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## Agreement of Parent and Child Reports of Trauma Exposure and Symptoms in the Peritraumatic Period

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### Abstract

Exposure to violence and potentially traumatic events (PTE) is a common experience among children and youth. The assessment of necessary intervention relies upon parental acknowledgement of exposure and recognition of their child's distress. Early interventions and treatment are most effective when parents are aware of the nature of the traumatic exposure, understand their child's symptomatic response, and are intimately involved in the treatment process. The present study investigated concordance between parents and exposed children on child trauma history, the subjective report of the impact of the traumas experienced, and presence of PTSD symptoms. Agreement between parent and child report of traumas experienced was non-significant for serious accidents, separation from significant others, and physical assaults. Non-significant agreement was also found for avoidance and hyperarousal symptoms of PTSD. Correlations were not significant between parent and child report of the impact of traumas both at the time of the incident and at the time of the interview. Recommendations are suggested for helping parents improve their capacity to understand the potential impact of exposure on the child's psychological functioning.

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In order for children to receive intervention or treatment for traumatic stress reactions, parents or adult primary caregivers typically must identify or acknowledge their children's distress following injury or exposure to violence. Particularly in the acute aftermath of an accident or other potentially traumatic event, first responders, child protective services workers, health care professionals and crisis workers often refer to parents, rather than the child, for information about the child's reactions including presence and severity of symptoms. In addition to many adults' discomfort with interviewing children, there are multiple reasons for which adult caregivers' are deferred to over their children; (1) medical treatment which may render the child unavailable (2) adult attempts to protect their children from thinking about the event or (3) the child's involvement in an on-going investigation (e.g. participating in a forensic interview for sexual abuse which precludes speaking about the event or associated symptoms except with the interviewer assigned to the investigation). Even when children are included as part of an assessment, clinicians may favor parent reports in forming an assessment of the child's psychiatric condition in the belief that adults are more accurate reporters (Grills & Ollendick, 2003); this may be particularly true for younger school-aged children ( $\leq 9$ ) (Rapee, Barrett, Dadds, & Evans, 1994). However, discrepancies between parent and child reports both of the child's exposure to potentially traumatic events, and of the child's resulting symptoms, must be taken into account by clinicians and researchers when considering the degree of dependence on caregivers for evaluation of child reactions. The current study investigates the concordance between adult

caregiver reports and child reports of current and prior trauma exposure, the impact of prior traumas on the child, and of symptoms related to those exposures within the peritraumatic period (within a month of exposure when PTSD cannot be diagnosed) after a child is exposed to a potentially traumatic event (PTE).

### **Parent-Child Agreement about Trauma Exposure History**

Significant discrepancies have been found between parent and child reports of the number of traumatic events previously experienced by the symptomatic child (Schreier, Ladakakos, Morabito, Chapman, & Knudson, 2005). Parent reports of children's exposure to violence have repeatedly been shown to underestimate the child's level of exposure (Ceballo, Dahl, Aretakis, & Ramirez, 2001; Richters & Martinez, 1993; Selner-O'Hagan, Kindlon, Buka, Raudenbush, & Earls, 1998), particularly for boys (Kuo, Mohler, Raudenbush, & Earls, 2000). Children have been found to report exposure to violence more often in their neighborhood or at school, while caretakers report more events near or at home (Raviv, et al., 2001; Thomson, Roberts, Curran, Ryan, & Wright, 2002). However, in the case of domestic violence, many parents deny or minimize the presence of children during incidents of violence by suggesting that the children were asleep, watching television or playing outdoors (Jaffe, Wolfe, & Wilson, 1990). Studies have shown that despite mothers' efforts to shield their children from violence, 68 to 87% of incidents of partner abuse are, in fact, witnessed by children (Jaffe, et al., 1990). Although a number of studies have looked at agreement between parent and child reports of type and level of trauma experienced by children, to our knowledge none have evaluated parent-child agreement about the impact of previous potentially traumatic experiences or how much previous events currently impact the child.

### **Parent-Child Agreement about Symptoms and Diagnosis**

When parents and children report independently on child symptoms, they provide notably different information. A number of studies support the finding that parents underestimate their child's posttraumatic stress disorder (PTSD) symptoms that result from exposure to community violence (Ceballo, et al., 2001), chronic medical conditions (Shemesh, et al., 2005) and injury (Meiser-Stedman, Smith, Glucksman, Yule, & Dalgleish, 2007, 2008). Some studies have found weak parent-child agreement regarding the presence of internalizing symptoms, but stronger agreement when reporting externalizing symptoms (Ladakakos, 2000; Perlstein, 2004) and a meta-analysis of 119 studies examining concordance among multiple informants found that agreement between parents and children was significantly lower for internalizing than externalizing disorders (Achenbach, McConaughy, & Howell, 1987). However, other studies have indicated that parents may tend to over-report externalizing symptoms (Kolko & Kazdin, 1993).

