.		☐ 1	Many days I do not feel like eating.
	☐ 2	Nothing is fun at all.		☐ 2	I eat pretty well.
5.	☐ 0	I am bad all the time.	19.	☐ 0	I do not worry about aches and pains.
	☐ 1	I am bad many times.		☐ 1	I worry about aches and pains many times.
	☐ 2	I am bad once in a while.		☐ 2	I worry about aches and pains all the time.
6.	☐ 0	I think about bad things happening to me once in a while.	20.	☐ 0	I do not feel alone.
	☐ 1	I worry that bad things will happen to me.		☐ 1	I feel alone many times.

	☐ 2	I am sure that terrible things will happen to me.		☐ 2	I feel alone all the time.
7.	☐ 0	I hate myself.	21.	☐ 0	I never have fun at school.
	☐ 1	I do not like myself.		☐ 1	I have fun at school only once in a while.
	☐ 2	I like myself.		☐ 2	I have fun at school many times.
8.	☐ 0	All bad things are my fault.	22.	☐ 0	I have plenty of friends.
	☐ 1	Many bad things are my fault.		☐ 1	I have some friends, but I wish I had more.
	☐ 2	Bad things are not usually my fault.		☐ 2	I do not have any friends.
9.	☐ 0	I do not think about killing myself.	23.	☐ 0	My schoolwork is all right.
	☐ 1	I think about killing myself, but I would not do it.		☐ 1	My schoolwork is not as good as before.
	☐ 2	I want to kill myself.		☐ 2	I do very badly in subjects I used to be good in.
10.	☐ 0	I feel like crying everyday.	24.	☐ 0	I can never be as good as other kids.
	☐ 1	I feel like crying many days.		☐ 1	I can be as good as other kids if I want to.
	☐ 2	I feel like crying once in a while.		☐ 2	I am just as good as other kids.
11.	☐ 0	Things bother me all the time.	25.	☐ 0	Nobody loves me.
	☐ 1	Things bother me many times.		☐ 1	I am not sure if anybody loves me.
	☐ 2	Things bother me once in a while.		☐ 2	I am sure that somebody loves me.
12.	☐ 0	I like being with people.	26.	☐ 0	I usually do what I am told.
	☐ 1	I do not like being with people many times.		☐ 1	I do not do what I am told most times.
	☐ 2	I do not want to be with people at all.		☐ 2	I never do what I am told.
13.	☐ 0	I cannot make up my mind about things.	27.	☐ 0	I get along with people.
	☐ 1	It is hard to make up my mind about things.		☐ 1	I get into fights many times.
	☐ 2	I make up my mind about things easily.		☐ 2	I get into fights all the time.
14.	☐ 0	I look O.K.			

☐ 1	There are some bad things about my looks.
☐ 2	I look ugly.

Appendix A5: Revised Manifest Anxiety Scale

Here are statements that describe how some children think and feel. Some of them are true about how you think and feel, so you will want to answer YES. Some are not true about how you think and feel, so you will want to answer NO. There are no right and wrong answers.

	No	*Yes*
1. You have trouble making up your mind		
2. You get nervous when things do not go the right way for you		
3. Others seem to do things easier than you can		
4. You like everyone you know		
5. Often you have trouble getting your breath		
6. You worry a lot of the time		
7. You are afraid of a lot of things		
8. You are always kind		
9. You get mad easily		
10. You worry about what your parents will say to you		
11. You feel that others do not like the way you do things		
12. You always have good manners		
13. It is hard for you to get to sleep at night		
14. You worry about what other people think about you		
15. You feel alone even when there are people with you		
16. You are always good		
17. Often you feel sick in your stomach		
18. Your feelings get hurt easily		
19. Your hands feel sweaty		
20. You are always nice to everyone		
21. You are tired a lot		
22. You worry about what is going to happen		
23. Other people are happier than you		
24. You tell the truth every single time		
25. You have bad dreams		
26. Your feelings get hurt easily when you are fussed at		
27. You feel someone will tell you that you do things the wrong way		
28. You never get angry *(Do you ever get angry?)*		

29. You wake up scared some of the time			
30. You worry when you go to bed at night			
31. It is hard for you to keep your mind on your school work			
32. You never say things you shouldn't *(Do you ever say things you shouldn't?)*			
33. You wiggle in your seat a lot			
34. You are nervous			
35. A lot of people are against you			
36. You never lie *(Do you ever lie?)*			
37. You often worry about something bad happening to you			

Appendix A6: Children's Perception of Interparental Conflict

I'm going to read you some questions about your family. In every family, there are times when moms and dads and kids get along, and times when they have disagreements or arguments. After I read each statement, say "YES" if the statement describes you or your family, and "NO" if the statement does not describe you or your family in the past 6 months. All families are different, so kids answer these questions differently. There are no right or wrong answers; I just want to know what you think about each question.

