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The Role of Family Processes in Childhood Traumatic Stress Reactions for Youths Living in Urban Poverty

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Abstract

This article reports findings from a cross-sectional study exploring relationships between trauma exposure, childhood traumatic stress, and family functioning. Data were collected from a sample of 100 mostly African American, 6- to 9-year-old children and their caregivers who were living in low-income, urban neighborhoods and analyzed using hierarchical multiple regressions. The children experienced high levels of exposure and traumatic stress symptoms. Trauma exposure was correlated with reexperiencing, avoidance, and arousal and also with externalizing behavior problems. Reexperiencing and avoidance symptoms were related to lower ratings of the value of family routines reported by caregivers. Higher ratings of family structure, including both organization and support, were related to fewer internalizing and externalizing behavior problems.

Keywords

children; urban; poverty; trauma; family process

Children growing up in low-income urban environments are often exposed to severe, ongoing trauma and develop traumatic stress disorders at disproportionate rates. For many low-income children, exposure to trauma is a fact of daily life. Their lives are punctuated by exposure to community violence, victimization/incarceration, and/or death of family members, and maltreatment (Black & Krishnakumar, 1998; Coulton, Korbin, & Su, 1999). Studies of children living in poor, inner-city communities find that between 70% and 100% have been exposed to traumas (Dempsey, Overstreet, & Moely, 2000; Macy, Barry, & Noam, 2003).

Many children when exposed to multiple traumas show distress initially, although most children are remarkably resilient. Fewer than 20% develop a psychiatric disorder, mainly anxiety disorders, including posttraumatic stress disorder (PTSD; American Psychiatric Association, 1994). Although a broad range of symptoms may develop following exposure to trauma, the *trajectory leading to PTSD* is especially important, as children who develop PTSD have demonstrated poorer outcomes across several domains compared with children who do not meet full criteria (Giaconia, Reinherz, Silverman, & Pakiz, 1995). In addition to exposure to a traumatic event, PTSD is defined by three symptom clusters, reexperiencing, avoidance and numbing, and hyperarousal, along with functional impairment. Research on child traumatic stress disorders generally focuses on diagnostic categorization or total PTSD

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symptoms across these clusters, without examining mechanisms that might differentially affect each symptom area independently. Exposure to multiple traumas increases the likelihood of a symptomatic response best described by affective (sadness and rage) and physiological dysregulations, attachment disturbances, alterations in consciousness and self-perception, and changes in systems of personal meaning (Cook et al., 2005; Herman, 1992; Kaysen, Resick, & Wise, 2003; Kiser, Millsap, & Heston, 1992; Terr, 1991; van der Kolk, 2005).

In addition to the direct consequences on children, the traumatic context of urban poverty has pervasive systemic effects that slowly erode parent and family functioning. Multiple models and solid empirical evidence suggest that trauma-related distress experienced by adults negatively affects their functioning, and in many cases, undermines parenting behaviors and parent-child relationships (Evans & English, 2002; Smith, Prinz, Dumas, & Laughlin, 2001). Negative changes in family functioning are also associated with urban poverty. Many families react with chaos, disorganization, and instability to the chronic stress and violence often associated with urban poverty. Uncontrollable situations make it difficult to sustain a stable and predictable daily schedule (Ackerman, Kogos, Youngstrom, Schoff, & Izard, 1999; Hill & Herman-Stahl, 2002). Urban poverty may also have a pervasive influence on family relationships; children internalize consistent failure of caregivers to provide protection and control over the environment and develop working models characterized by mistrust (Ackerman et al., 1999). High rates of family dissolution, discord, and violence diminish cohesion. Families in poor urban communities often struggle to maintain high expectations and to believe they have the necessary resources to overcome severe stress and trauma. Detrimental influences on parental well-being and family functioning exaggerate the contextual risks on children (Brody et al., 2003; Leventhal & Brooks-Gunn, 2000; McCubbin, 1995; Whittlesey et al., 1999).

