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Prior Trauma Exposure for Youth in Treatment Foster Care

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Abstract Very little research has focused on rates of trauma exposure for youth in treatment foster care (TFC). Available research has utilized record review for assessing exposure, which presents limitations for the range of trauma types examined, as records are predominantly focused on abuse and neglect. The current study examines exposure rates and association with emotional and behavioral outcomes for 229 youth in 46 TFC agencies. The youth in this study had exceptionally high rates of trauma exposure by foster parent report, similar to youth in traditional foster care, with nearly half of the sample exposed to four or more types of traumatic events. A composite child abuse and neglect exposure variable was associated with child and adolescent emotional and behavioral outcomes. Implications for services provided as part of TFC are discussed.

Keywords Treatment foster care · Child maltreatment · Trauma · Child welfare

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Introduction

Approximately one-half to two-thirds of all youth in the general population have experienced at least one traumatic event in their lifetime (Copeland et al. 2007; Finkelhor et al. 2009). Traumatic events include child abuse and neglect, exposure to domestic violence, community violence, and experiencing the violent death of a loved one, among others. Youth in foster care, in particular, have high rates of trauma exposure. For these youth, exposure rates approach 90% (Stein et al. 2001). Among trauma types, youth in foster care are also significantly more likely than the general population to have directly experienced violence themselves, specifically abuse and/or neglect (Burns et al. 2004; Garland et al. 1996).

Although the high rate of trauma exposure for youth in foster care has been well documented, rates of trauma exposure specifically for youth in Treatment or Therapeutic Foster Care (TFC) have not received sufficient attention, despite the fact that there are over 3,500 TFC programs across the country (Murray et al. 2010). In the services array for children and adolescents with emotional and behavioral problems, TFC is the least restrictive out-of-home treatment option. In planning services for TFC youth (e.g., mental health therapy, community supports), it is important to consider trauma exposure and its impact on youth emotional and behavioral functioning. However, little empirical data is available for this population specifically.

Not surprisingly, findings from two studies suggest that the majority of youth in TFC have been exposed to trauma; however, these studies utilized review of child welfare or state records to determine rates and type of exposure and were therefore more focused on child abuse and neglect. Exposure to other types of traumatic events (e.g., community violence, domestic violence) for youth in TFC has not been reported in the literature. Using child welfare record review, Hussey and Guo (2005) found that nearly half of 119 youth in a TFC program in Ohio had experienced neglect, nearly one-fifth had experienced physical abuse, and an unexpectedly small percentage, given findings in the general population, had experienced sexual abuse (2.5%). In a second record review study that included 183 youth in 46 TFC agencies located in North Carolina, overall rates of child abuse and neglect were as high as those in traditional foster care, with significantly higher rates of sexual abuse, compared to the Hussey and Guo (2005) study (Farmer et al. 2005). In the North Carolina study, 85% of the children and adolescents were exposed to trauma, with 52% of the sample exposed to sexual abuse (Farmer et al. 2005).

Given the limited research on trauma exposure for youth in TFC, exposure rates for youth in residential treatment settings (e.g., group homes, inpatient settings; the next "step up" in restrictiveness in the out-of-home care continuum) also merits review. Traumatic exposure rates for youth in these settings are high overall, with over half of youth reporting a history of abuse (Abramovitz and Bloom 2003) and 93% of youth reporting exposure to at least one traumatic event (Lipschitz et al. 1999). In these settings, the type of trauma exposure varies, but the most common appear to be witnessing community violence, child physical abuse, child sexual abuse, and/or witnessing domestic violence (Lipschitz et al. 1999; Rivard et al. 2003).

Treatment Foster Care

Ideally, TFC combines implementation of structured therapeutic interventions with opportunities for development within a family setting, and therefore provides a valuable component for a continuum of care within a system of care (Burns et al. 1999). Examining rates of trauma exposure both for child abuse and neglect, as well as for other trauma types-among youth in TFC is important. Trauma exposure rates and any associations with functioning may have considerable implications for mental health services for youth in TFC, particularly for determining need for traumafocused mental health treatment for youth in TFC. Access to evidence-based trauma treatments is increasing, due to efforts by the National Child Traumatic Stress Network and others in disseminating Trauma-focused Cognitive Behavioral Therapy (Cohen et al. 2006) and additional evidence-based trauma treatments. However, TFC agencies likely vary in their ability to identify and refer to appropriate providers. Identifying exposure and those negatively impacted by exposure provides some estimates for the percentage of TFC youth who may need access to additional providers.

