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Exposure to Traumatic Events and Health-Related Quality of Life in Preschool-Aged Children

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Abstract

Purpose—To examine the association of lifetime exposure to traumatic events with health-related quality of life (HRQOL) and psychosocial health in children aged 3 through 5 years.

Methods—Community-based, cross-sectional survey of 170 children and their parents. Traumatic events were assessed by the Traumatic Events Screening Inventory – Parent Report Revised using criteria for potentially traumatic events in young childhood outlined by the Zero to Three working group. HRQOL of young children was measured using the 97-item Infant/Toddler Quality of Life Questionnaire, and psychosocial health was measured using the Child Behavior Checklist 1 ½ – 5.

Results—123 (72%) of children had experienced at least one type of trauma event. Children who had been exposed to 1–3 types of trauma, and those exposed to 4 or more types of trauma had significantly worse HRQOL and psychosocial health than children not exposed to trauma. Significant effect sizes between children exposed to low levels or high levels of traumatic events and children not exposed to trauma ranged from small to large.

Conclusions—Exposure to traumatic events in early childhood is associated with less positive HRQOL and psychosocial health. Cumulative trauma exposure led to significant effects in outcome variables in this population. Interventions to decrease trauma exposure and to reduce significant stress in early childhood associated with exposure to trauma may be appropriate strategies for preventing negative health conditions throughout the lifespan.

Keywords

trauma; health related quality of life; young children; psychosocial health

Twenty-six percent of healthy children will witness or experience a traumatic event, such as abuse or neglect, before the age of 4 years [1]. In addition to short-term changes in behavior, exposure to trauma and its associated stress at a young age can lead to permanent changes in brain structure and function [2; 3]. These changes can, in turn, affect a range of important functions, including regulation of emotions, acquisition of new skills, and capacity to form

secure attachments [4–6]. Exposure to trauma in childhood has been linked to long-term physical health outcomes, including heart disease, cancer, and obesity [7–10]. While early developmental experiences can have significant effects on life-course trajectories [11; 12], there is limited information on the early childhood health precursors to adult chronic disease.

Health-related quality of life (HRQOL) is a multifactorial construct that focuses on individuals' physical, mental, emotional and social functioning. HRQOL is used to assess child health functioning in general populations [13; 14] and in relation to specific conditions, including childhood obesity [15; 16], asthma [17], and HIV status [18] as it provides information about a child's ability to function and adapt to the challenges of everyday life within the home, school, and community environments.

HRQOL in children is related to both self-reported chronic diseases (e.g., diabetes, arthritis, and hypertension), and their risk factors (e.g., body mass index, physical inactivity, and smoking status) [19]. Frequent exposure to trauma during older childhood and adolescence has been shown to be associated with worse HRQOL [20–24], psychosomatic complaints [25–27], poor physical functioning [28; 29], and greater use of health services [30]. In a cross-sectional study of fifth grade children examining the association between recent traumatic event exposure and HRQOL, for instance, Coker and colleagues found that children with more trauma exposure had greater odds of impaired HRQOL compared with children without any trauma exposure [24]. Further, increased HRQOL has been linked to mental health stressors including depression, lowered self-esteem, post-traumatic stress, and perceived stress in children after road traffic accidents [31], adolescents with inflammatory bowel disease [32], adolescents with premenstrual disorders [33], and injury patients two years after treatment in an Emergency Department [34]. While the link between HRQOL and exposure to traumatic events in older children and adults has been established [20–24; 35; 36], the relationships among exposure to trauma and HRQOL in preschool-aged children remains largely unknown. A better understanding of how trauma influences HRQOL in young children is necessary to begin to understand precursors to longer term health outcomes in order to intervene early, strengthen the foundations of health, and reduce the chronicity and severity of disease across the life course.

In line with the American Academy of Pediatrics' new focus on early childhood adversity [37], we sought to examine whether experiences of trauma are associated with HRQOL in young children. Based on previous literature, we hypothesized that (1) exposure to traumatic events will be associated with reduced HRQOL in young children, and (2) this association will have a linear relationship in that the more different types of traumatic events a child experiences, the worse his/her HRQOL.

Methods

Data used for this study were from a larger study examining the impact of social processes and child characteristics on the physical and social emotional health of young children from under-represented families.