Evidence suggests that, in addition to parental support (Kliewer, Murrelle, Mejia, Torresde, & Angold, 2001), other forms of family functioning are powerful mediators between trauma and its impact on children, including treatment outcomes (Pfefferbaum, 1997; Whittlesey et al., 1999). Impaired family functioning following chronic trauma may jeopardize the ability of families to make effective use of structured treatment approaches and limit the effectiveness of treatments that require family support. Although there is evidence supporting the use of a parent treatment component with trauma-specific child therapies (Carr, 2000; Pfefferbaum, 1997), there are few well-developed, standardized, and empirically supported family therapies for treating childhood traumatic stress.

This study was designed to test the hypothesis that the effect of trauma exposure on childhood traumatic stress is attenuated by family processes. Such evidence would suggest that working on family processes may limit the impact of stress or trauma. As we are particularly interested in finding ways to address health disparities and intervene to ameliorate the effects of urban poverty on ethnic minority children, our study sample included primarily nonreferred African American children living in low-income, urban environments.

Method

Sample

The study sample consisted of 100, 6- to 9-year-old children who live in poor inner-city communities in Baltimore, Maryland. One child per family participated in the study. On indicators such as child mortality, child abuse/neglect, juvenile arrest rates, homicides, poverty, and teen births, study communities surpass average city rates and are significantly

elevated when compared with state or national statistics (Ramos, 2004). Table 1 presents demographics on the children and their participating caregiver.

Procedures

The sample of 100 families was recruited from community organizations and facilities, such as after-school programs and ambulatory pediatric clinics. Recruitment occurred over a 15-month period starting in the fall of 2005. Recruitment strategies included posting signs, sending or mailing fliers to families, attending parent meetings, and approaching families while waiting for appointments. Because recruitment materials asked if caregivers were “interested in taking part in a research study about children and how being around violence and negative events can affect them?,” some caregivers may have participated because of concerns about their child's exposure to trauma.

Caregivers provided consent for their participation and for their child; child assent was required for 8- and 9-year-olds. Caregivers were paid \$30 for completing the evaluation and children were given a gift valued at \$15. The study was approved by a University Institutional Review Board prior to initiation.

Assessment

Each caregiver/child dyad participated in one 3- to 3.5-hour comprehensive assessment designed to measure exposure, childhood traumatic stress symptoms, and family functioning. Most participants completed the battery in a single session, although some required two visits.

Assessment included a semistructured diagnostic interview (K-SADS or Kiddie-Schedule for Affective Disorders and Schizophrenia for School-Age Children) with the caregiver and child and standardized measures related to child PTSD, including associated symptoms of complex trauma. The caregiver also completed a battery of paper-and-pencil instruments designed to measure family processes. A licensed master's in social work (MSW) conducted all assessments after completing reliability training on the K-SADS IV-R (Kiddie-Schedule for Affective Disorders and Schizophrenia for School-Age Children–Present version–Version IV) from the interview's author and on the K-SADS-P/L (Kiddie-Schedule for Affective Disorders and Schizophrenia for School-Age Children–Present and Lifetime) PTSD section at Judith Cohen's lab.

Measures

Data from the following measures are reported.

Measures to Assess Trauma Exposure

Traumatic Events Screening Inventory for Children–Brief Form (TESI-C-Brief) and Parent Report Revised (TESI-PRR)—This inventory (TESI-C-Brief, Ribbe, 1996; TESI-PRR, Ghosh-Ippen et al., 2002) is a measure of experiencing and witnessing traumatic events for children 3 to 18 years of age. Each negative life event was rated as no exposure, uncertain exposure, exposed but did not meet the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (*DSM-IV*) Criterion A requirements, or exposed but did meet *DSM-IV* Criterion A requirements. The inventories have adequate interrater reliability with kappas ranging from .73 to 1.0 and retest reliability kappas ranging from .50 to .70 (Ford et al., 2000). To create a composite measure of trauma exposure, we used the child and caregiver reports of the number of exposures the child experienced. We calculated a sum of events that met *DSM-IV* Criterion A (i.e., an event that involved both life threat and terror) by either parent or child/clinician report. An event endorsed by both the child and the

caregiver was counted once. By combining parent and child reports and weighting exposure by perceived severity of threat, this score formed a conservative estimate of exposure (Finkelhor, Ormrod, & Turner, 2007; Saunders, 2003).