The population of youth in TFC has both commonalities with, and is distinct from, the population of youth in traditional foster care. For this reason, there is some confusion and overlap in the research and services literature between foster care and TFC (Dorsey et al. 2008). Foster care, as traditionally viewed, is an element of child welfare services that involves placement of a child in a substitute home environment when the child's parents are unable or unwilling to provide appropriate care. In many cases, placement is subsequent to abuse. In comparison, TFC was developed explicitly as a treatment-oriented approach for youth with behavioral or mental health difficulties (Farmer et al. 2004). In comparison to foster care, the treatment foster parents in TFC are seen as front-line therapeutic agents who are responsible for working with other professionals in the youth's life to implement a comprehensive treatment plan (Chamberlain 1994, 2002; Meadowcroft et al. 1994). Like foster care, however, youth may be placed in TFC by child welfare, subsequent to abuse or neglect. Many youth ultimately placed in TFC began their tenure in out-of-home placement in traditional foster care and were moved to TFC after a number of failed foster care placements and/or escalating or high levels of behavioral and/or emotional difficulties. Alternatively, youth may have been placed in TFC as a "step down" from more restrictive placements (e.g., residential settings).

Trauma Exposure and Mental Health Problems

Trauma exposure is associated with a range of negative outcomes, in terms of behavioral and emotional functioning (Copeland et al. 2007; Curie 2002), that are often the focus of attention for youth in TFC. Emotional difficulties include increased rates of psychiatric disorders and symptoms including posttraumatic stress, anxiety, and depression. In the area of behavioral difficulties, conduct problems and abuse-specific problems (e.g., in the case of sexual abuse, sexualized behavior) have been noted (Briggs-Gowan et al. 2010; Hébert et al. 2006). Functional impairments include problems in interpersonal relationships (with peers or adults) and difficulties in school (Daignault and Hébert 2009). Studies also suggest that youth exposed to trauma may have lower self-esteem (Kim and Cicchetti 2009).

Trauma exposure, particularly exposure to child abuse and neglect, appears to have an impact across the lifespan, into adulthood (Courtney et al. 2010; Pecora et al. 2003). In a recent study, child maltreatment was associated with a greater likelihood of mental health disorders across the lifetime, including a ten-fold increase in risk for Posttraumatic Stress Disorder as well as higher risk for other anxiety disorders, mood disorders, and substance use disorders (Scott et al. 2010). Other research has documented that exposure to a wide range of traumatic events (i.e., child abuse and neglect, traumatic death of a loved one, exposure to domestic violence) is associated with psychiatric difficulties in adulthood and higher rates of chronic disease, suicide attempts, and mortality (Felitti et al. 1998).

Current Investigation

Given the limited literature on trauma exposure for youth in TFC and the association between trauma exposure and TFCrelevant outcomes, the current investigation has two goals. The first goal is to supplement the existing literature by examining the prevalence and type of trauma exposure among youth in TFC, moving beyond a focus on only abuse and neglect to assess a wider range of traumatic events. In comparison to the other two studies of exposure focused on TFC, we use treatment parents as reporters of exposure. The current investigation includes reports from the child's treatment parent on 10 types of traumatic events. Although all methods of determining trauma exposure have strengths and weaknesses, examining exposure via treatment parent report may capitalize on knowledge of trauma exposure both from any child disclosures in the home as well as from information from other involved professionals (e.g., child welfare social worker, clinician). The second goal of the study is to examine characteristics of youth exposure to particular trauma types and associations between trauma exposure and overall emotional and behavioral functioning, with a focus on youth strengths. Given prior research on the impact of maltreatment and neglect specifically (Walrath et al. 2006), we also seek to examine the association between a child abuse and neglect composite variable and youth outcomes.

