

# The Impact of Intimate Partner Violence and Additional Traumatic Events on Trauma Symptoms and PTSD in Preschool-Aged Children

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Children exposed to intimate partner violence (IPV) are at increased risk for developing traumatic stress symptoms and posttraumatic stress disorder (PTSD). Unfortunately, children who witness IPV are often exposed to additional traumatic events. Previous research has indicated that approximately one third of children experience 2 or more direct victimizations each year, and that exposure to one type of victimization places children at risk for exposure to additional types of victimization. Yet little is known about the impact of these additional traumas on children's functioning. For a sample of 120 preschool children (age 4–6 years) exposed to IPV in the past 2 years, 38% were exposed to additional traumatic events, including sexual assaults by family members, physical assaults, serious accidents, and/or life-threatening illnesses. Those exposed to both IPV and additional traumatic events had higher rates of PTSD diagnoses, traumatic stress symptoms ( $d = 0.96$ ), and internalizing ( $d = 0.86$ ) and externalizing behavior ( $d = 0.47$ ) problems, than those exposed to IPV alone. We also compared DSM-IV diagnostic criteria to proposed criteria for evaluating traumatic stress in preschool-aged children. Results revealed the importance of conducting a complete assessment of traumatic events prior to treating children exposed to IPV.

Intimate partner violence (IPV) is defined as threatened, attempted, or completed, physical, sexual, and emotional abuse between partners (Centers for Disease Control and Prevention, 2006). Roughly 15.5 million American youth live in homes where IPV has occurred in the past year (McDonald, Jouriles, Ramisetty-Mikler, Caetano, & Green 2006). Many of these children have faced chronic exposure to IPV since infancy (Bogat, DeJonghe, Levendosky, Davidson, & von Eye, 2006). Further, the majority of child witnesses to IPV are under the age of 6 years (Fusco & Fantuzzo, 2009). This early and chronic exposure places children at risk for developing problems in behavioral, emotional, and social functioning that can impede their development (e.g., Sternberg, Baradaran, Abbott, Lamb, & Guterman, 2006).

Such children may show traumatic stress reactions, as research indicates that between 17% and 33% of school-age children meet clinical criteria for posttraumatic stress disorder (PTSD; Graham-Bermann & Seng, 2005). Children may begin to express trauma symptoms following IPV exposure as

early as age 1 (Bogat et al., 2006), making the assessment of PTSD in early childhood a priority. Although researchers have developed scales designed to assess preschoolers' trauma exposure and symptoms, much remains to be discovered about the impact of exposure to multiple traumatic events (complex violence exposure) for preschoolers exposed to IPV (Levendosky, Huth-Bocks, Semel, & Shapiro, 2002; Scheeringa & Zeanah, 1994).

Although no studies of which we are aware have directly addressed exposure to additional traumatic events in preschoolers who witness IPV, some research exists on complex violence exposure, which provides the current study with a strong theoretical underpinning. Studies on childhood exposure to traumatic events indicate high prevalence rates, with over 60% of American children directly experiencing or witnessing a victimization in the past year (Finkelhor, Turner, Ormord, & Hamby, 2009). Briggs-Gowan and colleagues (2010) examined preschoolers' exposure in a clinically referred sample. Although not all of these children were exposed to IPV, they found that preschoolers' exposure to violence and to noninterpersonal trauma were significantly related, thus providing preliminary support that children living in families experiencing IPV may be more likely to experience other types of traumatic events.

Further, exposure to multiple events has been linked to commensurately higher levels of adjustment difficulties than for those experiencing one traumatic event (Finkelhor et al., 2009). One large-scale study of adults indicated that those who experienced multiple exposures to violence had significantly increased adjustment and health problems (Felitti et al., 1998).