Stress Index—The Stress Index (Attar, Guerra, & Tolan, 1994) is a 16-item scale measuring stressful life events common to urban, minority, elementary school children. Children rate each item according to whether or not it occurred over the previous year. A parent version was also used. Items overlapping with the TESI were removed leaving two subscales, one measuring life transitions (seven items) and one measuring concerns over safety (two items). Psychometric properties for this instrument have not been reported.

Measures to Assess Symptoms of Child Stress

Schedule for Affective Disorders and Schizophrenia for School-Age Children—Present and Lifetime (K-SADS-P/L) and K-SADS-P IV-R—K-SADS-P/L (Kaufman, Birmaher, Brent, Rao, & Ryan, 1995) and K-SADS-P IVR (Ambrosini & Dixon, 1996) are semistructured diagnostic interviews keyed to *DSM-IV* for children between the ages of 6 and 18 years. Interrater agreement ranges between 93% and 100% and test–retest reliabilities for current diagnosis of PTSD range between .56 and .67 (Ambrosini, 2000; Kaufman et al., 1997). Mirza, Bhadrinath, Goodyer, and Gilmour (1998) report adequate validity with a significant association between the K-SADS and “severe” PTSD as rated on the Fredrick's Reaction Index ($\chi^2 = 8.38, df = 1, p < .005$). The PTSD diagnosis can be scored as definite, partial, or not present (Connelly & Amaya-Jackson, 2002).

Angie/Andy Cartoon Trauma Scales (ACTS)—ACTS (Praver, DiGiuseppe, Pelcovitz, Mandel, & Gaines, 2000; Praver, Pelcovitz, & DiGiuseppe, 2003) provide a child-report cartoon and questioning format to elicit symptoms following ongoing trauma. The measure is appropriate for children aged 6 to 12 years. The 44 items provide a total score and 7 subscales scores (dysregulation of affect, dissociation, self-perception, systems of meaning, avoidance of stimuli, reexperiencing, and somatization). A range of scores for both clinical and nonclinical populations is provided for interpretation. Initial psychometric data on internal consistency reported coefficient alphas ranging from .70 to .95 as measured in a mixed sample of African American and Hispanic children. Only four subscales measuring symptoms related to multiple or chronic exposures (dissociation, self-perception, systems of meaning, somatization) were used in the analyses.

Child Behavior Checklist (CBCL)—CBCL (Achenbach & Edelbrock, 1991) requires a parent to rate 118 problems as they are perceived to reflect the child's behavior over the past 6 months. The instrument measures eight to nine subscales and three summary scales. Statistical data on reliability and validity have been well established.

Measures to Assess Family Processes

Family Processes—Family Processes (Smith et al., 2001) is a 35-item caregiver report scale designed to measure family processes in African American families. Items were taken from popular family assessment measures. Caregivers rate items on a 5-point scale reflecting the degree to which each item is true for their family. Three subscales, cohesion, structure, and beliefs, were used. Because the Family Processes measure is not used as frequently as the other measures, sample items for each subscale are provided below. Cohesion measures sense of belonging and closeness (e.g., Your family knows what you mean when you say something; Family members feel very close to each other). Structure indicates emotional support and organization (e.g., Your family expects too much of you; It is hard to identify the leader (or leaders) in your family). Beliefs represent the family's shared purpose and values (e.g., Family togetherness is important; Parents should teach their children what they

need to know to “make it” in the world). Cronbach's alphas on the scale ranged from .71 to .84 and factor analyses indicate a good fit to the data based on samples of African American families, mainly urban dwellers with higher levels of poverty and lower education levels than nationally representative samples.