Method

Data were collected as a part of a randomized clinical trial of TFC in a southeastern state that was conducted from 2003 to 2008 (for more information, see Farmer et al. 2010). Random assignment for the trial was conducted at the agency level, with seven agencies in the intervention group, and seven in the control group. Programs were distributed across the state. Two agencies (one in each condition) were operated by public mental health entities and the remaining agencies were run as private non-profit or for-profit organizations. Overall, programs had been operating from 2 to 15 years and had 13 to 50 licensed homes at baseline. Agencies randomly assigned to the intervention arm received study-provided training and consultation. Agencies in the control arm continued to provide training and services as usual. All youths served by these agencies during the 18-month recruitment period were eligible for inclusion in the study. Data for the current investigation come from the combined (i.e., both conditions) in-person baseline interviews with TFC parents. Interviews were conducted prior to intervention and included TFC parents in both the intervention (enhanced TFC) and the control groups (usual-care TFC). Overall, 247 youth and their treatment foster parent(s) participated in the randomized trial. The sample was comprised of youth who lived in TFC homes in participating agencies at the time the study started, as well as all youths who entered the agencies during the following 18 months. Approval from the Duke University Institutional Review Board was obtained for this study. Approval for secondary analyses was obtained by the University of Washington. Written informed consent was obtained from each youth's parent or legal guardian prior to the youth's enrollment in the study. Written consent was also obtained from all participating treatment parents before the interview.

Sample Characteristics

From the original randomized trial sample of 247, for the current study, youth younger than 5 (n = 9) and over age 18 (n = 3) were excluded, as relevant variables (i.e., emotional and behavioral outcomes) were not available for these youth due to the age range limitations for the outcome measure used. Six additional youth were excluded because their treatment foster parent reported no knowledge of the youth's trauma exposure history and therefore did not complete the trauma exposure questionnaire part of the interview, resulting in a final sample of 229 for this study.

As shown in Table 1, participating youth had an average age of approximately 13.24 years, almost half were female, and two-thirds were from minority racial-ethnic groups.

Table 1 Demographic characteristics of youths in treatment foster care and their treatment parents (N = 229)

Variable	Ν	%
Youth		
Age (M \pm SD)	13.24 ± 3.24	
Race		
White	76	33.2
African American	134	58.5
Other	19	8.3
Female	103	45.0
Months in current TFC home (M \pm SD)	20.32 ± 24.87	
Treatment parent		
Age (M \pm SD)	48.56 ± 10.14	
Race		
White	49	21.4
African American	173	75.5
Other	7	3.1
Female	204	89.1
Married	134	58.5
BERS strength index (M \pm SD score)	86.3 ± 16.0	

At baseline, youth had been living in their current TFC home for an average of 20.32 months (with a range of less than 1 month to over 12 years). The majority of the treatment foster parents were female and from minority racial-ethnic groups (mostly African American).

Measures

Demographics

Demographic information (including youth age, gender, length of time in TFC, etc.) was obtained using a study-developed measure.

Trauma Exposure

Trauma exposure was assessed by treatment parent report on the Trauma Event Inventory of the Posttraumatic Stress Disorder Reaction Index (PTSD-RI; Pynoos et al. 1998). The modified version of the PTSD-RI was created by the measure developers for use by the National Child Traumatic Stress Network (with which two of these authors were affiliated at the time of the study). To examine trauma exposure more broadly, TFC parent report was utilized instead of child welfare or state records review. Data are available on whether each of 10 trauma types was experienced by the child (as reported by the treatment parent). In addition, a composite child abuse and neglect variable was computed that represents exposure to one or more of the following: child sexual abuse (CSA), child physical abuse (CPA), or child neglect. This composite was coded 0-3, with higher scores indicating exposure to more types of child abuse and neglect.

Behavioral and Emotional Functioning

The Behavioral and Emotional Rating Scale (BERS; Epstein and Sharma 1998), completed by the treatment foster parent, was used to assess aspects of behavioral and emotional functioning. The BERS was designed to assess and evaluate youth strengths (Epstein 2000). The BERS includes 52 items that comprise 5 subscales (Interpersonal Strength, Family Involvement, Intrapersonal Strength, School Functioning, and Affective Strength) and an overall strength quotient. Each item was scored on a 4-point Likert-like scale, 0-3, with higher scores indicating higher personal strength on each item. Four BERS subscales were used in the current analyses: Interpersonal Strength, Intrapersonal Strength, Affective Strength, and School Functioning. The overall Strength Index was also included to assess overall strengths. To date, the BERS has been used in a variety of clinical and research projects. Studies examining reliability and validity (Epstein 1999) have demonstrated that the BERS has strong psychometric properties with well established test–retest reliability, interrater reliability, and coefficient alphas well above .80 for each of the subscales, indicating strong internal consistency (Epstein et al. 1999; Epstein et al. 2002).