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In a retrospective study by Cloitre and colleagues (2009), adults who had multiple types of violence exposure/abuse as children had increased symptom complexity as the number of traumas increased. Similarly, studies of older children have shown that those exposed to multiple types of violence are at significantly greater risk for adjustment problems than those experiencing only a single type of violence (Margolin, Vickerman, Oliver, & Gordis, 2010; Sternberg et al., 2006). When McCloskey and Walker (2000) assessed children who were abused by a parent in addition to witnessing violent events they found children with dual exposures were at particular risk for developing PTSD relative to those exposed to IPV alone. The increased adjustment difficulty associated with exposure to multiple events emphasizes the importance of evaluating other exposures in children exposed to IPV.

Children living in homes with IPV are at great risk for other types of interpersonal trauma. Children are 2.5 times more likely to be physically abused and almost 5 times more likely to be sexually abused than are children living in a home without IPV (Zolotor, Theodore, Coyne-Beasley, & Runyan, 2007). Numerous studies have documented an association between IPV and aggressive parenting, including overly harsh discipline and abuse (see Jouriles, McDonald, Slep, Heyman, & Garrido, 2008, for a review). These findings are reinforced by a large-scale study indicating that of children receiving trauma treatment, 78% experienced multiple or prolonged traumas, with an average of three traumatic experiences (Spinazzola et al., 2005). Further, research indicates that interpersonal traumas are more distressing than are noninterpersonal traumas, and the experience of interpersonal trauma places children at even greater risk of developing PTSD (Charuvastra & Cloitre, 2007). Together, these studies provide evidence that preschool-aged children living in violent homes may be at great risk for experiencing additional traumatic events. There is also a growing recognition that certain events not considered traumatic for adults may be traumatic for preschoolers (e.g., the death of a pet, assault by a sibling; Graham-Bermann et al., 2008). Thus, a comprehensive evaluation of events, including developmentally appropriate events, is needed.

Children who experience traumatic events are not only at high risk for developing PTSD, but may also suffer from a broad range of problems that challenge their functioning. A recent meta-analysis revealed that school-aged children exposed to both IPV and child maltreatment had approximately twice the risk of internalizing problems and 1.5 times the risk for aggression compared to children exposed to either form of violence alone (Sternberg et al., 2006). The longer-term effects of early exposure can also include delinquency, substance abuse, and depression in adolescents (Kilpatrick, Ruggiero, Acierno, Saunders, Resnick, & Best, 2003). When Felitti and colleagues conducted retrospective studies of adults exposed to adverse childhood experiences they found associations with negative physical and mental health outcomes in adulthood, as well as poorer social relationships (Dube et al., 2005; Felitti et al., 1998).

There is a dearth of information on the impact of IPV and other events on preschool-aged children. Because this age group is more likely to be present when family violence occurs, and such exposure increases the risk for other traumatic exposures, this is an especially important age group to evaluate (Fusco & Fantuzzo, 2009; Finkelhor et al., 2009). In a review, Howell (2011) concluded that younger children exposed to IPV have difficulty expressing emotions, are more aggressive, and have less secure attachments than children without IPV exposure. After preschoolers witness IPV, mothers commonly report a number of posttraumatic stress symptoms, such as their children repeatedly talking about the event, becoming clingy, experiencing an increase in nightmares, and having recurring thoughts about the traumatic event (Graham-Bermann et al., 2008).

Briggs-Gowan and colleagues (2010) examined the impact of different types of trauma on children and found that violence exposure was a significant predictor of children's psychiatric diagnoses, but noninterpersonal trauma did not significantly contribute to such problems after controlling for violence exposure. Although such a study provides insight into the relationships between trauma exposure and mental health, this and other studies of preschoolers fail to consider the impact of cumulative trauma. Further, no study of which we know has examined the impact of cumulative traumatic exposure in a sample of preschoolers living in homes where IPV is present.

In addition to examining the cumulative effect of exposure to many traumatic events on preschoolers' adjustment and traumatic stress, the current study evaluates children's PTSD symptoms using criteria according to the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.; *DSM-IV-TR*; American Psychiatric Association [APA], 2000) and criteria for assessing trauma symptoms in young children proposed by Scheeringa, Peebles, Cook, and Zeanah (2001). Because *DSM* criteria were historically created for adult war veterans and rape victims, research has indicated that such criteria may not fully describe trauma symptoms following other traumatic events and may not be developmentally appropriate for young children. Studies show that preschool and school-aged children experience significantly less avoidance symptoms than either physiological arousal or reexperiencing symptoms (e.g., Levendosky et al., 2002).