Study Population

A sample of 170 children attending Head Start programs and their caregivers participated in the study. To be enrolled in Head Start services, caregivers self-select to complete an application and are screened by Head Start for eligibility based on program requirements (e.g., family income). The study included children between 3 years and 5 years of age who were of African American or white race and identified as either Latino/Hispanic or non-Latino/Hispanic ethnicity per caregiver report. Children's primary caregiver had to be aged

16 years or older and had to have resided with the child for at least 50% of the time. To ensure accurate reporting of personal experiences by caregivers, those caregivers with a thought disorder, active psychosis or mania, or cognitive impairment were not eligible. Only one child and one caregiver per family were eligible for participation.

Procedure

This study was conducted over a 22-month period from April 2010 through February 2012 with the collaboration of a community-based agency that operates several early care and education centers in an urban city in the Northeastern United States.

We used a cross-sectional research design in which caregivers reported on children's trauma experiences, HRQOL, and psychosocial health. We received 489 initial consent to contact forms from caregivers, of which 270 (55%) were screened for participation. Screening fails were due to, for example, incorrect phone numbers, no response after repeated attempts, prior enrollment of a sibling in the study, and family decision to not participate. 170 (63%) of the 270 families screened enrolled in the study. Reasons for non-participation after screening included inability to schedule an interview after repeated attempts, child no longer enrolled in a participating center, family decision to not participate, and not meeting study criteria. Members of the university-based research team screened interested caregivers for eligibility through telephone interviews, and if eligible, a member of the research team met the caregiver at a location of the parent's choosing (e.g., public library) to complete study measures. All measures/questionnaires were conducted by a member of the research team in a semi-structured face-to-face interview format (i.e., items were read aloud to caregivers and follow-up questions were posed when appropriate). Visual aids (e.g., Likert-type scales corresponding to specific questionnaires) were also used to help caregivers who may have had potential literacy-related issues. Interviews took approximately 2 hours to complete and respondents were compensated with a \$45 gift card to local vendors. All study materials and corresponding semi-structured interviews were in English (75.3%) and Spanish (24.7%). The authors' Institutional Review Board approved study procedures and provided oversight in the protection of human research participants.

Measures

Traumatic events—The 24-item Traumatic Events Screening Inventory-Parent Report Revised (TESI-PRR) [38], which was developed for use with children aged birth to 6 years, was used to measure lifetime occurrence of exposure to trauma. A traumatic event for young children refers to “an event or events that involved the actual or threatened death or serious injury to the child or others, or a threat to the psychological or physical integrity of the child or others” [39]. Questions range from queries for accidental trauma such as “Has your child ever been in a serious accident like a car accident, a fall, or a fire?” to queries of sexual trauma. A sum score was calculated representing the TESI-PRR items endorsed by caregivers (i.e. “yes” a child has been exposed to a specific traumatic event at any time in the past; with a potential range of 0–24). The TESI-PRR correlates highly with another measure of trauma exposure ($r = .52$), indicating that the two instruments are measuring similar but not identical constructs [40]. Additionally, the Traumatic Events Screening Inventory-Parent Report has reported test-retest reliability kappas ranging from .50 to .79 [41].

Quality of Life—Caregivers completed the Infant/Toddler Quality of Life Questionnaire (ITQOL) [42; 43], a 97-item generic health status measure for children aged 2–72 months. Items and scales measure aspects of child physical health (physical functioning, growth and development, bodily pain, general health perceptions), and psychosocial functioning (temperament and moods, general behavior, and getting along with others), as well as impact on parents (emotional impact [worry or anxiety about child's well-being], time

impact [amount of time for personal needs], and family cohesion [ability to get along]). Items were summed according to standard ITQOL scoring procedures and transformed into their respective scales on a continuum ranging from 0 (worst possible score) to 100 (best possible score) [44]. Internal consistency has been demonstrated to be satisfactory with a Cronbach's $\alpha > .70$ for all ITQOL scales in a sample of healthy children and a respiratory illness sample. Test-retest reliability was moderate (six ITQOL scales showing ICC .50–.70) to adequate (four ITQOL scales showing ICC $> .70$) [45]. Cronbach's α values for this sample ranged from .70 to .93 for ITQOL scales.

Overall Health—Caregivers rated their children's general physical health and dental health at the time of the interview. Ratings were made using a 5-point Likert-type scale ranging from poor to excellent [46].