Analytic Approach

Chi-square and t tests were used to examine differences in frequencies and means, respectively, across trauma types. For these analyses (descriptive and analytic), only youth for whom the TFC parent had knowledge of trauma exposure for that particular trauma type (i.e., parent was able to say "yes" or "no") were included. Frequently, TFC parents reported being unaware of a youth's trauma exposure for particular types, endorsing "do not know" at a considerably high level that varied by trauma types (see column 1 of Table 3). Therefore, the sample size for analyses comparing across trauma types varies by each type examined (see Tables 3, 4, and 5). Rates of missing (i.e., treatment parent endorsement of "do not know") are the highest for sexual abuse and domestic violence, with 47 foster parents (20.5% of the sample) reporting no knowledge of the child's exposure to these trauma types.

Linear regression procedures were used to examine the association between the composite child abuse and neglect variable and the child emotional and behavioral functioning variables. Each child functioning outcome was regressed on a model that included child gender, length of stay in TFC, ethnicity, age, and child abuse/neglect. For these analyses, all youth (N = 229) were included in order to examine the cumulative impact of known trauma exposure. To be conservative, missing data (i.e., foster parent report of "do not know" for a particular trauma type) were coded as "0" such that higher scores on the composite variable represent higher rates of known trauma exposure. All analyses were run using Statistical Package for the Social Sciences (SPSS) version 16.0 (SPSS Inc. 2007).

Results

Trauma Exposure

Treatment parents reported high rates of trauma exposure for youth (see Table 2). Treatment foster parents reported that 93% of youth in the sample were exposed to one or more types of traumatic events, with nearly half exposed to four or more types. The highest rate of exposure was for emotional abuse (85%), followed by witnessing domestic violence (65.4%) (see Table 3). Treatment parents reported relatively similar rates of exposure to sexual abuse, physical abuse, neglect, and death or incarceration of a parent (i.e., approaching or just over half of the sample). Three

Four+

 care (N = 229)
 N
 % Endorsed yes

 Rate of trauma
 N
 % Endorsed yes

 Any
 213
 93.0

 One
 31
 13.5

 Two
 182
 79.5

152

115

63.3

48.5

Table 2 Rates of trauma exposure among youth in the rapeutic foster care $\left(N=229\right)$

Comparisons Across Trauma Types

Descriptive characteristics of youth exposed to a subset of the traumatic experiences are displayed in Tables 4 and 5. Given the high overlap in exposure across types, of the 10 trauma types examined, associations with outcomes were examined for the five types with the highest rates of exposure. Looking within trauma types, in this sample, youth who were sexually abused were more likely to be female $(X_{1, n=182}^2 = 16.83, p \le .00)$ and white $(X_{1, n=182}^2 = 14.84, p \le .00)$ $p \leq .00$) and had significantly lower scores on the Strength Index ($t_{180} = 2.21, p \le .05$) and on Intrapersonal Strength $(t_{180} = 2.88, p \le .01)$. Physically abused youth were more likely to be white $(X_{1, p=192}^2 = 5.11; p \le .01)$ and had significantly lower scores on the Strength Index ($t_{190} = 2.54$, $p \leq .05$), Interpersonal Strength ($t_{190} = 3.40, p \leq .00$), and School Functioning ($t_{190} = 2.05$, $p \le .05$). Emotionally abused youth were more likely to be white $(X_{1, n=207}^2 = 5.59)$, $p \leq .05$). Youth in the sample who witnessed domestic violence were younger ($t_{180} = 3.45, p \le .00$), more likely to be white $(X_{1, n=182}^2 = 9.21, p \le .01)$, and had significantly higher scores on Interpersonal Strength ($t_{180} = 2.64$, $p \leq .01$). There were no differences between youth exposed, and not exposed, to neglect.

Composite Child Abuse and Neglect Exposure

Higher scores on the composite child abuse and neglect exposure variable were associated with lower levels of Interpersonal Strength ($\beta = -0.51$, *S.E.* = 0.20, $p \le .05$) and Intrapersonal Strength ($\beta = -0.46$, *S.E.* = 0.21, $p \le .05$), but were not related to Affective Strength ($\beta = -0.33$, *S.E.* = 0.20, $p \le .05$; see Table 6). The composite child abuse and neglect variable was associated with overall child strengths ($\beta = -2.69$, *S.E.* = 1.11, $p \le .05$), such that greater exposure to child abuse and neglect was related to lower scores on the Strength Index. None of the covariates examined, with the exception of child age, were significantly associated with child functioning. Child age was associated with significantly higher levels of Interpersonal Strength ($\beta = 0.12$, *S.E.* = 0.06, $p \le .05$),

Discussion

This paper is one of few examining prevalence of trauma exposure for youth in TFC. In the limited previous studies (i.e., Hussey and Guo 2005; Farmer et al. 2005), examinations of exposure were limited to record review, which does not capture the broader range of traumatic experiences to which a child or adolescent may have been exposed. Youth in the current sample had exceptionally high rates of trauma exposure, with nearly half exposed to four or more types of traumatic events. Looking specifically at child abuse and neglect, greater exposure was related to poorer behavioral and emotional functioning.

