Consistency of Trauma Symptoms at Home and in Therapy for Preschool Children Exposed to Intimate Partner Violence

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The expression of posttraumatic stress symptoms during group therapy and how this might differ from the expression of those symptoms at home was evaluated in a group of preschool children exposed to intimate partner violence (IPV). The sample included 55 mother-child dyads. Reports of posttraumatic stress symptoms were collected from mothers and child therapists and compared in terms of the symptom subtypes that the child expressed at home and in therapy. The total number of posttraumatic stress symptoms that young children expressed at home and in group therapy did not differ. There was, however, a significant difference in mothers’ and therapists’ reports of physiological arousal symptoms, with mothers reporting more arousal symptoms than did the therapists. Additionally, higher levels of IPV exposure predicted higher levels of total posttraumatic stress symptoms. This study has important implications for researchers and clinicians, especially when considering the range of posttraumatic stress symptoms preschool children may present after exposure to IPV.

Keywords: intimate partner violence, preschool children, posttraumatic symptoms, group therapy

In recent decades, the negative psychological impact of intimate partner violence (IPV) on children has been widely studied. According to recent estimates, approximately 15.5 million American children living in dual-parent homes witness IPV each year (McDonald, Jouriles, Ramisett-Mikler, Caetano, & Green, 2006). Moreover, children who are exposed to IPV are more likely to endure child maltreatment, neglect, and sexual abuse and are more likely to suffer from health problems such as asthma, allergies, cold and flu, and gastrointestinal problems (Zolotor, Theodore, Coyne-Beasley, Runyan, 2007; Graham-Bermann & Seng, 2005). Children exposed to IPV have more social, behavioral, and cognitive problems than nonwitnesses and have a greater risk of developing externalizing and internalizing disorders and traumatic stress symptoms (Fusco & Fantuzzo, 2009; Graham-Bermann, Gruber, Girz, & Howell, 2009).

The majority of past research concerning children and their exposure to IPV has centered on school-age children (e.g., Graham-Bermann, Lynch, Banyard, DeVoe, & Halabu, 2007). However, recent research has shown that many characteristics unique to preschool-age children must be taken into consideration when interacting with, and attempting to treat, this age group. In general, preschool-age children may be more vulnerable to the impact of IPV and at greater risk for direct sensory exposure to IPV than older children because they are dependent on their parents or caregivers for protection from trauma and because they are often at home when the violence occurs (DeVoe & Smith, 2002; Fantuzzo & Fusco, 2007; Levendosky, Huth-Bocks, Shapiro, & Semel, 2003). Preschool-aged children who have been exposed to IPV are at greater risk than their nonexposed peers for developing behavioral problems, negative affect, aggression, insecure attachments to caregivers, and traumatic stress (Huth-Bocks, Schettini, & Shebroe, 2001; Levendosky et al., 2003). Because preschoolers living in homes where IPV is present may be at even greater risk than are older children, it is imperative for research to more fully examine how preschoolers express distress in the face of IPV, how their traumatic reactions are best assessed, and how symptom expression manifests in a treatment context.

Posttraumatic stress disorder (PTSD) may develop in preschoolers following exposure to IPV (DeVoe & Smith, 2002; Graham-Bermann et al., 2008; Scheeringa, Zeanah, Myers, & Putnam, 2005). Many PTSD symptoms characteristic of adults, such as intrusive thoughts, nightmares, hyperarousal, negative affect, and feelings of hopelessness about the future, are also found in preschoolers (Graham-Bermann et al., 2008; Scheeringa, 2006). However, clinicians and researchers must also consider developmentally unique symptoms when evaluating young children, including repetitive play, sleep disturbances, reenacting the trauma during play, developing new fears, increased separation anxiety, and experiencing developmental regressions (Graham-Bermann et al., 2008; Scheeringa, Zeanah, Myers, & Putnam, 2003). Further, posttraumatic stress symptoms in preschoolers are often stable and unremitting even after years of treatment (Scheeringa et al., 2005; Cohen & Scheeringa, 2009).

Recognizing and diagnosing PTSD in preschoolers is not always easy. First, due to the chronic nature of IPV, it may be difficult to pinpoint one specific traumatic event that stands out as the worst...
or most harmful (Margolin & Vickerman, 2007). Preschoolers’ stage of development can also pose problems in recognizing PTSD symptoms because their limited cognitive, affective, and verbal abilities can create unique manifestations of posttraumatic symptomatology (Scheeringa, 2006). Additionally, forming a diagnosis usually relies on caregivers’ reports, who, in the case of many children exposed to IPV, are likely suffering from PTSD themselves (Margolin & Vickerman, 2007; Stover & Berkowitz, 2005). This may be problematic, as parents who experience their own PTSD symptoms have been found to be poor at identifying symptoms associated with posttraumatic stress in their children (Valentino, Berkowitz, & Stover, 2010). Parents of young children often have an especially hard time identifying posttraumatic symptoms because of the child’s low verbal skills and ability to convey complex emotion or to identify internal states (Stover & Berkowitz, 2005). It is also possible that parents may not inform clinicians of violence occurring in the home, which could lead to a misdiagnosis (Margolin & Vickerman, 2007).