Psychosocial Health—Psychosocial health was assessed using the Child Behavior Checklist (CBCL) for children aged 1 ½ to 5 [47], a widely used 113-item parent-report measure designed to assess competencies, and behavioral and emotional problems in young children. The CBCL assesses internalizing (anxiety/depression, somatic complaints), and externalizing (aggression, delinquency) emotional and behavioral problems. Data are reported as normalized *T* scores based on separate norms for age and sex. Reliability and validity of the CBCL is well established. Cronbach's α values for this sample were .56 (somatic complaints), .92 (internalizing symptoms), and .97 (externalizing symptoms).

Covariates—We selected covariates based on previous literature and models relating trauma exposure to physical health [24; 48]. Child-related covariates were race/ethnicity (non-Hispanic black, non-Hispanic white, Hispanic, and other), age, and gender. Caregiver-reported covariates were age and educational attainment (no high school degree, high school degree/some college, and college degree or greater), and household-related covariate was annual household income (<\$20,000, \$20,000–\$34,999, \$35,000–\$49,999, and >\$50,000).

Statistical Methods

Descriptive statistics and frequencies were calculated for the study sample. A path analysis was conducted to assess for association between exposure to traumatic events and HRQOL in children, accounting for child-, caregiver-, and household-related factors. Analyses were conducted using AMOS version 19.0 software, which uses the maximum likelihood estimation (ML) method to estimate the model and obtain the variance-covariances of the parameters [49]. This method automatically treated missing data using listwise deletion. Data were complete for 167 (98%) of the sample. We used the following indices to assess model fit: comparative fit index (CFI) [50] with values greater than .95 indicating good model fit; and root mean square error of approximation (RMSEA) [50], with values less than .08 indicating reasonable fit. The model was determined to fit well if the criteria were met. To evaluate the statistical significance of individual model parameters (e.g., factor loadings, correlations), a statistical significance level of .05 was used. Exploratory analyses revealed that HRQOL physical functioning, growth and development, bodily pain, parent emotional impact, and parent time impact scales were skewed, thus log transformations were performed prior to data modeling. Child HRQOL was constructed as a latent variable incorporating the ten ITQOL scales. Finally, to investigate the association between traumatic event exposure, HRQOL and psychosocial health, we collapsed the number of types of traumatic events experienced into three categories (0, 1–3, and 4 or more types of trauma, representing no, low and high levels of exposure). Because the distributions of the ITQOL scale sum scores were often skewed to the left, we performed all comparisons using nonparametric Mann-Whitney *U* tests [51]. To interpret the observed differences, effect sizes of significant differences ($p < .05$) were calculated by dividing the difference in mean

score by the pooled standard deviation and defined following Cohen's guidelines: small effect $.20 \leq d < .50$, moderate effect $.50 \leq d < .80$, and large effect $d \geq .80$ [52].

Results

The study sample consisted of 170 children with a median age of 49 months (range 36 to 64 months) and their caregivers. Ninety-four percent of respondents were biological parents; 159 (89%) were biological mothers. The majority of children were non-Hispanic African American (42%) or Hispanic (55%) (Table 1). Fifty-one percent of caregivers had household incomes less than \$20,000 and about one-third had less than a high school education.

123 (72%) of children had experienced at least one type of traumatic event; 27% had experienced one event, 18% had experienced 2 events, 12% had experienced 3 events, and 16% had experienced 4 or more events. The most common types of events reported were exposure to domestic violence (22%), death of a loved one (18%), exposure to community violence (18%), and severe illness/injury or medical procedure of someone close to the child (18%).

The model depicting the role of exposure to traumatic events on child HRQOL fit well, $\chi^2(152) = 258.58, p = .000, CFI = .95, RMSEA = .06$. The residual variance associated with the measurement of child HRQOL = .20. Path coefficients and residual variances for the hypothesized model can be found in Table 2. In addition, significant direct effects were found. Early childhood exposure to traumatic events was negatively associated with HRQOL, $\beta = -.26, p = .002$, suggesting that children exposed to more of these events are less likely to have positive HRQOL. Household income between \$35,000 and \$50,000 was positively associated with HRQOL, $\beta = .31, p = .029$; children from higher income households had better HRQOL than children from lower income households.