When looking at specific exposure types, emotional abuse was the most common for youth in TFC, with treatment parents reporting that 85% of youth had experienced emotional abuse. Exposure to domestic violence was the second most common type, experienced by more than half of the sample. Child sexual abuse, physical abuse, and neglect were almost equally as common, experienced by nearly half of the sample. Rates of parental/caregiver death or incarceration were almost as high, with almost half of the sample exposed. To our knowledge, prior to this investigation, rates of parental loss through death or incarceration have not been examined for this population. The high rate of exposure to

N answered	N endorsed yes	% Endorsed yes
207	176	85.0
182	119	65.4
182	96	52.7
194	100	51.5
192	95	49.5
205	96	46.8
209	37	17.7
199	29	14.6
214	26	12.1
216	23	10.6
	207 182 182 194 192 205 209 199 214	207 176 182 119 182 96 194 100 192 95 205 96 209 37 199 29 214 26

Table 3 Trauma exposure among youth in the apeutic foster care (Total N = 229)

 Table 4 Demographic characteristics of youth by reported trauma types

6 1	5 5 I	51			
Variable	$\mathrm{CSA}^{\mathrm{a}}$ ($n=96$)	$CPA^b (n = 95)$	$EA^{c} (n = 176)$	Neg. ^d $(n = 100)$	$WDV^e (n = 119)$
Foster parent endorsed trauma					
Age (M \pm SD)	13.4 ± 3.2	12.9 ± 3.3	13.2 ± 3.3	12.9 ± 3.4	12.7 ± 3.4
Race, <i>n</i> (%)					
White	45 (72.6%)	38(61.3%)	67 (93.1%)	41 (59.4%)	47 (81.0%)
African American	44 (42.3%)	46 (41.1%)	93 (79.5%)	49 (45.4%)	58 (54.2%)
Other	7 (43.8%)	11 (61.1%)	16 (88.9%)	10 (58.8%)	14 (82.4%)
Gender, $N(\%)$					
Female	57 (69.5%)	45 (51.1%)	76 (81.7%)	38 (44.2%)	53 (63.1%)
Length of stay (months; M \pm SD)	22.2 ± 27.8	20.8 ± 22.4	20.4 ± 24.3	19.6 ± 23.8	18.8 ± 22.6
Variable	$\mathrm{CSA}^{\mathrm{a}}$ ($n = 86$)	$CPA^b (n = 97)$	$EA^{c} (n = 31)$	Neg. ^d $(n = 94)$	$WDV^e (n = 63)$
Foster parent endorsed no trauma					
Age (M \pm SD)	13.3 ± 3.4	13.6 ± 3.2	14.3 ± 2.9	13.6 ± 3.2	14.4 ± 5.7
Race, <i>n</i> (%)					
White	17 (27.4%)	24 (38.7%)	5 (6.9%)	28 (40.6%)	11 (19.0%)
Other	9 (56.2%)	7 (38.9%)	2 (11.1%)	7 (41.2%)	3 (17.6%)
African American	60 (57.7%)	66 (58.9%)	24 (20.5%)	59 (54.6%)	49 (45.8%)
Female	25 (30.5%)	43 (48.9%)	17 (18.3%)	48 (55.8%)	31 (36.9%)
Length of stay (months; $M \pm SD$)	20.81 ± 24.51	19.46 ± 25.98	19.71 ± 25.22	20.82 ± 25.76	22.36 ± 27.8

^a Childhood sexual abuse

^b Childhood physical abuse

^c Emotional abuse

^d Neglect

e Witnessing domestic violence

loss of a primary caregiver through death or incarceration suggests that it is important to consider trauma exposure more broadly and to expand assessment of exposure beyond abuse and neglect to also assess caregiver loss.