Poor concordance has been shown for the major childhood anxiety disorders presenting as either the principal diagnosis ( $\kappa = .22-.31$ ) or as part of the diagnostic profile ( $\kappa = .04-.23$ ) (Choudhury, Pimentel, & Kendall, 2003). In a prospective study of 90 children ages 10–16 exposed to a single-event trauma and their parents conducted by Meiser-Stedman et al. (2007), children were found to be significantly more likely than their parents to report meeting the Dissociation and Re-experiencing criteria for acute stress disorder (ASD), as well a diagnosis of ASD. Dissociation was particularly underreported by parents and was excluded from a study diagnosis of "early PTSD" (PTSD without the duration criterion); however parents were still significantly less likely to report that their child met the criteria for the early PTSD diagnosis than the children themselves (Meiser-Stedman, et al., 2007). A study by Kassam-Adams and colleagues of 219 injured children found similar results with parent-child agreement low for the overall diagnosis of child ASD ( $\kappa = 0.22$ ) and for the specific symptoms in the Dissociation, Re-experiencing, Avoidance, Arousal/anxiety and

Impairment clusters, with  $\kappa$  values ranging from .02 to .43. Parent and child ratings of child ASD severity were moderately correlated ( $r = 0.35$ ) (Kassam-Adams, Garcia-Espana, Miller, & Winston, 2006).

A study of 83 children hospitalized for traumatic injury found parents under-rated their child's level of PTSD symptoms when compared with the child's report gathered within 24 hours of hospital admission; this under report approached statistical significance at the 1 month assessment (Schreier, et al., 2005). The early discrepancy was attributable to how children and parents reported Re-experiencing and Avoidance/numbing symptoms, with children reporting higher symptoms in these categories. These discrepancies decreased at the 1-month and 18-month assessment points. There was good agreement on report of Hyperarousal symptoms at all time points (Schreier, et al., 2005). These data highlight the divergence of reporting within the peritraumatic period where preventative interventions might be the most successful. However, in a study of similar population, Ladakakos (2000) found that parents significantly under-rate their child's level of PTSD symptoms at all data points.

Some studies have shown superior parent-child agreement for the PTSD diagnosis as compared to the ASD diagnosis. Meiser-Stedman et al. (2007) examined parent-child agreement for these disorders in a prospective study of assault and motor vehicle accident (MVA) child survivors, assessed at 2–4 weeks and 6 months post-trauma. They found an improvement in parent-child agreement between the initial assessment with poor parent-child agreement for the diagnosis of ASD ( $\kappa = -0.04$ ), but fair agreement ( $\kappa = -0.21$ ) for PTSD diagnosis at 6-month follow-up. Additionally, parent reports of child ASD symptoms failed to correlate with later child PTSD (Meiser-Stedman, et al., 2007). These findings have significant implications for the assessment of children in the peritraumatic period and how a child's need for acute intervention is determined.

### Agreement by age and gender

It is unclear what role child age plays in the degree of parent-child concordance about child PTSD symptoms. Discrepancies have been shown to be more pronounced between younger children and their parents (Dyb, Holen, Braenne, Indredavik, & Aarseth, 2003). However Shemesh et al. (2005) found that the gap between adolescents' ( $n = 47$ ) reports of their PTSD symptoms and that of their parents was greater than that of children under age 12 ( $n = 29$ ), although the authors note that this finding may be compromised by the small numbers of children in each group. Choudhury et al. (2003) found agreement about the presence of an anxiety disorder diagnosis was poor for both age groups ( $\kappa = 0.16$  for children  $<11$  and  $\kappa = 0.05$  for children  $>10$ ). They found younger children to have higher rates of agreement for the presence of general anxiety disorder, social anxiety disorder, and specific phobia while showing greater agreement between parents and older children for the principal diagnosis of specific phobia. Studies to date have not looked at age relationship to parent-child agreement in reporting of PTSD diagnosis.

Inconsistent findings in studies examining the relation between child age and informant discrepancies may be attributable to inconsistencies in sample characteristics including categorization of child age and the research methodology (De Los Reyes & Kazdin, 2005). They may also be influenced by parents' own symptoms as parent report of child symptoms has been shown to be significantly correlated with parents' own symptoms following a traumatic event (Kassam-Adams, et al., 2006). There is evidence that this relationship is particularly true for parents of young children (Laor, Wolmer, & Cohen, 2001).