Scheeringa and colleagues (2001) developed the Posttraumatic Stress Disorder Semi-Structured Interview and Observational Record for Infants and Young Children to better assess traumatic stress symptoms in younger children and included symptoms unique to children, such as "loss of previously acquired developmental skills," "difficulties toileting," and "new fears." Other criteria were reworded from the *DSM-IV-TR* criteria to be more developmentally appropriate, i.e., altering "diminished interest in significant activities" to "constriction of play." Based on previous research on patterns of PTSD symptoms in young children, Scheeringa, Peebles, Cook, & Zeanah (2001) also proposed that young children only be

required to present one avoidance symptom to obtain a PTSD diagnosis rather than the currently required three. These modifications result in diagnosing more cases of PTSD in children than the current adult-oriented criteria typically used in research (Levendosky et al., 2002).

The primary aim of the present study was to examine the impact of additional traumatic events on children exposed to IPV. To our knowledge, no research has comprehensively evaluated the cumulative impact of different types of events on preschoolers who witness IPV. The current study provided information on how Scheeringa et al.'s (2001) developmental diagnostic algorithm differs from the *DSM-IV-TR* system and may impact how children present with PTSD and related problems following complex violence exposure. We evaluated the following hypotheses: (a) children exposed to IPV will have higher rates of PTSD diagnosis when using the Scheeringa and colleagues' developmental criteria than when using the *DSM-IV-TR* diagnostic guidelines; (b) PTSD diagnosis and the number of trauma symptoms will be positively associated with greater internalizing and externalizing behavior problems; (c) children exposed to IPV and additional traumatic events will experience more trauma symptoms and have higher rates of diagnosed PTSD when using either diagnostic measure than children exposed to IPV alone; and (d) children with exposure to additional traumatic events will have significantly higher levels of internalizing and externalizing adjustment problems than children exposed to IPV alone.

## Method

### Participants and Procedure

Following approval by the University of Michigan Institutional Review Board, women in a midwestern state were recruited by flyers and brochures distributed at low-income housing units, mental health agencies, and stores, or by announcements to parents in newsletters, newspaper advertisements, and with assistance from the department of social services. Although IPV affects individuals in all social classes, research shows that it occurs more often among persons with lower annual household incomes, with families earning less than \$7,500 experiencing an average of 13 intimate partner victimizations per family and households with an income of \$50,000 or more experiencing two victimizations per family (Rennison & Planty, 2003). Therefore, recruitment strategies targeted low-income housing. These recruitment methods gave the study the advantage of including women both from abused women's shelters and those living in the community.

A toll-free telephone number was provided for women to receive information about the study. Screening determined whether their child was in their custody, between the ages of 4 and 6 years, and if they experienced any physical IPV within the last 2 years. Women who contacted the study coordinator, regardless of qualification for the project, were provided

with information on local and affordable resources for families exposed to violence.

Mothers were told that they could set up an interview at the time and location of their choice. Interviews occurred primarily at a shelter for abused women and their children, and others took place in the woman's home if she was not living with an abusive partner. Interviews took approximately 1.5 hours and women received \$25 for their time. Interviewers were psychologists and graduate and undergraduate research assistants trained in research ethics and clinical interviewing with at-risk populations. Standardized measures were administered in structured interview format to include women with a range of reading abilities.

The sample of 120 children ages 4–6 years ( $M = 4.93$ ,  $SD = 0.86$ ) consisted of European American (38%), African American (37%), Latino/a (5%), and biracial (20%) children. There were 53% boys. Sixty percent of mothers completed some college or vocational school, and 40% had a high school education or less. Mothers' monthly income was low, but varied ( $M = \$1,414$ ,  $SD = \$1,549$ ). Relationship status indicated 43% single, 25% separated, 16% married, 9% divorced, and 7% living with but not married to their partner.