	No	*Yes*
1. You get scared when _____ *(ANY partner) &* your mom have disagreements		
2. When _____ *(ANY partner) &* your mom argue you worry about what will happen to you		
3. When _____ *(ANY partner) &* your mom argue you are afraid something bad will happen		
4. When _____ *(ANY partner) &* your mom argue you worry that one of them will get hurt		
5. When _____ *(ANY partner) &* your mom argue you worry that they might get divorced *(or separate*)		
6. When _____ *(ANY partner) &* your mom have disagreements you are afraid they will yell at you		

Appendix B: Additional Measures

Physical IPV. At the first and second assessments, mothers completed the Conflicts Tactics Scale Revised (Straus et al., 1996), which assesses the frequency of mothers' and mothers' partners' perpetration of minor and severe acts of physical IPV over the previous six months. Responses were collected on a 10-point scale (0 = *not in the past 6 months*, 1 = *once*, 2 = *two to three times*, 3 = *four to five times*, 4 = *once a month*, 5 = *two to three times a month*, 6 = *one to two times a week*, 7 = *three to four times a week*, 8 = *five to six times a week*, 9 = *every day*). Responses were summed, aggregating across mothers' reports of their own and their partners' perpetration. The physical assault subscale of the CTS-2 has been previously found to predict greater child internalizing problems (Levendosky & Graham-Bermann, 1998). In the current study, the physical assault subscale of the CTS-2 had an alpha of .80 at the first assessment and .81 at the second assessment.

Physical IPV ever occurred. At the first assessment, if mothers did not indicate on the CTS-2 physical assault subscale that an incident of physical IPV had occurred in the previous six months, they were asked if it had ever occurred (0 = *no*, 1 = *yes*). These responses were summed and then dichotomized to reflect whether physical IPV had ever occurred (0 = *IPV never occurred*, 1 = *IPV occurred*) between mothers and their partners.

Psychological IPV. At the first and second assessments, mothers completed the 48-item Index of Psychological Abuse (IPA; Sullivan et al., 1991) on the frequency of mothers' and mothers' partners' perpetration of psychological IPV over the past six months. Responses were collected on a 4-point scale (0 = *never*, 1 = *rarely*, 2 = *sometimes*, 3 = *often*) and summed into a total frequency score, aggregating across mothers' reports of their own and their partners' perpetration of psychological IPV. The IPA has been previously found to predict greater child

internalizing problems (Jouriles et al., 2015). In the current study, mother reports on the IPA had an alpha of .91 at the first assessment, .94 at the second assessment.

Appendix C: Supplementary Analyses

Supplementary Analysis Plan

We conducted supplementary analyses to examine: (1) child gender (1 = *female*, 2 = *male*) and race/ethnicity (0 = *Hispanic*, 1 = *non-Hispanic*) as moderators of the interactive effects of previous physical IPV and current psychological IPV, (2) mother reports of physical and psychological IPV, (3) mother reports of whether whether previous physical IPV had ever occurred (0 = *previous physical IPV never occurred*, 1 = *previous physical IPV occurred*), (4) conceptualizations of previous physical IPV using child-reports of whether previous physical IPV was severe (dummy-coded as 0 = *no IPV*, 1 = *mild IPV only*, 2= *severe IPV*) using hierarchical regressions, (5) conceptualizations of mother- and child-reported child internalizing problems as clinical versus non-clinical levels, using logistic regressions, and (6) the quadratic relation between previous physical IPV and child threat appraisals. We present odds ratios as an index of effect size of predictor variables in logistic regressions. We present the *R*-squared change as an indicator of whether interactions between current psychological IPV and dummy-coded harm or severity variables contribute unique variance to child adjustment indices.

Child-reported mother-reported physical and psychological IPV were skewed greater than one, and were transformed using the procedure that best reduced skewness. Square root transformations were used for mother-reported psychological IPV, and log transformations were used for mother-reported physical IPV.

Descriptives

According to mother's reports of IPV, 21% (104/506) of families in the current study experienced previous physical IPV. Among mothers reporting previous physical IPV, 68% (71/104) reported that the IPV occurred during one instance of conflict, 25% (26/104) reported

that the previous physical IPV occurred over two instances of conflict, and 7% (7/104) reported that the previous physical IPV occurred over three or more instances of conflict. Additionally, 41% (209/506) of mothers reported experiencing physical IPV prior to the timeframe examined in the current study. Additionally, 93% (472/506) of mothers reported current psychological IPV.

We examined convergence of mother and child reports of previous physical IPV and current psychological IPV. Of the 133 children who reported previous physical IPV, 36% (48/133) had mothers who also reported previous physical IPV. Of the 350 children who reported current psychological IPV, 91% (320/350) had mothers who also reported current psychological IPV. Correlations between mother-reported and child-reported physical and psychological IPV are presented in Table D1.

Additionally, 80% (407/506) of mothers endorsed that their children had experienced some parent-to-child physical aggression; 69% (351/506) reported their children experienced corporal punishment, 52% (263/506) reported their children experienced severe physical assault, and 0.5% (2/506) reported their children experienced very severe physical assault.

Exploratory Analyses

Gender did not moderate the interaction between child-reported previous physical IPV and current psychological IPV on child threat appraisals, b = -0.10, $t(489)$ = -0.44, p = 0.66, sr^2 = .00, mother-reported child internalizing symptoms, b = 0.54, $t(489)$ = 0.47, p = .64, sr^2 = .00, child-reported depressive symptoms, b = -.04, $t(489)$ = -0.01, p = .95, sr^2 = .00, child-reported anxious symptoms, b = 0.28, $t(489)$ = 0.35, p = .73, sr^2 = .00.