It is equally unclear how child gender relates to level of agreement between parent and child reports. The meta-analysis conducted by Achenbach et al. found the results inconclusive in

this area (Achenbach, et al., 1987). Choudhury et al. found poor agreement for presence of Anxiety in the diagnostic profile and for the principal diagnosis for both girls ( $\kappa = 0.31$  and  $\kappa = 0.35$  respectively) and boys ( $\kappa = -0.01$  and  $\kappa = 0.26$  respectively). Reviewing mixed findings from numerous investigators, De Los Reyes and Kazdin (2005) surmise that in the aggregate, child gender may not be related to informant discrepancies, but in specific populations, child gender effects may be present. No studies were found that examined gender differences in parent-child agreement for Depression or PTSD symptoms following a traumatic event.

While there are consistent findings in the literature on the poor concordance between caregiver and child report of trauma exposure, PTSD symptoms and diagnosis, this study adds to the body of literature on parent-child concordance in several areas. First, this study aims to further assess discrepancies between parent and child reports of specific types of traumas experienced by the child. Second, this study assesses agreement about the impact of these traumas, exploring how the trauma affected the child both at the time of the incident and at the time of the baseline assessment. Third, differences in concordance between parent and child are explored by gender and age for type of traumas, impact of the traumas, and posttraumatic symptoms.

## Method

### Participants

Seventy-six youth aged 7–17 years who were exposed to a potentially traumatic event (PTE) and endorsed at least one new symptom of post-traumatic stress disorder when screened by telephone using the Posttraumatic Checklist (Amaya-Jackson, McCarthy, Newman, & Cherney, 1995) were recruited into the Child and Family Traumatic Stress Intervention study (CFTSI) at the Trauma Section of the Yale Child Study Center. Children were referred by police, the hospital sexual abuse program, or a pediatric emergency department due to exposure to a PTE to participate in a randomized trial of a 4-session secondary prevention model for children exposed to a PTE.

### Procedure

For purposes of these analyses, data from all baseline interviews completed from December 2006 through July 2008, for the intervention study were utilized. Following written informed consent procedures, youth participants and their adult caregivers were interviewed using a standard set of measures. Baseline interviews were completed separately with each child and a caregiver, administered by a trained research assistant within 30 days of the PTE.

### Measures

For the purposes of the present study, six measures included in the baseline interview were analyzed: the Traumatic History Questionnaire Parent Version and Child Report Version (Berkowitz & Stover, 2005), the UCLA Posttraumatic Stress Disorder Reaction Index (PTSD-RI) Parent Report and Child Self-Report versions (Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998), and the Mood and Feelings Questionnaire Parent Report and Child Self-Report versions (Angold & Costello, 1987).

**Traumatic History Questionnaire (THQ)**—This questionnaire contains 13 identical items presented as child or parent report developed at Trauma Section at the Yale Child Study Center to assess the child's history of previous traumatic events and the intensity of their reactions. The items were derived from the Traumatic Events Screening Inventory Child and Parent Report (TESI; Ribbe, 1996; Ford, 2002; Gosh-Ippen et al., 2002). For each item endorsed, participants are asked to indicate the level of impact the trauma had on the

child, both at the time of the event and at present. Respondents select a number from 0 to 4, using a scale in which 0 denotes “not at all” and 4 denotes “extremely”. A total trauma history past impact score and total trauma impact current scores are derived by tallying all items endorsed.

*UCLA Posttraumatic Stress Disorder Reaction Index (PTSD-RI)* is one of the most widely used instruments for the assessment of posttraumatic symptomatology related to subjective distress. It assesses diagnostic criteria B (re-experiencing), criteria C (avoidance), and criteria D (hyperarousal) symptom clusters to diagnose PTSD (Pynoos, Rodriguez, & Steinberg, 2000). This measure is among the most extensively studied assessments of childhood PTSD and has strong convergent validity with regard to DSM-IV diagnosis. It allows for calculation of the severity of symptoms on each cluster (B, C, and D) and a total severity score. Numerous studies have found consistently higher Reaction Index scores among traumatized samples compared with control subjects. It has good convergent validity, 0.70 in comparison to the PTSD Module of the Schedule of Affective Disorders of School Aged Children and .82 with the Child and Adolescent Version of Clinician Administered PTSD Scale. Chronbach’s alphas fall in the range of .90 for internal consistency across versions and with test-retest reliability at .84. (Steinberg, Brymer, Decker, & Pynoos, 2004).

**Short Mood and Feelings Questionnaire (SMFQ)**—This questionnaire is a 13- item version of the Mood and Feelings Questionnaire (Angold & Costello, 1987) designed to detect depression in children and adolescents (Angold, et al., 1995). Items are rated by participants as “Not True=0”, “Sometimes=1”, or “True=2” yielding a total depression score. The SMFQ is highly correlated with the longer version of the MFQ and correlates moderately high with the Child Depression Inventory and Diagnostic Interview Schedule for Children. Internal consistency is good for both the child report (alpha .85) and parent report (alpha .87) (Angold, et al., 1995). The MFQ’s use in diagnosing depression has been validated in several studies (Messer, et al., 1995; Wood, Kroll, Moore, & Harrington, 1995).