### Measures

**IPV.** The Revised Conflict Tactics Scale (CTS2; Straus, Hamby, Bone-McCoy, & Sugarman, 1996) consists of 78 items that measure the severity of psychological, physical, and sexual violence across dating, cohabitation, and marital relationships. The 39 items concerning an intimate partner's violence towards the mother were included. Mothers were asked to indicate how often their partner used each violence tactic toward them within the last year using a 7-point scale (ranging from 0 = *this has never happened* to 6 = *occurred more than twenty times*, with 7 = *Not in the past year but it did happen before*). Only scores 0–6 were used to calculate the scale's five subcategories including Physical Assault, Psychological Aggression, Negotiation, Injury, and Sexual Coercion. Internal consistency ( $\alpha$ ) for the scales ranges from .79 to .95. The CTS2 also has demonstrated construct and discriminant validity (Straus et al., 1996). The present study  $\alpha$  coefficients were .81 for the Total Scale, Negotiation = .65, Psychological Aggression = .60, Physical Assault = .72, Sexual Coercion = .80, and Injury = .62.

**Child adjustment.** Mothers completed the Child Behavior Checklist/4–18 (CBCL; Achenbach, & Edlebrook, 1993). The measure consists of two broad problem scales and a total problems scale: Internalizing Behaviors (anxiety/depression, somatic complaints, and withdrawal) and Externalizing Behaviors (aggression and delinquency). The child's behavior is assessed on a 3-point scale: 0 = *not true*, 1 = *somewhat true*, and 2 = *very true or often true*. The reliability of the Internalizing and Externalizing Problems scales is reported as .89 and .93,

respectively (Achenbach, 1991). For the present study,  $\alpha = .91$  for both scales.

**Traumatic events.** The Posttraumatic Stress Diagnostic Scale (PDS) consists of 49 items that together allow for a presumed diagnosis of PTSD in adults (Foa, 1995). The first 13 questions ask about exposure to a variety of traumatic events. The scale was amended for use in the present study by asking mothers whether or not their preschool-aged child experienced or witnessed any of the traumatic events at any point in their lives. Events included being in a serious accident, assaulted by a family member or stranger, sexually abused, witnessed a fire or explosion, or had a life-threatening illness. Mothers were also given an opportunity to list other additional events that their child had ever experienced.

**Posttraumatic stress symptoms.** Scheeringa et al. (2001) created a 31-item questionnaire designed specifically for assessing traumatic stress symptoms in young children. Based on the *DSM-IV-TR* PTSD criteria for adults, The Posttraumatic Stress Disorder Semi-Structured Interview and Observational Record for Infants and Young Children (Scheeringa & Zeanah, 1994; Scheeringa et al., 2001) is a developmentally appropriate measure. In the present study, mothers were first asked whether their child witnessed a traumatic event. Following confirmation, mothers were asked about the presence of different traumatic stress symptoms, and if present to give a specific behavioral example. A team of trained clinicians then evaluated each answer to determine whether the example met threshold for a trauma symptom. To obtain a PTSD diagnosis, in accordance with Scheeringa et al.'s measure, children had to display at least one Category B reexperiencing symptom (e.g., being upset when reminded about the event), at least one Category C avoidance symptom (e.g., unable to remember certain parts of the trauma) and at least two Category D physiological arousal symptoms (e.g., increased irritability). The same criteria apply to the *DSM-IV-TR* with the exception of having three avoidance symptoms for a diagnosis (APA, 2000). There is also a Category E in this measure, an experimental cluster of proposed symptoms of developmental trauma (e.g., separation anxiety, regression of skills). For both algorithms, symptoms must have occurred for at least one month following the traumatic event. Symptom subscale reliabilities were  $\alpha = .41$  for reexperiencing,  $\alpha = .60$  for avoidance,  $\alpha = .71$  for arousal, and  $\alpha = .59$  for the experimental cluster of symptoms; total PTSD scale reliability was .81.