Family Time and Routines Index (FTRI)—The FTRI (McCubbin, McCubbin, & Thompson, 1996) is a 32-item measure of family activities, such as leisure, bedtime, and mealtime routines and the value that a family places on these activities, each rated on 4-point Likert-type scales. Adequate internal consistency (Cronbach's $\alpha = .88$) has been established.

Data Analysis

Each variable's distribution was assessed for normality. The trauma exposure score computed from the TESI was positively skewed and was normalized by a square root transformation. A small number of items (1%) were missing from the FTRI; therefore we imputed those values using a mean substitution procedure.

Descriptive statistics were calculated for trauma exposure and traumatic stress symptoms. Scores for the CBCL were compared with the clinical cutoff values. Bivariate correlations were calculated with the Pearson correlation coefficient to explore intercorrelations between gender, exposure, life transitions and safety from the Stress Index; reexperiencing, avoidance, arousal from the K-SADS-P/L; and internalizing, externalizing from the CBCL.

To test our hypothesis that family routines and structure help predict traumatic stress symptoms following multiple or chronic exposures, we ran separate hierarchical multiple regression models for each of the childhood traumatic stress symptoms (reexperiencing, avoidance, arousal from the K-SADS-P/L; dissociation, self-perception, systems of meaning, somatization from the ACTS; and internalizing, externalizing from the CBCL) as the dependent variable, controlling for gender. Age and race were not included as our sample was homogeneous on these two variables. In the first step, we entered gender along with trauma exposure and stressor variables (life transitions and safety from the Stress Index). In addition to exposure to trauma, life stressors were included because they have predicted traumatic distress in previous studies (Brody et al., 2003; Leventhal & Brooks-Gunn, 2000). In the second step, we entered the family functioning variables (family processes [structure, cohesion, beliefs] and family routine [total and value]) to test the additional predictive power of family functioning on traumatic stress symptoms. In the third step, to determine whether family routines or structure moderated the relationship between exposure and child traumatic stress symptoms, we assessed the interactions of exposure and these family variables. To avoid problems with multicollinearity, predictor variables were centered (Cohen, Cohen, West, & Aiken, 2003).

Results

Childhood Exposure and Traumatic Stress

Descriptive analysis provides a picture of this sample's exposure and response to trauma. Based on caregiver or child report on the TESI, 87% reported exposure to multiple events that meet *DSM-IV* Criterion A, 6% reported exposure to one event, and 7% reported no exposure. Mean number of events reported was 5.3 with a range from 0 to 21. The most common events included illness/death of a family member/friend, family member arrested/jailed/imprisoned, separation from caregiver, family members physically fighting, and serious accidents.¹ Mean total scores on the Stress Index were 3.64 ($SD = 2.20$) by parent/caregiver report and 4.43 ($SD = 2.62$) by child report.

Subscales measuring traumatic stress symptoms yielded the following description of this sample. Cronbach's alphas were above .80 on all measures. A total of 28 of the 100 children had been exposed to more than one trauma meeting Criterion A and met partial or full symptom criterion for PTSD as measured on the K-SADS. On the ACTS, 26% of this sample had mean total scores in the elevated range and, according to the interpretation guidelines, should raise some concern, and 22% were very elevated and should raise clinical concern. On the associated symptoms subscales, children's scores were in the elevated or very elevated range as follows: 19% and 22% of children, respectively, were in the elevated and very elevated ranges for dissociation, 27% and 16% for self-perception, 14% and 13% for somatization, and 15% and 22% for systems of meaning (e.g., feelings of hopelessness and despair). Children with mean CBCL scores above the clinical cutoff (>63) accounted for 10% of the sample on the internalizing subscale and 18% on the externalizing subscale.

Relationships Between Exposure, Family Routines and Structure, and Child Symptoms

Because there were no significant effects for cohesion or beliefs in any of preliminary analyses, these variables were excluded in the final regression models. In addition, none of the regression models using the ACTS subscales (dissociation, systems of meaning, self-perception, and somatization) were significant, so no further results using ACTS data are presented.