Overall, children exposed to at least one type of traumatic event had significantly lower HRQOL than children who had not been exposed (Table 3). Specifically, children with exposure to 1–3 types of traumatic events, “low” levels (versus children not exposed) scored significantly lower (worse) ($p < .05$) on several ITQOL scales and higher (worse) on CBCL behavior and somatic complaints subscales. Further, children who were exposed to 4 or more types of traumatic events, “high” levels, also scored significantly lower than non-exposed children on several ITQOL and CBCL scales. Children exposed to high levels of traumatic events also score significantly worse ($p < .05$) than children exposed to low levels of events on ITQOL temperament and moods, and parental emotional impact and time impact scales, as well as internalizing, and externalizing CBCL subscales, indicating more difficulty regulating emotions in children, less time for caregivers to attend to personal needs because of their child's problems, and more caregiver reported anxiety or worry about child well-being. Effect sizes for significant Mann-Whitney *U* tests between children exposed to low levels of traumatic events and children not exposed to trauma were small, while effect sizes for children exposed to high levels of traumatic events, compared to children not exposed, ranged from small to large. Small significant effect sizes were also found between children exposed to low levels of traumatic events compared to children exposed to high levels of traumatic events.

Discussion

To our knowledge, this is the first community-based study to examine the association between exposure to traumatic events and health-related quality of life (HRQOL) in young children aged 3 through 5 years. Nearly three-fourths (72%) of the children in this community sample were reported by their caregivers to have experienced at least one type of

traumatic event. This figure is twice as high as rates of exposure previously reported for children and adolescents [1; 53]. Although children attending Head Start and their families may receive more services and supports than similar children not attending Head Start, high prevalence of trauma exposure in our population may be due to the community and contextual factors (e.g., high levels of community violence and poverty) faced by the children and families who participated in the current study.

As predicted, we found a significant negative association between experiencing different types of traumatic events and impaired HRQOL and psychosocial health in young children. Consistent with earlier research in adult populations [36], populations of children with specific chronic illness [54–58], and a recent study of a community sample of fifth-grade children [24], we found significant negative associations between young child HRQOL and exposure to different types of traumatic events. As in previous literature [28; 59–61], relationships were found between exposure to traumatic events and young children's internalizing, externalizing and somatic symptoms. Thus, there are linkages between young children's exposure to different types of traumatic events and health outcomes.

The ITQOL includes two scales reflecting the impact of the child's health on caregivers themselves (i.e. 'parental emotional impact' and 'parental time impact'). Caregivers indicated that having a child with more trauma exposure was associated with greater caregiver worry about the child and less time for caregivers to attend to personal needs. Following trauma exposure, caregivers play a critical role in influencing children's developmental trajectories as effective parenting practices provide a protective environment surrounding youngsters [62]. When caregivers are able to monitor, set limits, encourage skill development, problem solve, and be positively involved, their children are more likely to show resilience in the face of traumatic events [62–65]. Thus, it is important to assess and work with caregivers who may also be dealing with their own reactions to the event(s) while being responsible for helping children function after exposure.

In line with previous literature [24; 66], a linear relationship was found as experiencing of more types of traumatic events was associated with worse child outcomes. There is a growing body of literature that indicates developmental outcomes are best predicted by cumulative risk factors, including multiple trauma exposures, than by a single pathogenic condition [67]. This prediction is particularly strong for older children [68], as the effect of exposure to multiple types to traumatic events on symptoms grows stronger with increasing age [69]. The temporal proximity of trauma, the developmental stage of young children, and the increased understanding of the importance of the first few years of life in shaping life-long trajectories [70] may account for the linear relationship found in analyses. Even in young children, cumulative trauma exposure led to significant negative effects in HRQOL and psychosocial health.

We used effect size to interpret the clinical significance of differences of ITQOL scale scores. Previous studies using ITQOL in disease populations [54–56; 58] show effect sizes ranging from .3 to 1.2. The higher values found in previous literature do not discount the lower effect sizes found in the current study as we did not assess disease-specific populations. Rather, clinically significant ITQOL scores in the absence of disease reinforces the notion that HRQOL is a multidimensional construct that includes physical, emotional, social, school, and caregiver functioning and allows measurement that transcends the presence of symptoms or specific disease conditions.

Experiences influence health development at all stages of human development, however, those early in life are thought to have a particularly powerful effect on morbidity [11; 37]. While adult-disease models of trauma exposure have demonstrated this relationship [8; 9;

71; 72], the immediate disease-specific physical health consequences of trauma exposure in young children are unknown. Looking more broadly at health in the context of HRQOL in young childhood as a precursor to longer term chronic health outcomes may help identify relevant factors and mechanisms for health in young children exposed to trauma.