### Data Analyses

Chi-square analyses were used to determine whether children exposed to IPV would have higher rates of PTSD diagnosis when using Scheeringa et al.'s developmental criteria than when using the *DSM-IV-TR* diagnostic criteria. Similar analyses were

used to ascertain whether children exposed to IPV plus additional traumatic events had significantly higher rates of diagnosed PTSD when using either diagnostic measure than children exposed to IPV alone. Pearson correlations were utilized to test the second hypothesis, that there would be a positive and significant relationship between *DSM-IV* trauma symptoms and internalizing and externalizing behavior problems. *T* tests were used to establish whether children exposed to IPV plus additional traumatic events experienced significantly more trauma symptoms, as well as greater internalizing and externalizing behavior problems, than children exposed to IPV alone.

There was only one missing item for one participant on a mother's report of child PTSD symptoms, which was given a value of 0 to ensure the most conservative estimate for PTSD symptom expression. Other missing data were within acceptable limits.

## Results

### Two Categorizations of Traumatic Stress

In this sample of 120 children, 85 participants (71%) met the 1-month requirement. As displayed in Table 1, based on the current *DSM-IV-TR* criteria, of the 85 children with symptoms present for at least 1 month, 17% met diagnostic criteria for PTSD. Based on Scheeringa et al.'s (2001) criteria, 51% of these preschool-aged children could be diagnosed with PTSD. The most common symptoms were reexperiencing, followed by physiological arousal, with variability in avoidance symptoms depending on the algorithm used (see Table 1). Regardless of which algorithm was used, PTSD diagnoses did not differ by child sex, ethnicity, age, mother's education, or household income.

The four experimental trauma symptoms in Scheeringa et al.'s measure (2001) were found in 92% of children with other symptoms that lasted more than 1 month ( $M = 2.14$ ,  $SD = 1.17$ ). Of the 111 children displaying these experimental trauma symptoms, being more aggressive since the traumatic event was present for 69% and new symptoms of separation anxiety were present for 65%. The development of new fears occurred for 45% and regression in developmental gains was reported for 27% of children.

There was a positive and significant relationship between *DSM-IV* trauma symptoms and internalizing and externalizing behavior problems. For internalizing problems, Pearson correlations were ( $n = 120$ ) .43 ( $p < .001$ ) for reexperiencing, .49 ( $p < .001$ ) for avoidance, .61 ( $p < .001$ ) for arousal, and .64 ( $p < .001$ ) for total trauma symptoms. For externalizing problems,  $r = .35$  ( $p < .001$ ) for reexperiencing, .26 ( $p < .001$ ) for avoidance, .47 ( $p < .001$ ) for arousal, and .45 ( $p < .001$ ) for total trauma symptoms. Children diagnosed with PTSD had significantly more internalizing and externalizing behavior problems, internalizing  $t(118) = 6.56$ ,  $p < .001$ ; externalizing  $t(118) = 4.99$ ,  $p < .001$ .

Table 1  
 Posttraumatic Stress Disorder Symptoms and Diagnoses for Standard and Enhanced Criteria

Variable	DSM-IV-TR		Enhanced	
	<i>n</i>	%	<i>n</i>	%
Reexperiencing	77	91	77	91
Avoidance	14	17	54	64
Arousal	65	77	65	77
Additional	–	–	78	92
Met criteria	14	17	43	51

Note. *N* = 85. DSM-IV-TR = Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.; American Psychiatric Association, 2000); Enhanced = Scheeringa et al. criteria.

### Additional Traumatic Events

Of the 120 children, 74 (62%) never experienced an additional traumatic event beyond exposure to IPV. Forty-six children (38%) had at least one additional traumatic event. Of these 46 children, 32 (70%) experienced only one additional event, 11 (24%) experienced two additional traumatic events and three (6%) experienced three additional traumatic events. There were no significant differences between exposure to IPV only and exposure to additional traumatic events as a function of child sex, age, ethnicity, mother's education, or income.