## Data Analysis

First, Cohen’s Kappa (Cohen, 1960) was used to assess agreement between parent and child reports of specific traumas experienced by the child over his/her lifetime on the THQ. Kappa ( $\kappa$ ) is a correlational statistic that examines agreement while correcting for chance.  $\kappa$  values of greater than 0.75 are considered to indicate high agreement, 0.40 to 0.75 represent moderate agreement, and less than 0.40 indicate poor agreement (Mannuzza, et al., 1989). Next, the group was split by gender and age (school age 7–12 and adolescents 13–17) and Kappa statistics computed to determine if parent-child agreement differed for trauma types based on either of these characteristics. Next, Prevalence-Adjusted Bias-Adjusted Kappas (PABAK; Byrt, Bishop & Carlin, 1993) were used to assess agreement between parent and child reports of the three PTSD symptoms criteria on the PTSD-RI. PABAK is a measure of agreement ranging from  $-1$  to  $+1$  that depends solely on the observed proportion of agreement between raters. It adjusts Kappa (Cohen, 1960) for imbalances caused by differences in the prevalence and bias (Byrt et al., 1993). It addresses the problem of high inter-rater agreement and low kappa scores known as the “kappa paradox” (Cicchetti & Feinstein, 1990), which was observed in our PTSD-RI data. PABAK was used rather than the standard kappa statistic. Several other recent studies have used PABAK in their reliability studies (Girianelli et al., 2007; Cibere et al., 2008). Last, Pearson correlations were calculated to assess the strength of the relationship between parent and child report of: 1) the impact of previous traumas on the child both at the time of the trauma and at the present time; 2) the severity of PTSD symptoms for Criteria B (Re-Experiencing Cluster), C (Avoidance Cluster), D (Hyperarousal Cluster) and Total scores; and 3) severity of

depression symptoms reported on the SMFQ. Correlations of .30 or less were considered to reveal little relationship between the variables (Hinkle, Wiersma & Jurs, 1988).

## Results

### Demographics and Descriptive Statistics

The total sample of 76 included 44 females and 32 males. The majority of caregivers were mothers (89%) with only 11 fathers (11%) participating. Youth ranged in age from 7 to 17 years ( $M = 12.05$ ,  $SD = 2.87$ ). The ethnic makeup of youth in the sample was 31.6% Caucasian, 36.8% African American, 19.7% Hispanic, 11.8% Multi-Ethnic or other. Youth were referred for the following traumatic events: 21.1% Sexual Abuse; 19.7% Assault; 23.7% Motor Vehicle Accident; 21.1% Witnessing Violence; 5.3% Threatening; 5.3% Injury; and 2.6% Animal Bite.

### Concordance between parent and child report for specific types of previous traumas

Cohen's Kappa was used to assess agreement between parent and child reports of the child's trauma history. Kappa statistics for parent-child agreement with respect to specific traumas are shown in Table 1. Overall, agreement between parent and child report was poor to moderate, with  $\kappa$  ranging from 0.12 to 0.58. The strongest agreements, which fell in the moderate range and were statistically significant, were for whether the child had been a victim or witness of sexual activities ( $\kappa = 0.58$ ,  $p < .001$ ), experienced the death of someone close ( $\kappa = 0.41$ ,  $p < .001$ ), or had a family member arrested or in jail ( $\kappa = 0.40$ ,  $p < .001$ ). Although in the poor range, agreement for dog/animal bites, suicide of someone close, having been a victim or witness of a mugging or the victim or witness of physical violence were statistically significant (see Table 2). Negligible and non-statistically significant agreement was found for serious injuries, separation from significant others, and physical assault (see Table 2).

When compared by gender, agreement between parent and child report remained poor to moderate across trauma types. Males and their parents had statistically significant agreement across more trauma types than girls. Boys and their parents had better agreement for victim/witness of mugging ( $\kappa = .52$ ,  $p < .01$ ), suicide of someone close ( $\kappa = .52$ ,  $p < .01$ ), and family member arrested and jailed ( $\kappa = .43$ ,  $p < .05$ ) than girls who had non-significant agreement in these categories (see Table 1). Girls and their parents had significant agreement for animal bites ( $\kappa = .42$ ,  $p < .01$ ) and witnessing physical violence ( $\kappa = .29$ ,  $p < .05$ ), while boys did not. Girls and boys and their parents both had statistically significant agreement for severe illness or injury, and victim of sexual assault (see Table 1). Despite statistical significance, agreement across all trauma types was in the moderate range at best and very low/poor at worst.