The current study expands existing research by evaluating similarities and differences of maternal and therapist reports of children’s PTSD symptoms. Given that only one reporter typically supplies most of the data used in studies of child functioning, it is imperative to expand findings by comparing mothers’ reports to child therapists’ reports across settings. This aids both in the understanding of children’s symptom presentation across environments and informs thorough assessment techniques for preschool-aged children. If consistency can be demonstrated in children’s symptoms across settings, it provides support for the validity of PTSD assessment with young children—that is, the symptoms are consistently true of the child. Differences between therapist and mother reports could be indicative of either differences in reporting or true differences in symptom expression by the child, both of which have important implications for assessment and intervention.

Given the lack of currently available research comparing parent ratings to therapist ratings, information was gleaned from studies evaluating the consistency of parent and teacher ratings across settings. For evaluators interacting with children in different situations (i.e., at home and in school), the concordance in ratings of child behavioral problems is uniformly low (Murray et al., 2007). Some reports indicate that teacher ratings, but not the ratings of parents, are significantly related to children’s independently observed activities (Wimsler & Wallace, 2002). Further, caregiver stress and parental psychopathology may also impact the consistency of ratings between parents and teachers (Youngstrom, Loeber, & Stouthamer-Loeber, 2000). To obtain the most complete picture of a child’s functioning, it is therefore critical to evaluate children across environments and to expand into new settings, including group therapy.

Depending on the diagnostic criteria used, studies have reported differing prevalence rates of PTSD in preschoolers; some researchers have found that up to 56% of their sample met the threshold for PTSD, while others report numbers between 13 and 50% (DeVoe & Smith, 2002; Margolin & Vickerman, 2007). These inconsistencies have led many clinical researchers to begin using The Posttraumatic Stress Disorder Semi-Structured Interview and Observational Record for Infants and Young Children, a developmentally designed instrument for assessing and diagnosing PTSD in preschoolers (Scheeringa & Zeanah, 1994). This new tool lowers the symptom thresholds for young children to meet criteria for diagnosis. The new criteria require younger children to only exhibit one avoidance symptom and do not require extreme emotional or behavioral reactions at the time of the traumatic event. The measure also evaluates a set of experimental developmental regression symptoms, which can include the loss of previously acquired skills, such as toilet training or speech (Scheeringa et al., 2003). By eliciting a parent’s report of symptoms with behavioral examples that are then evaluated by clinicians, this measure addresses several limitations of previous methods, such as symptoms checklists. The current study uses this developmentally oriented assessment, thereby providing information on children’s PTSD that will be consistent with proposed changes in PTSD diagnostic criteria for children.

This study aimed to (1) evaluate mothers’ reports of children’s posttraumatic stress symptoms at hospital discharge and therapists’ reports of children’s posttraumatic stress symptoms during the course of therapy; (2) determine if children express similar overall levels of symptoms at home and in therapy; (3) determine if there is a difference between therapists’ and mothers’ diagnosis rates of PTSD; and (4) determine how the amount of violence exposure affects the number of reported posttraumatic stress symptoms. It was hypothesized that (1) children who have greater levels of PTSD symptomatology as reported by the mother preintervention would exhibit more symptoms overall during the course of therapy than those children with lower reports of symptoms; (2) children would exhibit similar symptoms in therapy as they exhibit at home; (3) there would be a significant difference between therapists’ and mothers’ diagnosis rates of PTSD, with therapists producing higher diagnosis rates; and (4) higher reports of violence would be related to higher maternal reports of child posttraumatic stress symptoms.

Method

Participants

Participants consisted of 55 mothers and their preschool-age children from southeast Michigan or Windsor, Ontario, Canada, who had been exposed to IPV within the past two years. On average, the children were 5 years old (SD = 9.3), and the mothers were 32 (SD = 7.62). Mothers in the study had an average monthly income of $1,415 (SD = $1,571). The sample was racially diverse; 45% of the children were European American, 24% of the children were African American, 24% of the children were biracial, and 7% of children were Hispanic. Many of the mothers (45.5%) were single, while 29% were separated, 14.5% were still married, 5.5% were living with a partner, and 5.5% were divorced. Fifty percent of the women were currently living in or had previously lived in an emergency shelter for families exposed to violence.