Ethnicity did not moderate the interaction between child-reported previous physical IPV and current psychological IPV on child threat appraisals, b = -0.32, $t(488)$ = -0.97, p = .33, sr^2 = .00, mother-reported child internalizing symptoms, b = 0.67, $t(488)$ = 0.40, p = .67, sr^2 = .00,

child-reported depressive symptoms, b = -0.72, t(488) = -0.82, p = .41, sr^2 = .00, child-reported anxious symptoms, b = -0.47, t(488) = -0.40, p = .67, sr^2 = .00.

Mother-reported previous physical IPV did not moderate the relation between mother-reported current psychological IPV and child threat appraisals, b = -0.12, t(492) = -1.48, p = .14, sr^2 = .00, mother-reported child internalizing symptoms, b = -0.57, t(492) = -1.70, p = .09, sr^2 = .01, child-reported depressive symptoms, b = -0.02, t(492) = 0.88, p = .38, sr^2 = .00, child-reported anxious symptoms, b = -0.22, t(505) = -0.77, p = .44, sr^2 = .00.

Mothers' reports of whether they ever experienced previous IPV did not moderate the relation between mother-reported current psychological IPV and child threat appraisals, b = -0.01, t(492) = -0.11, p = .92, sr^2 = .00, mother-reported child internalizing symptoms, b = 0.13, t(492) = 0.26, p = .79, sr^2 = .00, child-reported depressive symptoms, b = -0.01, t(492) = -0.28, p = .78, sr^2 = .00, and child-reported anxious symptoms, b = -0.59, t(492) = -1.53, p = .13, sr^2 = .00.

The interaction between child reports of previous physical IPV severity and current psychological IPV did not explain additional variance in predicting child threat appraisals, ΔF (2, 492) = 3.01, p = .05, ΔR^2 = .00, mother-reported child internalizing symptoms, ΔF (2, 492) = 0.75, p = .47, ΔR^2 = .00, child-reported depressive symptoms, ΔF (2, 492) = 0.48, p = .62, ΔR^2 = .00, and child-reported anxious symptoms, ΔF (2, 492) = 0.44, p = .64, ΔR^2 = .00.

Previous physical IPV and current psychological IPV did not interact to predict clinical versus non-clinical levels of mother-reported child internalizing problems, b = 0.30, OR = 1.35, 95% CI [0.70, 2.61], p = .37, child-reported depressive symptoms, b = -0.21, OR = 0.81, 95% CI [0.55, 1.21], p = .31, and child-reported anxious symptoms, b = 0.40, OR = 1.50, 95% CI [0.75, 3.00], p = .26.

Previous physical IPV exhibited a curvilinear relation with child threat appraisals, b = -0.38, $t(493) = -2.33$, $p = .02$, $sr^2 = .01$, such that the relation between previous physical IPV and child threat appraisals was stronger at low versus high levels of previous physical IPV. At absent levels of previous physical IPV, previous physical IPV was related to greater child threat appraisals, $b = 1.02$, $t(493) = 2.80$, $p = .01$, $sr^2 = .02$. At infrequent levels of previous physical IPV, greater previous physical IPV was related to greater child threat appraisals, $b = 0.72$, $t(493) = 2.88$, $p = .004$, $sr^2 = .04$. At frequent levels of previous physical IPV, previous physical IPV was not related to child threat appraisals, $b = 0.17$, $t(493) = 1.20$, $p = .23$, $sr^2 = .00$ (see Figure D1).

Appendix D: Supplementary Tables and Figures

Table D1

Means, Standard Deviations, and Correlations among Child and Mother Reports of IPV (N = 506)

Variable	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*Mean (SD)*
1. Physical IPV$^{P, M}$	—							0.81 (2.35)
2. Physical IPV$^{Cu, M}$	.44**	—						0.60 (2.06)
3. Psychological IPV$^{P, M}$	.46**	.37**	—					16.20 (13.72)
4. Psychological IPV$^{Cu, M}$	.35**	.50**	.76**	—				13.84 (14.85)
5. Physical IPV$^{P, C}$	.33**	.27**	.24**	.26**	—			1.22 (3.17)
6. Physical IPV$^{Cu, C}$	.19**	.27**	.17**	.21**	.48**	—		1.09 (3.00)
7. Psychological IPV$^{P, C}$	.25**	.21**	.35**	.32**	.39**	.28**	—	4.75 (5.20)
8. Psychological IPV$^{Cu, C}$	.22**	.23**	.31**	.31**	.31**	.45**	.55**	5.03 (5.83)

Note. P = previous, Cu = current, PC = parent-to-child; Mother reports were used for variables in row/column 1-4, and child reports were used for variables in row/column 5-8. All means are for raw data, prior to any data transformations.
*$p < .05$, **$p < .01$

Figure D1

Results of Quadratic Regression Predicting Child Threat Appraisals (N = 506)