Overall, girls reported significantly higher rates of serious accidents ( $F(1, 75) = 5.7$ ) and separation from someone close ( $F(1, 75) = 9.7$ ) than boys (see Table 1), but agreement in these categories between parent and youth report was comparable across genders and in the very low range.

When evaluated by age group (school age versus adolescents), agreement was variable. Agreement between school age children and their parents was in the moderate range and was statistically significant for family member arrested/jailed ( $\kappa = .47$ ,  $p < .001$ ) and having been a victim or witness of mugging ( $\kappa = .39$ ,  $p < .01$ ) but agreement on these variables was not statistically significant for adolescents and their parents. Adolescents had statistically significant agreement with parents for severe illness/injury ( $\kappa = .33$ ,  $p < .05$ ) while school aged children did not (see Table 2). Both groups had statistically significant agreement with parents for death of someone close, animal bites, and sexual abuse. Adolescents self

reported significantly higher rates of witnessing physical violence ( $F(1, 75)=7.2$ ) and family member jailed ( $F(1,75)=6.9$ ) than school aged children. No other significant age differences were found for self reported trauma exposure (see Table 2).

### Relationship between parent and child report of the impact of traumas

Correlations of parent and youth report were not significant for the total impact of earlier potential traumas on youth at the time of the incident ( $r = .21$ ), and as reported at the baseline interview ( $r = .21$ ). When assessed by gender, there were significant positive correlations for male youth and their parents for the impact of the events at the time of the incident ( $r = .55, p = .000$ ) and at the time of the baseline report ( $r = .43, p = .02$ ). These correlations fell in the moderate range. However, correlations were non-significant for females (see Table 3). Girls reported significantly higher impact of prior traumas at the time of the event than boys based on their own reports ( $F(1, 75) = 5.6$ ) (see Table 4). No significant gender differences were found based on parent report (see Table 4). When analyzed by age, the association between parent and child report was not significant for school aged children or adolescents. In fact the correlation between adolescent and parent report was near zero (see Table 4).

### Concordance between parent and child report of PTSD and depression symptoms

PABAK was used to assess agreement between parent and child reports on the three symptom criteria for PTSD. There was high agreement for the Re-experiencing cluster (PABAK = 0.85), but poor agreement for the Avoidance cluster (PABAK = 0.12), and Hyperarousal cluster (PABAK = 0.04). When assessed by gender, the agreement between males and their parents was significantly higher than between females and their parents for Hyperarousal (See Table 4). Agreement between school age children and their parents and adolescents and their parents were similar for Re-experiencing and Avoidance with high agreement for the former and poor agreement for the latter. Adolescents had significantly higher agreement for Hyperarousal than school aged children and their parents (see Table 5).

Pearson correlations were run to find relationships between parent and youth report of the severity of symptoms of depression and PTSD Re-experiencing, Avoidance, Hyperarousal clusters, and Total Scores. Significant positive correlations were found between parent and youth severity scores for depression ( $r=.28, p=.032$ ), Re-experiencing ( $r = .28, p = 0.22$ ), Hyperarousal ( $r = .40, p = .001$ ), and Total Severity Score ( $r = .25, p = .03$ ). Although significant, all correlations fell within the low range (Franzblau, 1958; Hinkle, Wiersma, Jurs, 1988). For male participants, there were significant correlations for Re-experiencing ( $r=.40, p=.036$ ), Hyperarousal ( $r=.67, p = .000$ ), Total PTSD Severity Score ( $r = .42, p = .026$ ), and depression ( $r=.41, p=.043$ ); for female participants, significant positive correlations were found for Hyperarousal ( $r = .33, p = .044$ ) only. Girls self reported significantly higher severity of Avoidance than boys ( $F(1, 75)=3.98$ ); however based on parent report boys had significantly higher Hyperarousal and Total severity than girls ( $F(1,75)=5.5$  and  $4.2$  respectively). Correlations for Re-experiencing ( $r = .49, p = .001$ ) and Hyperarousal ( $r = .39, p = .013$ ) were significant for school age participants, while Hyperarousal ( $r = .41, p = .034$ ) and depression ( $r=.45, p=.025$ ) were significant for adolescents (see Table 3).