Procedures

Following institutional review board (IRB) approval, mothers and children were recruited using advertisements posted at public agencies, retail stores, and local domestic violence emergency shelters as part of a randomized control trial of an intervention program for preschool-age children and their mothers (Graham-Bermann, 2006). Women who called a toll-free number received
information about the study and were screened to determine if they had a child between 4 and 6 years of age, experienced IPV in the last two years, and that they and their child were able to participate in a group intervention program. No other exclusion criteria were enforced. Following mothers’ informed consent that included information about the protection and use of information from the interviews and group therapy, mothers participated in a preintervention interview lasting between 1.5–2 hours to assess IPV history and posttraumatic stress symptoms. Interviewers were clinical graduate students or advanced undergraduate research assistants trained in structured interview techniques and certified in the ethical conduct of research. Mothers received $25 for their time. All study materials were de-identified for participants’ privacy.

**Preschool Kids’ Club Intervention**

Within one week of the interview, mothers and preschoolers participated in a 10-session evidence-based group intervention program, the Preschool Kids’ Club, aimed at alleviating the negative impacts of violence exposure (Graham-Bermann & Follett, 2000). Group sessions were held twice a week over five weeks and were each conducted by two therapists. After each session, therapists reported posttraumatic stress symptoms that children exhibited. Group therapists were community professionals and advanced clinical psychology graduate students who participated in a clinical practicum training course. Therapists received four weeks of clinical and didactic training before beginning groups, including training in working with families exposed to IPV and evaluating the behavioral functioning of group participants. Therapists also received weekly supervision from a licensed clinical psychologist throughout the practicum period. Both the group therapists’ clinical training and weekly supervision included information aimed at ensuring accurate posttraumatic stress symptom assessment and coding. If therapists were unsure whether a symptom should be determined “present” or “not present,” they brought the behavioral example of that symptom to group supervision for the group to discuss and determine the appropriate code. In addition to adhering to APA ethical standards for confidentiality, measures were taken to protect participant safety throughout the program. Namely, therapists discussed with mothers the best time to call their home, whether a message could be left, and resolved any issues surrounding transportation to therapy and interviews.

**Measures**

**Demographics.** Mothers provided general background information including age, race, income, educational attainment, relationship status, and housing history.

**Intimate partner violence.** To assess perpetration and experience of family violence, researchers administered the Revised Conflict Tactics Scale, (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) a 78-item instrument that measures the severity and frequency of psychological aggression, physical assault and injury, sexual coercion and violence, and negotiation tactics over the past year in a couple’s relationship. For the purposes of the present study, only the 39 statements assessing violence victimization were administered to the participants. The CTS2 has proven to be reliable, with alphas for its subscales ranging from $\alpha = .79$ to $\alpha = .95$ (Straus et al., 1996). For the present study, the reliability for the CTS Total was $(\alpha) .81$.

**Child Posttraumatic Symptoms at Home** were assessed with the Posttraumatic Stress Disorder Semi-Structured Interview and Observational Record for Infants and Young Children (Scheeringa & Zeanah, 1994). This 31-item scale was completed by the mother and identifies the presence or absence of PTSD symptoms in children. First, mothers established that their child had witnessed a traumatic event and that their child was very afraid/helpless/distressed. Items assessed symptoms in four categories: 5 reexperiencing symptoms (e.g., “Did your child react some part of the traumatic event?”), 6 avoidance symptoms (e.g., “Since the event, has your child tried to avoid hearing conversations about it?”), 5 physiological arousal symptoms (e.g., “Has your child seemed watchful or on guard even though there was no reason to be?”), and 4 experimental/associated symptoms (e.g., “Has your child been a lot more aggressive than s/he used to be?”). Mothers were asked to indicate if they had observed their child experiencing each of the symptoms in the past month. If a symptom was present, mothers were asked to give a behavioral example and report the degree to which the symptom interfered with their child’s life during the previous month. After the interviews, a clinical psychologist and trained researchers evaluated each behavioral account to determine if the example met threshold to be considered a symptom of PTSD. Each symptom was rated as 0 (not present), 1 (somewhat/a little), or 2 (present a lot of the time). Extensive research suggests that this measure more accurately diagnoses highly symptomatic children as compared to the DSM-IV-TR criteria alone and has higher criterion validity than the current diagnostic criteria (Scheeringa, Peebles, Cook, & Zeanah, 2001; Scheeringa et al., 2003). Furthermore, recent examinations of the scale have reinforced its predictive validity for PTSD diagnosis for children over time (Scheeringa et al., 2005). Total scale reliability for the present study was $(\alpha) .84$.