Bivariate correlations explored relationships between gender, exposure, life transitions and safety, reexperiencing, avoidance, arousal; and internalizing, externalizing behavior problems. Table 2 reports correlation coefficients, means, and standard deviations.

PTSD Symptom Clusters

In the first step of the hierarchical regression models predicting PTSD cluster symptoms on the K-SADS, gender, trauma exposure, and life stressors account for a significant proportion of variance (all $ps < .0001$, refer to Table 3). There was a significant main effect for gender in the models predicting reexperiencing and arousal. Girls were significantly more likely to have higher symptom scores on these two scales. Exposure significantly predicted higher symptom scores on all three PTSD clusters; however life stressors (safety and transitions) did not.

The addition of the set of family variables (total routines, value of routines, and structure) in Step 2 of the hierarchical regression models did not significantly increase the prediction of trauma symptoms, although there was a trend in this direction for avoidance symptoms. However, when looking at individual family variables, the models suggest that when caregivers reported placing less value on their daily routines, reexperiencing and avoidance symptoms of their children were significantly increased. In addition, the total number of family routines significantly predicted an increase in avoidance. None of the family variables were associated with prediction of arousal symptoms.

Child Behavior Checklist

In the first step of the hierarchical regression models predicting CBCL internalizing and externalizing subscales, gender, trauma exposure, and life stressors account for a significant proportion of variance (all $ps < .0001$, refer to Table 4). Trauma exposure predicted more externalizing behaviors but not internalizing behaviors. Endorsement of more life transitions and safety concerns predicted more internalizing behaviors; more life transitions predicted more externalizing behaviors.

¹Some of the events reported would not meet Criterion A1 for all children, but for a particular child with multiple traumas, an event might carry additional perceptions of threat and was rated as meeting Criterion A1.

The addition of the set of three family variables significantly improved the prediction of both externalizing and internalizing behavior. Specifically, higher ratings of family structure predicted fewer internalizing and externalizing behaviors.

To determine whether family routines or structure moderate the relationship between exposure and child traumatic stress symptoms, we included the interactions of trauma exposure and the three family variables to all of the models. None of the interaction terms were significant for any of the outcome variables.

Discussion

Many school-aged children growing up in urban poverty are exposed to multiple adverse life events and traumas (Dempsey et al., 2000; Macy et al., 2003). Although not a clinical sample or a population-based study, 87% of this community sample had experienced multiple traumas and more than one quarter (28%) had multiple exposures to trauma and met either partial or full criteria for PTSD. Exposure has been clearly linked to traumatic stress reactions in children and this study was no exception.

The literature suggests that children who have been exposed to multiple traumas demonstrate a wider variety of problems than the clusters of symptoms included in PTSD. Although there is no “gold standard” for assessing childhood exposure or complex traumatic stress disorders (Cohen, 1998; Connelly & Amaya-Jackson, 2002), this study included a measure of associated symptoms. The lack of significant findings linking exposures with the ACTS cartoon scales or internalizing problems on the CBCL raises multiple issues to consider. First, abstract concepts, such as changes in self-perception and systems of meaning may be difficult for 6- to 9-year-old children to understand and report (Ackerman, Izard, Kobak, Brown, & Smith, 2007). Second, relatively few children met the clinical cutoff for internalizing behavior, suggesting that caregivers may not be valid reporters of their child's internalizing behavior. Or, third, perhaps the symptoms reported on the ACTS cartoon scales or the internalizing behaviors reported on the CBCL are not as strongly related to multiple exposures, whereas the PTSD diagnosis better reflects children's reactions to chronic exposure. The results of this study are preliminary, and further investigation is needed to better understand the association between trauma exposure and internalizing symptoms. Clearly, the results demonstrate that exposure is a strong predictor of traumatic stress symptoms. In addition, findings of a significant main effect between total family routines with avoidance and significant inverse relationships between the value of daily routines with reexperiencing and avoidance symptoms, and family structure with internalizing and externalizing behavior problems supports and further specifies the premise that family practices affect a child's response to trauma. It is interesting to note that family routines seem to influence PTSD symptom clusters in different ways and that arousal was not related to these processes.