## Discussion

Agreement between adult caregivers and their children about the type of potentially traumatic events experienced by the child, the impact of these events and the resulting symptoms was variable and at times strikingly poor. Agreement was considered in the low range across most types of traumas reported. While some differences based on age and gender were found, correlations were moderately positive at best. Youth reported more

events than parents, especially in categories of community violence. Not only did parents' greatly underestimate their child's exposure in certain categories, but their report of the impact of previous or recent PTEs on their children either at the time of the incident or at the time of the assessment was low. Correlations were not significant and the meaningful association was low (Hinkle, Wiersma & Jurs, 1988) indicating parents' lack of understanding of the impact of events on their children. This was particularly true for females and adolescents. An outstanding conclusion from this study is that parent-child agreement on the numbers and types of potentially traumatic experiences and their subsequent impact is poor beginning in the acute peritraumatic period. In general, parent-child communication about youth experience of upsetting events and its accompanying distress appears to be lacking.

These findings are consistent with prior reports in the literature (Schreier, et al., 2005) and are grounds for continuing concern. Family and social support has been found to be an essential protective factor in multiple explorations of exposure to traumatic events (Bal, De Bourdeaudhuij, Crombez, & Van Oost, 2004; Kaufman, et al., 2004). In childhood and adolescence reliance on adult caregivers for appropriate emotional support and attention is generally a necessity. Adolescents may have more opportunity and ability to access support from peers and other adults, but regardless of age, parental recognition of traumatic symptoms is a requirement in order for consultation or treatment to be obtained. Lack of parental understanding about the impact of the trauma experienced by the child is likely to be related to failure to seek intervention required to adequately address symptoms and subsequently, to poorer outcomes for the child.

There was similarly poor agreement between adult caregivers and their children regarding Early PTSD symptoms. Despite the recognition that their child had experienced a PTE and was symptomatic on screening (as was required for inclusion in the study), there was limited concordance on symptom reports. It is not surprising that caregivers reported less Avoidance symptomatology. As a primarily internalizing symptom, parental knowledge of this symptom is dependent upon reports from their children. It was surprising to find such poor agreement for Hyperarousal symptoms as those are more easily observable. There was greater agreement between males and their parents for PTSD Criteria D (Hyperarousal) and depressive symptoms. Boys are more likely to demonstrate externalizing symptoms of psychiatric disorders (Miner, Clarke-Stewart, 2008; Leadbeater, Kuperminc, Blatt, Hertzog, 1999) and parents tend to over report externalizing symptoms and under report internalizing symptoms (Kolko & Kazdin, 1993). It is possible that normal reporting trends coincidentally led to parents more accurately reporting externalizing symptoms that their male children also reported. The finding that there is greater concordance for boys and their parents on Depression items may be related to a behavioral change in activity level that depressed boys exhibit, but again, since the agreement was still generally low it is not an especially clarifying result and bears further investigation with a larger sample size.

The findings of low concordance between parent and youth reports in the period soon after a PTE and when the child has screened positive for posttraumatic symptoms points to the relatively high risk these children face for poor outcomes following exposure to a PTE. If caregivers are unaware that a PTE occurred, and uninformed about its potential impact, they cannot be expected to provide the support and guidance required. It is certainly understandable for caregivers and other adults to be unaware of children and youth's suffering from non-trauma related psychological symptoms and disorders. However, when all have acknowledged the occurrence of a PTE and have had contact with various agencies as a result, this lack of recognition is remarkable. Clearly a greater role for agencies such as law enforcement, Child Welfare, Pediatric Emergency Departments and Inpatient units and others can be envisioned, in which more and better information about the potential for



psychological injury after a PTE is provided to parents and caregivers in the immediate aftermath of the event. The provision of educational information about traumatic stress, and in particular about avoidance symptoms and dissociation in children could be a helpful addition to the general discharge instructions from hospitals. Law enforcement could provide such information with directions for follow up on the legal aspects of a criminal case, and Child Welfare Workers could directly aid caregivers in the assessment of posttraumatic symptomatology. Given the fact that children's reports have been given less weight than parent reports in some circumstances, the provision of this information should be protocolized, rather than given out on what is perceived as an "as-needed" basis by the child-serving professional. While providing these resources is not a panacea, they may contribute to greater caregiver recognition of the exposed child's symptoms and needs, which may in turn lead families to seek needed services.

Therapies for childhood PTSD have recognized the importance of parent-child communication and involvement in order to ameliorate posttraumatic symptoms. The most effective treatments for children with PTSD such as Trauma Focused-Cognitive Behavioral Therapy (TF-CBT; Cohen, Deblinger, & Mannarino, 2006), Child-Parent Psychotherapy (Lieberman, Ghosh Ippen, & Van Horn, 2006; Lieberman, Van Horn, & Ippen, 2005) all include parent education and involvement as a core component of treatment. Even Cognitive Behavior Therapy in Schools (CBITS) (Jaycox, 2003; Kataoka, et al., 2003; Stein, Elliott, et al., 2003; Stein, Jaycox, et al., 2003), which provides group treatment for older children, includes two sessions with parents and psychoeducational handouts for caregivers. Just as the inclusion of caregivers is generally accepted as a key component of treatment for childhood PTSD, it should be understood as a central element of models for early intervention.