**Child posttraumatic stress symptoms in therapy.** To obtain information about children’s posttraumatic stress symptoms during group therapy, therapists evaluated the children using a 22-item instrument based on the Posttraumatic Stress Disorder Semi-Structured Interview and Observational Record for Infants and Young Children items (Scheeringa & Zeanah, 1994). Therapists collaborated to complete an evaluation immediately following each group therapy session to determine if children showed any of: 5 reexperiencing symptoms, 6 avoidance symptoms, 5 physiological arousal symptoms, and 6 experimental/associated symptoms. A few items were added so that criteria would apply to the group therapy setting. For instance, “clinging to group leader,” was included in addition to “had difficulty separating from mother.” In order to ensure that symptoms met the threshold for a traumatic reaction, this collaboration was deemed necessary because of the nature of the group therapy session; that is, because there was so much activity in the room, the input of both therapists was necessary to provide the most accurate description of the child’s behavior. Therapists did not query children about their symptoms; rather, they referred to their own session notes and observations of each child’s behavior to determine if each symptom was exhibited. If both therapists agreed and endorsed a symptom as present, they wrote an explanation detailing how that symptom manifested for that particular child during that session with a behavioral example. The reported examples were then reviewed by the research team to assure that they represented trauma symptoms. Both group therapists and researchers were trained in evaluating child behaviors.
according to the standards outlined by Scheeringa (2006) in the development of the original scale.

For the current study, if a child exhibited a symptom in any of the 10 sessions, the symptom was coded as “present,” and if they did not exhibit the symptom in any of the 10 sessions, the symptom was coded as “not present.” Because the current study examined symptoms using a binary (present/not present) criteria across all 10 sessions, the symptom profiles of preschoolers in the current study represent symptom expression over time and do not represent symptom frequency and are therefore not representative of treatment outcomes. The rationale for aggregating symptoms across sessions is as follows: because therapist evaluations were observational and therapists did not inquire into specific traumatic stress reactions, the measure of PTSD symptoms at the first session would capture only symptoms that were expressed spontaneously during the first 45 minutes of therapy. This would have likely resulted in an underrepresentation of children’s symptoms in therapy. Because of this, the authors believed that therapist evaluations of symptoms across all 10-sessions would be a more comparable measure of symptom presentation given that mothers reported on their children’s expression over a 1-month period. Creating an aggregate of children’s symptoms across sessions also reduced the likelihood of treatment effects, as there is no reduction in child PTSD symptom scores if they improve across the course of therapy (e.g., a symptom expressed in Session 1 but not in Sessions 5–10 is still considered “present”). While mother and therapist reports are for consecutive months and are thus not entirely equivalent measures, creating a therapist score that captured the same duration as mother reports (1 month) seemed to be the most methodologically sound analysis plan.

Results

The level of violence in the current sample was quite high, with mothers on average reporting 181.4 ($SD = 119.1$) violent conflict tactics in the past year, ranging from psychological aggression to sexual violence to physical injury. Specifically, mothers reported that in the past year they experienced an average of 56 acts of physical violence ($SD = 59.68$), 96 instances of psychological aggression ($SD = 55.45$), 18 instances of sexual violence ($SD = 30.25$), and had an average of 14 injuries as a result of physical violence ($SD = 18.44$). There was only one missing item for one participant on mother’s reports of child PTSD symptoms, which was given a value of “0” in order to ensure the most conservative estimate for PTSD symptom expression. There were no missing data on the group therapist evaluations of children’s PTSD symptoms. On average, mothers reported their child expressed 6.76 out of 22 ($SD = 3.98$) total PTSD symptoms prior to intervention, while group therapists reported an average of 5.67 out of 22 ($SD = 3.27$) across the treatment period. A paired $t$ test indicated that there were not significant differences in mother and group therapist reports of total symptoms.

In terms of specific symptom subtypes, mothers reported at the preintervention interview that their child experienced an average of 3.69 ($SD = 3.01$) reexperiencing symptoms, 2.06 ($SD = 2.05$) avoidance symptoms, and 3.73 ($SD = 2.64$) physiological arousal symptoms in the past month. Group therapists, on the other hand, reported an average of 1.99 ($SD = 1.1$) reexperiencing symptoms, 1.67 ($SD = 1.36$) avoidance symptoms, and 0.76 ($SD = .92$) physiological arousal symptoms for each child across the 10 group therapy sessions over five weeks. There were no significant differences in children’s PTSD symptoms based on whether or not they had ever resided in a shelter.