Of those who reported additional events, the most common were nonsexual assault by a family member or someone the child knew (e.g., mugged, attacked, shot; 21%), and being in a serious accident, fire, or explosion (7.5%). Life-threatening illness (6%) and sexual assault by a family member or someone known to the child (6%) were also reported. Approximately 3% experienced assaults by a stranger, sexual contact with someone 5 or more years older, imprisonment in their home, or torture. Few children were exposed to natural disasters, such as tornados, hurricanes, earthquakes, or floods (2%).

### Association Among Events and Diagnoses

We hypothesized that children exposed to additional traumatic events would be more likely to meet criteria for a diagnosis of PTSD. There was a significant difference in the rate for children who had and had not witnessed additional traumatic events using the DSM-IV-TR PTSD criteria, with 8% of children with exposure to IPV-only compared to 28% of children with exposure to additional traumatic events,  $\chi^2(1, N = 120) = 5.803$ ,  $p = .016$ . These results suggest that children exposed to additional traumatic events are significantly more likely to receive a standard diagnosis of PTSD when compared to children who have been exposed to IPV-only.

Further, tests of difference comparing the mean number of traumatic stress symptoms (reexperiencing, arousal, and avoidance) and the total number of symptoms revealed significant differences between children exposed to additional traumatic events and those exposed to IPV only, such that additional

exposure was related to more symptoms in every category (see Table 2). Using Cohen's categorization, large effects were found in each case (Cohen, 1992). Consistent with the third hypothesis, these results demonstrate that exposure to additional traumatic events is significantly related to the overall number of trauma symptoms for children exposed to IPV-only.

A post hoc analysis was undertaken to assess whether the number of expected versus found cases of PTSD differed by the presence of each individual traumatic event. Only one, non-sexual physical assault of the child, was significant when using the DSM-IV diagnostic criteria,  $\chi^2, df = 1 = 4.56, p = .033$ ; when using the alternative diagnostic criteria, there was no difference  $\chi^2, df = 1 = 3.22, p = .07$ . Of children with a diagnosis, 43% had been physically assaulted.

### Exposure and Child Adjustment

As indicated in Table 2, children exposed to additional traumatic events were more likely to have both internalizing,  $t(91) = -2.93, p = .004$ , and externalizing behavior problems,  $t(86) = -2.63, p = .01$ , than were the IPV-only children. Additionally, those with higher scores on internalizing behaviors were significantly more likely than those with lower scores to meet criteria for a PTSD diagnosis using DSM-IV criteria,  $t(63) = -3.61, p = .001$ , as well as when using the developmental criteria,  $t(28) = -3.14, p = .003$ . No significant differences were found between children with higher scores on externalizing behaviors and PTSD diagnosis.

### Discussion

The goal of the present study was to examine the impact of exposure to additional traumatic events on children who were exposed to IPV and to provide information on preschoolers' posttraumatic stress symptoms by using the current DSM-IV-TR criteria for PTSD as well as a developmentally appropriate version of the criteria developed by Scheeringa and colleagues (2001). The hypothesis that these developmentally appropriate diagnostic criteria would result in significantly higher rates of PTSD diagnosis in children exposed to IPV was supported.

Table 2  
Means, Standard Deviations, and Effect Sizes of Symptoms for Children With IPV Only or IPV Plus Additional Events

	IPV ( <i>n</i> = 74)		IPV Plus other events ( <i>n</i> = 46)		<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Trauma symptoms					
Reexperiencing	2.93	2.77	5.38	3.93	-0.84***
Avoidance	1.16	1.55	2.42	2.31	-0.64**
Arousal	2.67	2.23	4.78	2.87	-0.82***
Total symptoms	6.89	5.40	12.86	6.98	-0.96***
Internalizing problems	7.20	6.29	14.75	10.72	-0.86***
Externalizing problems	15.27	10.72	20.32	10.77	-0.47**

Note. IPV = Intimate partner violence.

\*\**p* < .01. \*\*\**p* < .001.