Early intervention strategies for potentially traumatized children may be most effective when directly connected with organizations that serve or come into contact with children that have been exposed to a PTE and, when needed, promptly combine caregiver and child psychoeducation with the facilitation of bi-directional communication. If these two aims are accomplished, logically, caregiver support of the child should be an achievable outcome resulting in better rates of recovery. In addition, in high risk populations, such as those living in psycho-social adversity, with familial or personal histories of Psychiatric Disorders or chronically exposed to PTEs, early intervention models with these core components may serve to increase the early identification of children requiring mental health and other longer term treatments and interventions. It is possible that such early identification and subsequent treatment may actually decrease the later burden on stretched mental health resources for older adolescents and adults.

### Limitations and Future Directions

The relatively small sample size included in this study resulted in a small number of participants for gender and aged based comparisons and did not allow for more specific analysis related to female adolescents versus male adolescents. The timing of the data collection (within 30 days of a potentially traumatic event) also prevents generalizing the findings for the concordance of PTSD symptom reporting. We were not able to report on the concordance between parent and youth report for full PTSD diagnosis since this diagnosis cannot be made within 30 days of an incident. We can only speak to the concordance of reporting within the peritraumatic or Acute Stress period. Since other studies have reported convergence in reports by caregivers and youth over time, longitudinal follow-up with a larger sample size to allow examination of gender and age differences in concordance would be beneficial. Other studies have also reported significant relationships between parents' own symptoms and their report of their child's symptoms (Kassam-Adams et al., 2006), which may help explain some of the disagreement found in this sample. The issue of

parents' own reactions and symptoms and how parental history of trauma and posttraumatic reactions, as well as current reactions to their child's experiences, may limit parental capacity to seek and participate in interventions designed to assist their children requires careful consideration as interventions for youth who have experienced a traumatic event are designed and implemented.

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**Table 1**

**Kappas for Parent and Youth Agreement for Traumas Reported**

Trauma	Males (n=32)		Females (n=44)		Total (n=76)					
	K	Child (%)	Parent (%)	K	Child (%)	Parent (%)				
Serious Accident	.19	43.8	18.8	.07	70.5	29.5	5.7*	.13	59.2	25.0
Severe Illness or Injury	.23*	6.3	34.4	.19*	2.3	18.2	.76	.22**	3.9	25.0
Death of Someone Close	.51**	65.6	46.9	.31*	72.7	65.9	.43	.41***	69.7	57.9
Separation from Significant Others	.19	18.8	43.8	.10	52.3	38.6	9.7**	.12	38.2	40.8
Suicide of Someone Close	.52**	9.4	12.5	.07	20.5	6.8	1.7	.23*	15.8	9.2
Physical Assault or Threatening	.29	31.3	21.9	.07	27.3	20.5	.14	.17	28.9	21.1
Victim or Witness of Mugging	.52**	12.5	9.4	-.04	11.4	2.3	.02	.25*	11.8	5.3
Attacked By a Dog or Other Animal	.24	31.3	15.6	.42**	29.5	13.6	.03	.34***	30.3	14.5
Witnessing Physical Violence	.18	68.8	71.9	.29*	70.5	47.7	.03	.24*	69.7	57.9
Family Member Arrested or In Jail	.43*	53.1	62.5	.39	56.8	34.1	.10	.40***	55.3	46.1
Victim or Witness of Sexual Activities	.35*	9.4	6.3	.64***	18.2	20.5	1.1	.58***	14.5	14.5

Note: K, Kappa Value.

\* p<.05.

\*\* p<.01.

\*\*\* p<.001.

**Table 2**  
Kappas for Parent and Youth Reported Trauma History, as a Whole and Separately by Age Group

Trauma	School Age (n=46)			Adolescence (n=30)			Total (n=76)		
	K	Child (%)	Parent (%)	K	Child (%)	Parent (%)	K	Child (%)	Parent (%)
Serious Accident	.15	52.2	17.4	.04	70.0	36.7	2.4	59.2	25.0
Severe Illness or Injury	.13	2.2	23.9	.33*	6.7	26.7	.95	3.9	25.0
Death of Someone Close	.37***	63.8	43.5	.38*	80.0	80.0	2.5	69.7	57.9
Separation from Significant Others	.12	41.3	45.7	.10	33.3	33.3	.48	38.2	40.8
Suicide of Someone Close	-.07	10.9	4.3	.38	23.3	16.7	2.1	15.8	9.2
Physical Assault or Threatening	.11	23.9	19.6	.22	36.7	23.3	1.4	28.9	21.1
Victim or Witness of Mugging	.39***	13.0	6.5	-.05	10.0	3.3	.16	11.8	5.3
Attacked By a Dog or Other Animal	.41**	28.3	19.6	.25*	33.3	6.7	.22	30.3	14.5
Witnessing Physical Violence	.17	58.7	52.2	.29	86.7	66.7	7.2**	69.7	57.9
Family Member Arrested or In Jail	.47***	43.5	43.5	.27	73.3	50.0	6.9**	55.3	46.1
Victim or Witness of Sexual Activities	.55***	13.0	15.2	.61***	16.7	13.3	.19	14.5	14.5