Frequencies, shown in Table 1, identify the most common symptoms expressed by the sample during group therapy and at home. During therapy, the most commonly endorsed symptom was “reenacted the traumatic event in play or drawing” (67%), followed by “talked about feelings associated with the family violence” (62%). In the context of the intervention, therapists recorded when a child spontaneously mentioned family violence and indicated feelings of distress about this in order to satisfy the threshold for a reexperiencing symptom. For example, during an activity where the children were talking about good things about families, one child interjected that “my dad hits my mom,” reported that he was scared by this, and then did not participate in the remainder of the activities that session. Another child, while drawing a picture of her family, drew a cast on her mother’s arm and told the group therapist that her dad “hurt her mom’s hand.” During a different session when discussing what children could do when their parents were fighting, one child immediately ran to the corner of the room and demonstrated how he and his brother hid when “mommy and daddy were yelling at each other.”

At home the most common symptoms children expressed were “irritability, fussiness, mood swings, or temper tantrums” (67%), followed by “appearing upset when separating from the mother” (66%), “acting aggressively” (66%), and “talking about their feelings associated with family violence” (58%). As a post hoc analysis, differences in mother and therapist reports of child PTSD symptoms were tested at the item level. Paired $t$ test results indicated differences at the item level, especially for arousal and experimental symptoms (see Table 1).

The first aim of the study was to evaluate the relationship between mothers’ and therapists’ reports of trauma symptoms of preschoolers exposed to IPV. We hypothesized that children’s PTSD symptoms, as reported by mothers, would be positively related to the number of symptoms shown in therapy. No significant association was found for any symptom subtype (see Table 2). Thus, the hypothesis was not supported.

The second aim of this study was to determine if children exhibited similar symptom category patterns in therapy as they did at home. Results of $t$ tests indicate no significant differences between mothers and therapists in the overall reports of reexperiencing symptoms, avoidance symptoms, or total symptoms. For example, one mother reported that her child had been engaging in violent reenactments of the violence with his brother, and after witnessing her being choked, reenacted it at school and choked another child. The group therapist also reported violent reenactments of punching in almost every session this child attended, including throwing imaginary punches, repeatedly punching stuffed animals, and pretending to punch other children and the group therapists. There was a significant difference between mothers’ and therapists’ reports of physiological arousal symptoms, $t(54) = -6.61$, $p < .01$. On average, group therapists reported 0.76 ($SD = .92$) symptoms while mothers reported 2.22 ($SD = 1.42$). Thus, the hypothesis that children would exhibit similar symptom category patterns in therapy as they do at home was supported for avoidance and reexperiencing symptom categories;
while children showed much more physiological reactivity when at home.

The third aim of the study was to determine if there was a difference between therapists' and mothers' PTSD diagnosis rates. It was found that mothers' reports rendered more PTSD diagnoses (55%) than did group therapists (22%). However, chi-square analyses showed no significant difference between these reporting rates, and our hypothesis was not confirmed.

The fourth aim of the study was to determine whether the amount of violence exposure was related to the number of reported posttraumatic symptoms. In this case, we hypothesized that higher reports of violence in the home would be related to higher maternal reports of child posttraumatic stress symptoms. Reexperiencing and arousal symptoms were significantly correlated with total violence exposure (r(54) = .36, p < .01, r(54) = .23, p < .05, respectively). Avoidance symptoms were not significantly related to total violence exposure, but were related to sexual violence (r(54) = .22, p < .05) and physiological arousal symptoms (r(54) = .53, p < .01). Thus, the hypothesis that children exposed to more total violence would express more PTSD symptoms was not supported.

### Table 1

**Types of Trauma Symptoms Expressed by the Child During Group Therapy (According to Therapist) and at Home (According to Mother)**