This study has limitations related to sample size, study design, and measurement. The sample size limited our ability to explore all the subscales of interest. This study focused on family processes and did not include measures of parent support and parenting practices even though these factors are important for recovery from child traumatic distress. In addition, the sample size also hindered our ability to explore gender differences and may explain the lack of significant findings in the moderated analyses. Further research using larger samples is needed to gain a better understanding of the gender differences and family processes related to childhood traumatic stress symptoms and would allow exploration of a complete model including parental functioning.

The cross-sectional design does not permit us to address causality. Families that had experienced trauma may have been disproportionately drawn to the study through recruitment procedures. Additionally, some selection bias may have resulted because these were volunteers found in community settings. The data were all self-reports; so to reduce concerns about measurement variance information was collected from both child and caregiver (Scheeringa, Wright, Hunt, & Zeanah, 2006). Homogeneity of the sample regarding ethnicity provides insights into how trauma exposures and family routine and structure influence this largely African American sample; however, it is unclear whether relations are similar among other ethnic groups. The results are subject to Type I error because we did not correct for multiple comparisons. Given the dearth of research on this topic, we felt it was important to minimize the Type II error and to rely on replication to confirm these findings.

There are also concerns related to the assessment of the constructs, including difficulties measuring complex symptoms in relatively young children. Additionally, measurement of family routines in ethnic minority samples is quite challenging as few instruments have adequate psychometric properties.

Even with the limitations, results from this preliminary study provide additional information about the role of family variables, including routine and structure, in understanding childhood traumatic stress reactions. For children and their families exposed to on-going stress and trauma related to urban poverty, treatment may need to include bolstering the family's ability to minimize trauma exposures to the extent it is possible, support adaptation once exposed, and make use of treatment if necessary. Such treatment could help families work to repair the slow erosion of meaningful daily routine and family structure that often accompanies living in urban poverty. Our findings suggest that family-based interventions may complement trauma-specific evidence-based practices for families dealing with chronic, severe stress and threat. One promising family intervention provides a behavioral- and skills-based framework for supporting effective family processes for managing and ameliorating trauma-related disorders in children (Kiser, 2006a, 2006b; National Child Traumatic Stress Network, 2008).

Family Routine and Structure

Valuing daily routines—Daily rituals or patterned routines comprise activities such as greetings and good-byes, mealtimes, and bedtimes. Routines take on meaning for family members as they are performed repeatedly and enable families to complete daily tasks. Meaning relates to the importance or value that the family places on carrying out the routine. The practice of meaningful family routines has been linked to healthy family coping with a variety of stressors, including chronic physical illness, psychiatric disturbance, and changes in membership. As an example, meaningful family routines have been used as a means of improving children's adherence to asthma treatment by incorporating treatment components into daily routines such as shared family meals (Fiese & Wamboldt, 2000).

The combination of a high number of daily routines along with diminished value of these routines may be related to the burden of inner-city poverty. Caregivers facing multiple hassles struggle to provide basic needs and protect their young from dangers. In response to the extra effort required, it is likely that daily patterned routines, which are highly vulnerable to daily hassles and major family stressors (Fiese & Wamboldt, 2000), might seem futile and lose meaning for many families. Further support for this interpretation comes from a qualitative follow-up study with caregivers of the children who had been exposed to multiple traumas and had PTSD symptoms. Getting by, that is accomplishing basic tasks required to make it through the day, was a main theme as caregivers discussed how they spent their days. More often than not, caregivers expressed frustration related to the daily

hassles associated with living in urban poverty and their discontent was compounded by the extra demands of taking care of a child with trauma-related symptoms (Kiser, Nurse, Lucksted, & Collins, 2008).