A number of limitations must be considered in conjunction with the results of our study. First, the study was cross-sectional, limiting ability to infer causation in regard to associations between traumatic event exposure and subsequent HRQOL and psychosocial health. Second, this study was designed to assess the impact of social processes and child characteristics on the health of young children of color, thus limiting generalizability of findings. Third, this study relies on adult/caregiver report. While caregiver reports of young children's functioning is feasible and appropriate, the use of child-focused research methods (e.g., child interviews, play-based assessments) would provide more information regarding how the children themselves perceived potentially traumatic events. Lastly, although significant differences were detected between groups, most effect sizes were small. Future research could address these limitations using larger samples, and by obtaining multiple sources of data (e.g., independent caregiver reports; direct behavioral observation) with more detailed description (e.g., exact onset, frequency and duration) of the traumatic events beginning in early childhood and continuing prospectively. Lastly, while the TESI-PRR is a promising measure, standard scoring procedures is a total sum score of all types of traumatic events experiences. Future research using the TESI-PRR that analyzes different groupings of trauma types (e.g., interpersonal versus non-interpersonal trauma) while also incorporating contextual factors associated with trauma (e.g., perpetrators relationship to the child) would add to the utility of the screening tool. Nevertheless, important conclusions can still be drawn.

There is mounting evidence [63; 73] that among even very young children, exposure to trauma is associated with a range of psychosocial health problems that may compromise healthy development and place them at risk for persistent serious physical and psychological problems throughout the lifespan. There is strong scientific evidence that the origins of adult disease are often found in biological and developmental disruptions during the early years of life [70]. Thus, interventions to decrease the number and severity of trauma experiences that threaten the well-being of young children and those that reduce significant stress in early childhood associated with exposure to traumatic events may be appropriate strategies for preventing adult health conditions [11; 37; 70]. Further, trauma research has identified a link between parent adjustment and children's functioning after exposure to trauma [60; 63; 74; 75]. Therefore, care of children after exposure to trauma within the family context that strengthens caregiving skills and parenting practices could serve as an effective approach to promoting children's recovery and functioning following trauma. Further exploration of the relationship between exposure to traumatic events and health in very young children is an integral step toward providing targeted support and prevention strategies for improved health throughout the lifespan.

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Abbreviations

HRQOL	health related quality of life
TESI-PRR	Traumatic Events Screening Inventory-Parent Report Revised
ITQOL	Infant/Toddler Quality of Life Questionnaire
CBCCL	Child Behavior Checklist
SEM	structural equation model
ML	maximum likelihood estimation
CFI	comparative fit index
RMSEA	root mean square error of approximation

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Figure 1.

Model depicting path analysis assessing for association between exposure to traumatic events and HRQOL in children, accounting for child-, caregiver-, and household-related factors.

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

Note: Latent variable Child HRQOL comprised of ITQOL subscales: PF = Physical functioning; GD = Growth and development; BP = Bodily pain; TM = Temperament and moods; GB = General behavior; GA = Getting along; GH = General health perceptions; PE = Parental emotional impact; PT = Parental time impact; FC = family cohesion.

Table 1

Distribution of Sample Characteristics

Characteristic	Mean (SD)
Child age, months	49.5 (6.1)
Caregiver age, years ^a	30.9 (7.5)
	N (%)
Child race/ethnicity	
Non-Hispanic white	2 (1.2)
Non-Hispanic African American	71 (41.8)
Hispanic	93 (54.7)
Non-Hispanic other ^b	4 (2.4)
Child gender	
Male	86 (50.6)
Female	84 (49.4)
Annual household income, \$	
< 20,000	87 (51.2)
20,000–34,999	46 (27.1)
35,000–49,999	20 (11.8)
50,000	9 (5.3)
Unreported	8 (4.7)
Parent educational attainment ^c	
< High school	58 (34.1)
High school/some college	99 (58.2)
4-year college degree	13 (7.6)
Child physical health status ^d	
Excellent to good	162 (95.3)
Fair to poor	8 (4.7)
Child dental health status ^d	
Excellent to good	152 (89.4)
Fair to poor	18 (10.6)

^aCaregiver age is for the caregiver responding to the survey.

^bThe "other" category includes non-Hispanic multiracial children.

^cHighest level of educational attainment for the caregiver responding to the survey.

^dCaregiver reported.