These findings may raise concerns about the overdiagnosis of PTSD in preschoolers. Chronic trauma exposure, however, has also been associated with high rates of PTSD symptoms in both studies of adults (Cloitre et al., 2009) and studies of children (McCloskey & Walker, 2000; Spinazzola et al., 2005). The current study's focus on evaluating multiple potentially traumatic events and on utilizing the developmentally appropriate criteria may have contributed to such high rates of PTSD in preschoolers. Still, there is no gold standard for measuring PTSD in preschoolers. Further studies are needed to assess whether Scheeringa et al.'s instrument can accurately diagnose PTSD in such young children. Studies that compare different instruments' sensitivity in ruling out other disorders or those that test for differences in functional impairment for children with and without PTSD are needed.

In the present study, children who were exposed to IPV and at least one additional traumatic event had significantly more symptoms of traumatic stress in every symptom category than children experiencing IPV alone. In addition, using the *DSM-IV-TR* diagnostic criteria, children exposed to IPV and additional traumatic events had significantly higher rates of PTSD diagnosis than children experiencing IPV alone. When using the developmentally appropriate criteria, however, this was not replicated. In the McCloskey and Walker (2003) study, the number of children experiencing dual victimization in their sample was extremely small (*n* = 3). Still, all of the children who were directly victimized, in addition to experiencing IPV, met criteria for PTSD. It appears that the combination of direct victimization and witnessing IPV poses greater risk.

Children experiencing additional traumatic events were significantly more likely to show both internalizing and externalizing behavior problems than were children exposed to IPV alone. These results are in line with studies indicating that multiple trauma exposures lead to significantly higher levels of adjustment problems for children (Margolin et al., 2010; Sternberg et al., 2006). Such findings draw attention to an at-risk

sample of children who may be labeled as aggressive due to their behavior problems, but are in fact highly traumatized. It is especially important to accurately diagnose these children so they gain access to appropriate treatment services.

### Limitations

All data were based on mothers' reports of their children's functioning. Further, the current study only evaluated violence inflicted upon the mother, and did not assess violent tactics that she may have used against her partner or her child. Given that a large proportion of IPV is bidirectional (McDonald et al., 2006), reports solely from the mother are likely an underestimation of the actual level of violence in the home. In addition, there may be a social desirability effect in mothers' reports of trauma symptoms in their children. Mothers may also be unable to accurately report all of the internal symptoms from which their preschool-age children are suffering (Levendosky et al., 2002; Scheeringa et al., 2001).

The PDS used to evaluate exposure to additional traumatic events in this sample of women and children only includes types of traumatic events likely experienced by adults. In this study, 24.5% of mothers endorsed their child's exposure to an event in the "other" category, indicating that experiences listed on the PDS are not comprehensive enough to address the traumatic events of childhood. Further, there is no information about the time elapsed between the index event and report of symptoms. Finally, though the CBCL is reliable, its validity has not been established for children under 6 years of age.

Another limitation concerns the sample. The mothers and children were mostly low-income families from the Midwest, which may impact the generalizability of results. No child adjustment variable, however, was significantly impacted by household income. The study was not nationally representative in terms of ethnicity, but no results differed based on child ethnic background, or any other demographic variables. Whether the children had previous therapy or participated in intervention prior to the start of the study was unknown.

## Clinical Implications and Future Directions

Regardless of how PTSD is assessed, the results of this study suggest that there are a great number of children suffering from PTSD and not being treated. The stakes are high, given that long-term consequences associated with untreated PTSD include delinquency, substance abuse, and difficulty in relationships. By highlighting the need for more diagnostic rigor, this study provides insight into how best to assess high-risk children. Further, this study offers evidence that exposure to multiple PTEs may have a cumulative impact on symptom expression in preschool-aged children. Thus, it would be fruitful for those assessing children to consider the impact of additional traumatic events, particularly when evaluating and treating preschool-aged children exposed to IPV. This would allow for more effective treatment planning, as therapists would be better able to address all of the issues contributing to children's symptom presentation.

To better assess the impact of additional PTEs, it may be helpful for subsequent studies to use a measure with a more comprehensive list of life traumas. Doing so may increase our understanding of a broader range of traumas and how they are associated with the expression of symptoms. In any event, it is evident that exposure to additional traumatic events has an impact on the functioning of even young, preschool-aged children exposed to IPV.

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