Note: K, Kappa Value; School Age (7–12), Adolescents (13–16).

\* p<.05.,

\*\* p<.01,

\*\*\* p<.001.

**Table 3**  
 Correlations of Parent and Youth Reported Trauma History Impact, Depression, PTSD Criteria B, C, D, and Total Severity Scores.

	Males (n=32)	Females (n=44)	School Age (n=46)	Adolescences (n=30)	Total (n=76)
Past Trauma Impact	.55***	.11	.26	-.01	.21
Current Trauma Impact	.43*	.16	.26	.06	.21
PTSD Re-experiencing Severity Score	.40**	.21	.49***	-.04	.28*
PTSD Avoidance Severity Score	.12	.23	.11	.15	.12
PTSD Hyperarousal Severity Score	.67***	.33*	.39*	.41*	.40***
PTSD Total Severity Score	.42*	.26	.29	.21	.25*
MFQ Total	.41*	.25	.21	.45*	.28*

Note: School Age (7–12), Adolescences (13–16); MFQ, Mood and Feelings Questionnaire.

\* p<.05,

\*\* p<.01,

\*\*\* p<.001.

**Table 4**

Means and Standard Deviations for Outcome Variables of Interest

Outcome	Male		Female		Total		F
	Mean	SD	Mean	SD	Mean	SD	
<b>PARENT</b>							
PTSD Re-experiencing	7.2	5.1	5.8	4.5	6.4	4.8	1.75
PTSD Avoidance	6.1	5.8	4.5	3.9	5.1	4.8	2.18
PTSD Hyperarousal	9.6	4.8	7.1	4.4	8.1	4.7	5.5*
PTSD Total Severity	22.9	13.1	17.27	10.7	20.9	11.9	4.2*
<b>CHILD</b>							
PTSD Re-experiencing	7.2	5.1	7.8	5.0	7.5	5.1	.29
PTSD Avoidance	6.1	5.8	9.4	5.3	7.8	5.6	3.98*
PTSD Hyperarousal	9.6	4.8	10.0	4.3	9.8	4.6	1.86
PTSD Total Severity	22.9	13.1	27.2	12.1	25.1	12.6	3.8
<b>PARENT</b>							
MFQ Total Score	6.2	6.5	4.9	4.5	5.4	5.4	1.1
<b>CHILD</b>							
MFQ Total Score	5.7	4.9	7.9	5.6	24.1	13.6	2.6
<b>PARENT</b>							
Trauma Impact	4.8	5.2	4.4	3.2	4.6	4.2	.22
Trauma Impact Past	9.4	6.5	7.2	4.4	8.1	5.5	3.13
<b>CHILD</b>							
Trauma Impact	3.7	3.7	5.8	5.5	4.9	4.9	3.6
Trauma Impact Past	7.1	5.6	10.8	7.2	9.2	6.8	5.6*

\* p < .05



**Table 5**

PABAK Agreement for Parent and Youth Report of PTSD Symptoms

	Males (n=32)			Females (n=44)			Total (n=76)		
	PK	X <sup>2</sup>	Parent	PK	X <sup>2</sup>	Parent	PK	X <sup>2</sup>	Parent
Meet Criteria B	.79	.08	96.2	.90	.03	97.4	.85	.09	96.9
Meet Criteria C	0	.19	50.0	.15	3.0	48.3	.12	2.1	48.9
Meet Criteria D	.79	6.2*	100	.55	.57	83.8	.04	.14	90.2
	School Age (n=46)			Adolescences (n=30)			Total (n=76)		
Meet Criteria B	.85	.53	95.0	.85	NA	100	.85	.09	96.9
Meet Criteria C	.22	2.4	56	-.04	.29	40	.12	2.1	48.9
Meet Criteria D	.51	.76	88.6	.85	8.3	82.3	.04	.14	90.2

Note: Criteria B=Re-experiencing, Criteria C=Avoidance, Criteria D=Hyperarousal, School Age (7–12.99), Adolescence (13–17); PK=Prevalence-adjusted bias-adjusted kappa

\* p<.05