One important finding from this study is the limited knowledge that treatment parents had about the child's trauma exposure history, despite their role as both parents and treatment providers, with variation in reported knowledge by type of trauma. Treatment parents were least informed about exposure to sexual abuse and domestic violence: the trauma types with the greatest amount of missing data. For these trauma types, one-fifth of treatment parents were unable to report on exposure to these traumatic events. In our open-ended interviews with treatment parents, one of the most common complaints voiced was having limited knowledge of the child's trauma history, and specifically the child's history of abuse and neglect. In some of our other work with traditional foster parents (Dorsey and Feldman 2010), similar complaints were frequently reported. This lack of knowledge is concerning, as it seems that adults with whom TFC and foster care youth are residing could be more supportive and, ultimately, more effective if they were more aware of the child's history. For TFC, the lack of knowledge pertaining to a child's history seems particularly concerning given the front-line therapeutic role that treatment foster parents are expected to play. It is unclear whether the trauma history for these youth is unknown in general, or whether treatment parents' unawareness is a result of inadequate communication between other professionals (e.g., child welfare worker, licensing or placement agency) and the treatment parent. Either way, it is clear that involved systems and professionals should prioritize ways to better educate treatment parents about the child or adolescent's past trauma exposure.

Limitations

In terms of limitations, the high percentage of youth in this study for whom exposure rates were unknown by their TFC parents suggests that trauma exposure rates may be imprecise, and likely are an underestimate. For example, considering sexual abuse, the trauma type for which the highest percentage of TFC parents reporting being unaware, converting "don't know" to "yes" would result in exposure rates of 62.4%. If all "don't knows" were "no," rates of exposure to sexual abuse would be 41.9%. Most likely, exposure rates fall in between these "don't know" confidence intervals. However, even taking these

Variable	$\mathrm{CSA}^{\mathrm{a}}$ ($n=96$)	$CPA^b (n = 95)$	EA^{c} (<i>n</i> = 176)	Neg. ^d $(n = 100)$	$WDV^e \ (n = 119)$
Foster parent endorsed tra	ита				
BERS (M \pm SD score)					
Strength index	83.77 ± 14.59	83.79 ± 15.15	86.67 ± 16.04	85.26 ± 15.33	84.99 ± 15.30
Interpersonal strength	7.58 ± 2.77	7.16 ± 2.51	7.78 ± 2.94	7.48 ± 2.65	7.37 ± 2.74
Affective strength	8.19 ± 2.86	8.17 ± 2.94	8.57 ± 2.94	8.18 ± 2.77	8.38 ± 2.97
Intrapersonal strength	7.09 ± 2.75	7.46 ± 3.02	7.77 ± 3.01	7.53 ± 3.12	7.55 ± 2.99
School functioning	6.82 ± 2.73	6.74 ± 2.68	7.14 ± 2.91	7.17 ± 2.97	6.90 ± 2.69
Variable	$\mathrm{CSA}^{\mathrm{a}}$ ($n = 86$)	$CPA^b (n = 97)$	$\mathrm{EA^{c}}(n=31)$	Neg. ^d $(n = 94)$	WDV ^e $(n = 63)$
Foster parent endorsed no	trauma				
BERS (M \pm SD score)					
Strength index	88.92 ± 16.87	89.62 ± 16.66	87.65 ± 12.68	88.76 ± 15.66	88.37 ± 16.95
Interpersonal strength	8.23 ± 3.10	8.56 ± 3.15	8.35 ± 2.29	8.20 ± 2.92	8.56 ± 3.14
Affective strength	8.67 ± 2.86	8.87 ± 2.83	7.90 ± 2.37	8.73 ± 2.86	8.35 ± 2.99
Intrapersonal strength	8.36 ± 3.19**	8.21 ± 2.97	7.90 ± 2.55	8.13 ± 2.90	7.98 ± 3.11
School functioning	7.44 ± 2.88	7.59 ± 3.06	7.39 ± 2.55	7.52 ± 2.82	7.41 ± 3.06

Table 5 Behavioral and emotional rating scale (BERS) scores by reported trauma type

Higher scores reflect higher personal strength

^a Childhood sexual abuse

^b Childhood physical abuse

^c Emotional abuse

^d Neglect

^e Witnessing domestic violence

* $p \le .05$, ** $p \le .01$, *** $p \le .001$

confidence intervals into account (i.e., actual exposure may be slightly higher, or lower, than reported), rates of exposure are exceptionally high. Additional research using multiple methods of identifying trauma exposure for this population is needed. Youth report of trauma exposure, given treatment parents' limited knowledge, would be particularly helpful. Often, researchers are hesitant to ask youth directly about their own exposure; however studies suggest that generally youth are not negatively impacted by being asked about traumatic events and very few (5–10%) report emotional distress (e.g., Kassam-Adams and Newman 2003; Ruzek and Zatzick 2000).