<table>
<thead>
<tr>
<th>Type of symptom</th>
<th>Therapist</th>
<th>Mother</th>
<th>Significant difference (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reexperiencing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissociated, spaced out in a daze</td>
<td>29%</td>
<td>29%</td>
<td>0.00</td>
</tr>
<tr>
<td>Had nightmares about the event</td>
<td>—</td>
<td>58%</td>
<td>—</td>
</tr>
<tr>
<td>Reenacted family violence in play or drawing</td>
<td>67%</td>
<td>35%</td>
<td>−3.14***</td>
</tr>
<tr>
<td>Showed any negative feelings associated with family violence</td>
<td>40%</td>
<td>45%</td>
<td>0.60</td>
</tr>
<tr>
<td>Talked about feelings associated with family violence</td>
<td>62%</td>
<td>58%</td>
<td>−0.36</td>
</tr>
<tr>
<td>Appeared to have flashbacks/reexperience the event in any way</td>
<td>24%</td>
<td>45%</td>
<td>2.36*</td>
</tr>
<tr>
<td>Arousal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appeared on guard, hypervigilant, or watchful for no reason</td>
<td>6%</td>
<td>35%</td>
<td>4.05***</td>
</tr>
<tr>
<td>Displayed a startled response or got scared for no reason</td>
<td>6%</td>
<td>51%</td>
<td>6.26***</td>
</tr>
<tr>
<td>Displayed irritability, fussiness, mood swings, or temper tantrums</td>
<td>33%</td>
<td>69%</td>
<td>3.99***</td>
</tr>
<tr>
<td>Got biologically worked up when reminded of the event</td>
<td>9%</td>
<td>20%</td>
<td>1.51</td>
</tr>
<tr>
<td>Had more difficulty concentrating than other kids</td>
<td>33%</td>
<td>20%</td>
<td>−1.63</td>
</tr>
<tr>
<td>Avoidance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Didn't play as much as other kids</td>
<td>42%</td>
<td>4%</td>
<td>−5.04***</td>
</tr>
<tr>
<td>Displayed less emotion than other kids</td>
<td>27%</td>
<td>9%</td>
<td>−2.63*</td>
</tr>
<tr>
<td>Tried to avoid activities related to violence</td>
<td>20%</td>
<td>29%</td>
<td>1.29</td>
</tr>
<tr>
<td>Tried to avoid hearing or talking about the violence</td>
<td>22%</td>
<td>36%</td>
<td>1.59</td>
</tr>
<tr>
<td>Seemed more withdrawn or less sociable than other kids</td>
<td>53%</td>
<td>20%</td>
<td>−4.19***</td>
</tr>
<tr>
<td>Was not able to remember part(s) of the violence</td>
<td>4%</td>
<td>15%</td>
<td>2.20*</td>
</tr>
<tr>
<td>Experimental</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acted aggressively</td>
<td>26%</td>
<td>60%</td>
<td>4.38***</td>
</tr>
<tr>
<td>Afraid of things that others would not be afraid of</td>
<td>11%</td>
<td>55%</td>
<td>6.46***</td>
</tr>
<tr>
<td>Any other evidence child was upset during the session</td>
<td>16%</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Appeared upset when separating from mother</td>
<td>25%</td>
<td>65%</td>
<td>3.59***</td>
</tr>
<tr>
<td>Clinging to group therapist</td>
<td>26%</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Evidence of regression (thumb-sucking, wetting, transitional object)</td>
<td>15%</td>
<td>22%</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Note.** N = 55.

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

### Table 2

**Pearson Correlation Coefficients for Therapist-Rated PTSD Symptoms, Mother-Rated PTSD Symptoms, and Violence in the Home**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Group therapist avoidance</td>
<td>.10</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2. Group therapist reexperiencing</td>
<td>.30*</td>
<td>1.0</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>3. Group therapist arousal</td>
<td>.13</td>
<td>.42**</td>
<td>1.0</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>4. Mother avoidance</td>
<td>.09</td>
<td>.10</td>
<td>.08</td>
<td>1.0</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>5. Mother reexperiencing</td>
<td>.23*</td>
<td>−.11</td>
<td>−.08</td>
<td>.59**</td>
<td>1.0</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>6. Mother arousal</td>
<td>.16</td>
<td>.06</td>
<td>−.01</td>
<td>.64**</td>
<td>.61**</td>
<td>1.0</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
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</tr>
<tr>
<td>7. Total violence</td>
<td>−.15</td>
<td>−.14</td>
<td>−.10</td>
<td>.16</td>
<td>.36**</td>
<td>.23*</td>
<td>1.0</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>8. Negotiation</td>
<td>.13</td>
<td>.26*</td>
<td>.19</td>
<td>−.16</td>
<td>.06</td>
<td>.04</td>
<td>.27**</td>
<td>1.0</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>9. Psychological aggression</td>
<td>−.18</td>
<td>−.07</td>
<td>.01</td>
<td>.19</td>
<td>.41**</td>
<td>.28**</td>
<td>.85**</td>
<td>.27**</td>
<td>1.0</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>10. Physical assault</td>
<td>−.22</td>
<td>−.12</td>
<td>−.08</td>
<td>.16</td>
<td>.26**</td>
<td>.19**</td>
<td>.85**</td>
<td>.04</td>
<td>.68**</td>
<td>.42**</td>
<td>1.0</td>
<td>—</td>
</tr>
<tr>
<td>11. Sexual coercion</td>
<td>−.12</td>
<td>−.27*</td>
<td>−.19</td>
<td>.22*</td>
<td>.22*</td>
<td>.16</td>
<td>.62**</td>
<td>−.01</td>
<td>.46**</td>
<td>.42**</td>
<td>1.0</td>
<td>—</td>
</tr>
<tr>
<td>12. Injury</td>
<td>−.23*</td>
<td>−.19</td>
<td>−.20</td>
<td>.10</td>
<td>.20*</td>
<td>.12</td>
<td>.77**</td>
<td>.05</td>
<td>.57**</td>
<td>.79**</td>
<td>.32**</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**Note.** N = 55.