Table 2

Standardized path coefficients and residual variances for the proposed model

Parameter	Path Coefficient	S. E.	Residual Variance
<i>Direct Path Coefficients</i>			
Trauma exposure HRQOL	-.26 **	.34	
Child's age HRQOL	.14	1.10	
Male gender HRQOL	<.01	1.11	
African American HRQOL	-.19	7.02	
Hispanic/Latino HRQOL	-.42	7.04	
Other race/ethnicity HRQOL	-.14	7.71	
Less than high school ^a HRQOL	-.82	7.25	
High school/some college ^a HRQOL	-.80	7.21	
College degree ^a HRQOL	-.47	7.57	
Income < \$20,000 ^a HRQOL	.08	2.58	
Income \$20,000 – \$34,999 ^a HRQOL	.10	2.68	
Income \$35,000 – \$49,999 ^a HRQOL	.31 *	3.11	
Income > \$50,000 ^a HRQOL	.08	3.50	
<i>HRQOL Latent Variable Coefficients</i>			
General health perceptions (GH)	.54 **	---	.29
Physical functioning (PF)	-.26 **	<.01	.07
Growth and development (GD)	-.66 **	.01	.44
Bodily pain (BP)	-.30 **	.01	.09
Temperament and moods (TM)	.77 **	.19	.59
General behavior (GB)	.76 **	.29	.57
Getting along (GA)	.77 **	.23	.60
Parental emotional impact (PE)	-.63 **	<.01	.40
Parental time impact (PT)	-.51 **	.01	.26
Family cohesion (FC)	.31 **	.29	.10

Note. S. E. = Standard Error. HRQOL = Health related quality of life.

^aCaregiver information.*
 $p < .05$.**
 $p < .01$.

Table 3

Means, Standard Deviations, and Traumatic Event Exposure Group Differences

ITQOL Scale ^b	Group A No Trauma (n = 47)		Group B 1-3 TTEE (n = 96)		Group C 4+ TTEE (n = 27)		Effect Size ^d	
	M (SD)		M (SD)		M (SD)		A-B	A-C B-C
Physical functioning (PF)	99.65 (1.73)		98.23 (7.71)		93.85 (20.95)		--	.48 --
	94.31							
Growth and development (GD)	(17.11)		93.26 (8.97)		92.22 (8.41)		.09	.14 --
			93.75		88.89			
Bodily pain (BP)	96.20 (9.41)		(14.10)		(16.51)		--	.59 --
	84.28		82.97		77.83			
Temperament and moods (TM)	(10.83)		(11.85)		(10.30)		--	.61 .45
	72.87		67.97		68.82			
General behavior (GB)	(17.23)		(18.44)		(18.57)		--	-- --
	76.06		75.52		71.42			
Getting along (GA)	(14.95)		(13.82)		(12.95)		--	-- --
General health perceptions (GH)	80.51		74.71		76.26			
	(11.90)		(12.85)		(15.13)		.46	-- --
	80.62		76.06		71.04			
Parental emotional impact (PE)	(11.46)		(15.24)		(13.63)		.32	.78 .34
	93.62		93.39		86.77			
Parental time impact (PT)	(19.69)		(16.95)		(18.32)		--	.36 .38
	83.62		76.60		70.00			
Family cohesion (FC)	(16.67)		(23.91)		(27.60)		--	-- --

Means, Standard Deviations, and Traumatic Event Exposure Group Differences

CBCL Scale Scores ^c	M (SD)		M (SD)		M (SD)	
Internalizing behavior	45.64		51.74			
	(12.87)		(10.49)		--	.91 .49
	42.57 (9.79)		44.18		49.59	

Means, Standard Deviations, and Traumatic Event Exposure Group Differences

CBCL Scale Scores ^c	M (SD)	M (SD)	M (SD)
Externalizing behavior	40.00 (9.36)	(12.41)	(11.15) -- .95 .45
Somatic complaints	51.43 (3.12)	53.69 (6.04)	55.11 (7.16) -- .74 --

p values < .05 are considered significant and effect sizes for significant values are presented; *p* values are based on Mann-Whitney *U* test for differences between subgroups of children with and without trauma exposure.

Abbreviations: ITQOL, Infant and Toddler Quality of Life Inventory; CBCL, Child Behavior Checklist 1.5–5; TTEE, Types of Traumatic Events Experienced.

^aCohen's effect size (*d*) for differences in HRQOL between subgroups of children with and without trauma exposure: .20 *d* < .50 is considered a small difference, .50 *d* < .80 is considered a moderate difference, and *d* .80 is considered a large difference.⁴⁴

^bFor the ITQOL higher scores indicate better functioning.

^cFor the CBCL, higher scores indicate worse functioning.