Additional limitations of the current study include that all variables (e.g., trauma exposure, child functioning) were assessed using treatment parent report and that the investigation did not include an assessment of posttraumatic stress symptoms (PTS). Although PTS was assessed in the Together Facing the Challenge randomized clinical trial, it was only assessed for youth ages 10 and older and the PTS measure was not administered to any youth for whom interviewers had concerns about emotional and behavioral stability (as trauma was not the focus of the study). Therefore, the sample with whom PTS was assessed was limited (i.e., youth ages 10-18), and skewed toward more highly functioning youth.

Implications

The high rates of exposure in this sample of youth residing in TFC combined with rates found in the limited prior studies clearly supports the need for additional attention to trauma exposure for youth in this setting. Findings may suggest the need for routine screening for trauma exposure for all youth in TFC. Such screening should utilize multiple reporters when possible (e.g., youth, caseworkers, treatment parents, family members, former caregivers). Youth with trauma exposure, which is nearly all youth in this sample, should be assessed for trauma impact. Treatment plans should include consideration of trauma-focused treatment for those experiencing symptoms in behavioral and emotional regulation, PTS, and/or depression and anxiety. Evidence-based treatments for trauma exposure, like Trauma-focused Cognitive Behavioral Therapy (Cohen et al. 2006; Dorsey et al. 2011), should be considered as part of the service array for these youth. These treatments are flexible and can address traumatic grief along with trauma exposure, which is a particular advantage given the high rate of parental and caregiver loss among TFC youth.

Treatment parents play a critical role in implementing treatment plans for the youth in their home and in linking youth with appropriate services. Findings from this study

Table 6 Association between trauma exposure (Child abuse and neglect composite variable) and functioning (N = 229)

	β (SE)
BERS interpersonal strength	
Child demographics	
Female	-0.71 (0.40)
Black	-0.54 (0.40)
Age	-0.12 (0.06)*
Months in TFC	-0.01 (0.01)
Trauma type	-0.51 (0.20)*
BERS intrapersonal strength	
Child demographics, β (SE)	
Female	-0.63 (0.42)
Black	-0.17 (0.43)
Age	-0.16 (0.07)
Months in TFC	0.00 (0.01)
Trauma type	-0.46 (0.21)*
BERS affective strength	
Child demographics	
Female	-0.01 (0.40)
Black	-0.52 (0.41)
Age	-0.12 (0.06)
Months in TFC	0.01 (0.01)
Trauma type	-0.33 (0.20)
BERS strength index	
Child demographics	
Female	0.00 (0.04)
Black	-0.20 (0.34)
Age	-1.63 (2.24)
Months in TFC	-3.49 (2.20)
Trauma type	-2.69 (1.11)*

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

suggest that although trauma exposure rates are exceptionally high, treatment parents are lacking information about exposure to particular types of traumatic experiences (e.g., sexual abuse). Improving trauma screening for youth, and information sharing with the treatment parents responsible for their care, is likely an important part of providing a safe and treatment-oriented environment for youth.

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References

- Abramovitz, R., & Bloom, S. (2003). Creating sanctuary in residential treatment for youth: From the 'well-ordered asylum' to a 'livinglearning environment'. *Psychiatric Quarterly*, 74, 119–135.
- Briggs-Gowan, M. J., Carter, A. S., Clark, R., Augustyn, M., McCarthy, K. J., & Ford, J. D. (2010). Exposure to potentially traumatic events in early childhood: Differential links to

emergent psychopathology. *Journal of Child Psychology and Psychiatry*, 51, 1132–1140.