*p < .10.  **p < .05.  ***p < .01.
partially supported. Additional relationships between children’s PTSD symptoms and types of violence exposure can be found in Table 2.

As there was a large amount of variability in the number of violent events children were exposed to each year, differences in PTSD symptoms were examined by quartile as a post hoc analysis. Children in the lowest quartile lived in homes with fewer than 122 violent events in the past year ($M = 60.76, SD = 35.98$). Children in the highest quartile lived in homes with between 293 and 687 violent events in the past year ($M = 413.78, SD = 119.11$). One-way ANOVAs were conducted to examine differences in PTSD symptoms across violence quartiles. There was no significant difference in therapist reports of children’s PTSD symptoms by violence quartile for any symptom category. However, mothers’ reports of children’s PTSD symptoms were significantly different for arousal and reexperiencing symptom categories ($F = 5.73, p < .05, F = 11.77, p < .01$, respectively), with children in the lowest quartile of violence exposure having significantly fewer arousal and reexperiencing symptoms than children in any other quartile.

**Discussion**

Little is known about young children’s posttraumatic stress symptoms across environments. The current study sought to improve the understanding of preschooler’s presentation of posttraumatic stress symptoms by examining symptom expression both at home and in therapy as reported by mothers and group therapists, respectively. In order to provide an accurate and developmentally appropriate perspective on preschoolers’ PTSD diagnosis and symptoms, the current study made use of an evidence-based, developmentally designed assessment (Scheeringa & Zeanah, 1994). For children in this study, the total number of PTSD symptoms was similar across environments. This finding highlights the pervasive nature of total severity of traumatic reactions across environments as well as the need for interventions that are aimed at treatment planning for multiple environments.

However, similarity in total symptom counts does not ensure that symptom presentation is consistent across environments. Thus, the second aim was to determine if children express similar subtypes (reexperiencing, physiological arousal, or avoidance) of traumatic stress symptoms at home and in therapy. Again, results indicated that mothers and therapists did not report significantly different numbers of reexperiencing and avoidance symptoms, providing external validation of mothers’ reports for these symptom categories. This validation is especially important since mothers’ ability to report on their children’s PTSD symptoms has been questioned (Valentino, Berkowitz, & Stover, 2010).

Mothers and therapists did, however, report significantly different levels of arousal symptoms, with mothers reporting more overall arousal symptoms than therapists. Similarly, mothers and therapists showed differences in reports of arousal symptoms at the item level (see Table 1). Examples of these symptoms were “appeared on guard, hypervigilant, or watchful for no reason,” and “displayed a startled response or got scared for no reason.” This is in contrast to literature that suggests that mothers may underreport child symptoms as a symptom of their own traumatic avoidance (Cohen & Scheeringa, 2009). It could be that mothers reported more arousal symptoms because they spent more time with their children and were therefore more likely to note these symptoms. Group therapy is also a unique setting in which therapists seek to promote the telling of traumatic stories while assuaging any signs of physiological arousal. For example, if group therapists noted any signs that a child in the group was becoming dysregulated, they were trained to draw them away from the upsetting material and use timeouts and relaxation techniques to calm them (Graham-Bermann, 2011). This may have resulted in an overall lower presentation of arousal symptoms. In addition, because much of the violence witnessed by the children happened in the home, this environment may trigger more arousal symptoms than the therapeutic environment, representing a true difference in symptom experience based on location.

Analysis of individual symptoms also indicated some items that therapists reported much more frequently than mothers (see Table 1). Therapists more frequently reported that children: “reexperienced family violence in any way,” “didn’t play as much as other kids,” “displayed less emotion than other kids,” and “seemed more withdrawn or less sociable than other kids.” These higher reports may be caused for a number of reasons. First, several of these items are comparative in nature (e.g., “didn’t play as much as other kids”). Therefore, it is possible that these symptoms are either more highly elicited or are more apparent in a group context, when children may readily be compared to their peers. It may be that if mothers were able to observe their children in the group, mothers’ reports of these symptoms would have been more similar to therapists’ reports. Similarly, the therapeutic context was designed to address issues related to family violence, so the environment may have elicited higher therapist reports of “reexperienced family violence in any way” than the home environment.