Previous research with samples of urban, African American, single mothers has demonstrated that setting children and immediate family as a priority is an important component of successful adaptation (Brodsky, 1999). In addition to supporting individual family member's coping strategies after trauma occurs, proactive interventions are needed to increase care-givers' sense of the importance of their daily caregiving routines and their commitment to maintaining shared time and experiences. Psychoeducational activities can inform families about the benefits of predictable routine. Skill-building activities can teach families to establish and implement proactive, effective, and satisfying daily routines. For example, families may be assisted in developing safety routines that stipulate rules and acceptable behaviors intended to keep family members safe.

Providing structure and support—Family structure was predictive of fewer reported internalizing and externalizing behavior problems on the CBCL. The family structure subscale, designed specifically for African American families, measures family organization “representing the role of ‘parents as managers’ who help develop household guidelines and rules, appropriate roles and responsibilities, and ways of monitoring the family” (Smith et al., 2001, p. 968). It also includes family support, caring for the emotional needs of individual family members, and involvement in child activities. As in previous studies with the Family Processes instrument, the family structure subscale showed more consistent and robust relationships to a broad array of child outcomes, such as social and emotional competence, than did the subscales measuring family cohesion or beliefs (Smith et al., 2001).

Providing a safe and secure environment for children is a basic family function, an imperative in the treatment of trauma-related symptoms, and a major problem for families in poor urban settings. Caregivers use a variety of means to structure family life including establishment of clear role definitions and boundaries, parental leadership, unambiguous rules and expectations for behavior, fair and consistent discipline, and adequate monitoring and supervision (Hawkins, 1999). Many families living in dangerous impoverished neighborhoods struggle with these family management practices jeopardizing their functioning related to safety/insulation from danger, stability, and meeting the needs of family members. Strategies for improving family support and structure might help protect children from a variety of environmental risk factors, thus coaching families to establish firm routines regarding children's activities (talking about daily activities, planning and carrying out shared activities, knowing where their children are, whom they are with, and who is watching over them) may help to enable families to maintain control over difficult circumstances. The ability of families to increase their predictability, structure, and support may be important strategies for preventing further exposure and for helping children cope with any additional traumas they might experience.

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Table 1

Demographic Characteristics of the Sample

Child	Percentage	Caregiver (<i>N</i> = 99 because of missing data)	Percentage
Age (years)		Age (years) ^a	
6	33	18-24	16.16
7	26	25-29	19.19
8	24	30-34	22.22
9	17	35-39	16.16
Mean age = 7.26 years		>40	26.26
Gender		Gender	
Male	50	Male	1
Female	50	Female	99
Race		Race	
Asian/Pacific Island		Asian/Pacific Island	1
Black/African American	93	Black/African American	92
White (non-Hispanic)	4	White (non-Hispanic)	6
Other	3	Other	1
		Education ^a	
		<8th grade	3.03
		Some high school	25.25
		High school diploma/GED	42.42
		Some college	23.23
		≥College	6.06
		Household income ^a (\$)	
		<20,000	70.71
		20,000-\$35,000	20.20
		35,000-\$50,000	5.05
		>50,000	4.04

^a*N* = 99 because of missing data.

Table 2

Pearson Product Correlation Matrix

Study Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Gender												
2. Exposure	0.01											
3. Safety	0.16	0.37**										
4. Transition	0.14	-0.05	0.08									
5. Routine (FTRI-A)	-0.11	-0.22*	-0.03	-0.10								
6. Routine value (FTRI-B)	-0.05	-0.01	0.00	-0.22*	0.51***							
7. FP structure	-0.06	-0.23*	-0.17†	-0.22*	0.15	0.06						
8. K-SADS reexperiencing	0.18†	0.51***	0.25*	-0.08	-0.10	-0.15	-0.09					
9. K-SADS Avoidance	0.17†	0.46***	0.22*	-0.05	0.00	-0.11	-0.08	0.85***				
10. K-SADS arousal	0.22*	0.49***	0.28*	-0.06	-0.04	-0.07	-0.10	0.85***	0.81***			
11. CBCL external	0.18†	0.33**	0.28**	0.29**	-0.27*	-0.13	-0.48***	0.20*	0.13	0.20†		
12. CBCL internal	-0.03	0.25*	0.29**	0.21*	-0.25*	-0.12	-0.38***	0.15	0.05	0.07	0.63***	
Mean	1.50	2.31	0.84	2.34	70.21	53.97	3.93	10.53	9.22	6.81	48.73	53.78
Standard deviation	0.50	0.92	0.76	1.49	14.16	8.41	0.68	4.84	4.43	3.32	9.75	10.69
N	100	100	100	100	100	100	100	99	99	99	100	100

Note: FTRI = Family Time and Routines Index; CBCL = Child Behavior Checklist; K-SADS = Kiddie-Schedule for Affective Disorders and Schizophrenia for School-age Children.

† $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Hierarchical Regression: Gender, Exposure, Safety, Transitions, Routines, Routine Value, and Structure as Predictors of Posttraumatic Stress Disorder Cluster Symptoms^a

Table 3

Variable	K-SADS Reexperiencing		K-SADS Avoidance		K-SADS Arousal	
	EQ 1	EQ 2	EQ 1	EQ 2	EQ 1	EQ 2
	<i>b</i>	<i>b</i>	<i>b</i>	<i>b</i>	<i>b</i>	<i>b</i>
Gender	1.59 [†]	1.71*	1.33	1.52 [†]	1.29*	1.39*
Exposure	2.60***	2.75***	2.16***	2.42***	1.68***	1.82***
Safety	0.40	0.35	0.23	0.14	0.39	0.34
Transitions	-0.27	-0.37	-0.17	-0.24	-0.16	-0.20
Family routines		0.05		0.07*		0.04
Family routine value		-0.13*		-0.12*		-0.06
Family structure		0.05		0.01		-0.02
<i>R</i> ²	.30	.33	.24	.29	.30	.32
Change in <i>R</i> ²		.04		.05		.02
Change in <i>F</i> (3, 92)		1.69		2.14		1.05
Significance of change		.175		.100		.374

Note: K-SADS = Kiddie-Schedule for Affective Disorders and Schizophrenia for School-age Children; EQ = Equation.

** *p* < .01.

^a Gender, trauma exposure, safety, and transitions were entered in the first equation and family routines, family routine values and family structure were added in the second equation.

[†] *p* < .10.

* *p* < .05.

*** *p* < .001.

Table 4

Hierarchical Regression: Gender, Exposure, Safety, Transitions, Routines, Routine Value, and Structure as Predictors of Internalizing and Externalizing Behavior Problems^a

Variable	Internalizing		Externalizing	
	EQ 1	EQ 2	EQ 1	EQ 2
	<i>b</i>	<i>b</i>	<i>b</i>	<i>b</i>
Gender	-1.94	-2.50	2.23	1.81
Exposure	2.11 [†]	0.82	3.13 ^{**}	1.94 [†]
Safety	3.10 [*]	3.05 [*]	1.70	1.52
Transitions	1.53 [*]	0.96	1.84 ^{**}	1.25 [*]
Family routines		-0.15 [†]		-0.10
Family routine value		0.03		0.01
Family structure		-4.42 ^{**}		-5.02 ^{***}
<i>R</i> ²	.16	.27	.24	.37
Change in <i>R</i> ²		.11		.13
Change in <i>F</i> (3, 92)		4.69		6.61
Significance of change		.004 ^{**}		.0004 ^{***}

Note: EQ = Equation.

^a Gender, trauma exposure, safety, and transitions were entered in the first equation and family routines, family routine values and family structure were added in the second equation.

[†] $p < .10$.

^{*} $p < .05$.

^{**} $p < .01$.

^{***} $p < .001$.