Despite differences in symptoms at the item level, there was no statistically significant difference in mother and therapist reports of PTSD diagnosis rates. Both mother and therapist diagnosis rates (55% and 22%, respectively), were similar to rates in young children reported in other research (13–56%) (DeVoe & Smith, 2002; Margolin & Vickerman, 2007; Scheeringa et al., 2005). This supports the use of Scheeringa and Zeanah’s (1994) revised, developmentally appropriate criteria for PTSD diagnosis in young children, and provides further external validation for mothers as reporters.

The hypothesis that higher levels of violence exposure would be related to higher PTSD symptomatology was supported. This finding confirms past research where the amount and severity of violence predicts to greater levels of PTSD symptoms (Graham-Bermann, DeVoe, Mattis, Lynch & Thomas, 2006; Graham-Bermann et al., 2008). A more detailed examination of this relationship by quartiles found that mothers of children in the lowest quartile of violence exposure reported significantly fewer arousal and reexperiencing symptoms than mothers of children in any other quartile. There were no significant differences in therapist reports of children’s PTSD symptoms by violence quartiles. Given our finding that therapists reported fewer examples of physiological arousal during the therapy sessions than did mothers who reported on the child’s behaviors at home, it seems reasonable that the level of violence would be related to the mothers’ reports of trauma symptoms. Alternatively, this difference could be due to reporter bias, such that mothers knew that their child was exposed to high levels of violence and thus reported more symptoms, including physiological arousal, whereas therapists’ reports may...
not have been impacted by the amount of violence in the home. Still, the children in this study were seriously affected by exposure to IPV and displayed significant trauma symptoms that put them at risk for delays in optimal development.

Limitations

Although this study provides important information about preschoolers’ expression of traumatic symptoms during group therapy, there are certain limitations that must be addressed. First, the sample size was relatively small and only involved children from the Midwest who had been exposed to IPV and who participated in a group therapy program. Thus, it is possible that a larger, more geographically diverse sample could yield different results.

Another notable limitation to this study concerns the group therapists. The group therapists had different professional backgrounds and levels of clinical experience and training, making it possible that some therapists were better able to recognize and address posttraumatic symptoms. In addition, there was no measurement of interrater reliability as the therapists completed the measure together. Further, group therapists’ evaluations of child PTSD symptoms took place during the treatment period over five weeks whereas the mothers’ interview occurred prior to the intervention and focused on the prior month. Thus, the evaluations did not assess identical periods of time, though they both captured a one month period. In the future, studies may consider having mothers keep observation records of PTSD symptoms expressed at home (during the course of therapy) so that the same period of time is evaluated or have mothers observe therapy sessions and report on their children’s symptom expression. In addition, the make-up of the group or the therapist’s race and/or gender may also have influenced a child’s expression of trauma symptoms.

Clinical Implications

The results of the current study indicate that preschoolers who have been exposed to IPV show a wide range of posttraumatic symptoms both at home and in group therapy. This highlights the need to evaluate children’s symptoms in multiple settings as opposed to relying on in session behavior. Given that mothers may note physiological symptoms not present in a therapeutic context, it is essential that mothers’ evaluations are included as a part of the assessment. Further, clinicians and intervention developers may need to consider how to address symptoms that may not present in therapy. For example, clinicians may need to consider home-based observations and therapeutic interventions to address some symptoms of physiological arousal that are reported at greater rates by mothers. It may also be important to consider symptom expression in other environments, such as preschool, and how similarities and differences in children’s symptom presentation could further inform assessment and intervention. Additionally, the results of this study have significant implications for clinicians who facilitate group interventions for this age group and population because they highlight which types of symptoms preschoolers are most likely to exhibit during group therapy.

Future Directions

Results of the current study indicate some variability in reports of children’s PTSD symptoms at the item level and in total physiological arousal symptoms, with greater agreement between reporters for reexperiencing and avoidance symptom categories, overall level of symptoms and diagnosis rates. Because children under six have the greatest risk of being exposed to IPV (Fantuzzo & Fusco, 2007), it seems essential that research continue to focus on this age group and how they respond to IPV exposure across contexts.

Other studies could also evaluate mothers’ ability to report on their children’s posttraumatic symptoms, focusing especially on mother’s traumatic symptom expression and PTSD diagnosis, as the mothers of children exposed to IPV likely have also endured a range of traumatic events themselves. Understanding how mothers’ traumatic stress may impact the reporting of symptoms and the relationship between children’s symptoms and mothers’ symptoms has implications for both assessment and intervention. Additional research might also examine other reporters of children’s posttraumatic stress symptoms, such as fathers, preschool teachers, and daycare providers, and utilize measures that combine child and caregiver reports.

References


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