- Burns, B., Hoagwood, K., & Mrazek, P. (1999). Effective treatment for mental disorders in children and adolescents. *Clinical Child & Family Psychology Review*, 2, 199–254.
- Burns, B., Phillips, S., Wagner, H., Barth, R., Kolko, D., Campbell, Y., et al. (2004). Mental health need and access to mental health services by youths involved with child welfare: A national survey. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43, 960–970.
- Chamberlain, P. (1994). Family connections: A treatment foster care model for adolescents with delinquency. Eugene: Castalia.
- Chamberlain, P. (2002). Treatment foster care. In B. J. Burns & K. Hoagwood (Eds.), Community treatment for youth: Evidencebased interventions for severe emotional and behavioral disorders (pp. 117–138). New York: Oxford University Press.
- Cohen, J., Mannarino, A., & Deblinger, E. (2006). *Treating trauma* and traumatic grief in children and adolescents. New York: Guilford Press.
- Copeland, W. E., Keeler, G., Angold, A., & Costello, J. (2007). Traumatic events and posttraumatic stress in childhood. Archives of General Psychiatry, 64, 577–584.
- Courtney, M., Dworsky, A., Lee, J., & Raap, M. (2010). Midwest evaluation of the adult functioning of former foster youth: Outcomes at age 23 and 24. Chicago: Chapin Hall at the University of Chicago.
- Curie, C. G. (2002). Statement to the senate, committee on health, education, labor and pensions. *The effects of trauma on children and the role of mental health services*, hearing, June 10, Available at: http://www.hhs.gov/asl/testify/t020610.html. Accessed 2/21/06.
- Daignault, I., & Hébert, M. (2009). Profiles of school adaptation: Social, behavioral and academic functioning in sexually abused girls. *Child Abuse and Neglect*, 33, 102–115.
- Dorsey, S., Briggs, E. C., & Woods, B. A. (2011). Cognitive behavioral treatment for posttraumatic stress disorder in children and adolescents. *Child and Adolescent Psychiatric Clinics of North America*, 20, 255–269.
- Dorsey, S., Farmer, E. M. Z., Barth, R. P., Greene, K. M., Reid, J., & Landsverk, J. (2008). Current status and evidence base of training for foster and treatment foster parents. *Children & Youth Services Review*, 30, 1403–1416.
- Dorsey, S., & Feldman, E. S. (2010). Fostering Hope: Traumafocused cognitive behavioral therapy with youth in foster care. Presented at the 24th Annual San Diego International Conference on Child and Family Maltreatment, San Diego, CA.
- Epstein, M. H. (1999). The development and validation of a scale to assess the emotional and behavioral strengths of children and adolescents. *Remedial & Special Education*, 20, 258–262.
- Epstein, M. H. (2000). The behavioral and emotional rating scale: A strength-based approach to assessment. *Diagnostique*, 25, 249–256.
- Epstein, M. H., Cullinan, D., Harniss, M. K., & Ryser, G. (1999). The scale for assessing emotional disturbance: Test-retest and interrater reliability. *Behavioral Disorders*, 24, 222–230.
- Epstein, M. H., Cullinan, D., Ryser, G., & Pearson, N. (2002). Development of a scale to assess emotional disturbance. *Behavioral Disorders*, 28, 5–22.
- Epstein, M. H., & Sharma, J. (1998). Behavioral and emotional rating scale: A strengths-based approach to assessment. Austin: PRO-ED.
- Farmer, E., Burns, B., Wagner, H., Murray, M., & Southerland, D. (2010). Enhancing 'usual practice' treatment foster care: Findings from a randomized trial on improving youths outcomes. *Psychiatric Services*, 61(6), 555–561.
- Farmer, E., Dorsey, S., & Mustillo, S. (2004). Intensive home and community interventions. *Child & Adolescent Psychiatric Clin*ics of North America, 13, 857–884.

- Farmer, E., Murray, M., Dorsey, S., & Burns, B. J. (2005). Enhancing and adapting treatment foster care. Presented at the 18th annual research conference proceedings, A system of care for children's mental health: Expanding the research base, University of South Florida, Louis de la Parte Florida Mental Health Institute, Research and Training Center for Children's Mental Health Tampa, FL.
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., et al. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. American Journal of Preventive Medicine, 14, 245–258.
- Finkelhor, D., Turner, H., Ormrod, R., & Hamby, S. L. (2009). Violence, abuse, and crime exposure in a national sample of children and youth. *Pediatrics*, 124, 1–13.
- Garland, A., Landsverk, J., Hough, R., & Ellis-Macleod, E. (1996). Type of maltreatment as a predictor of mental health service use for children in foster care. *Child Abuse and Neglect*, 20, 675–688.
- Hébert, M., Tremblay, C., Parent, N., Daignault, I. V., & Piché, C. (2006). Correlates of behavioral outcomes in sexually abused children. *Journal of Family Violence*, 21, 287–299.
- Hussey, D., & Guo, S. (2005). Characteristics and trajectories of treatment foster care youth. *Child Welfare: Journal of Policy*, *Practice, & Program, 84*, 485–506.
- Kassam-Adams, N., & Newman, E. (2003). The reactions to research participation questionnaires for children and for parents. (*RRPQ-C and RRPQ-P*). General Hospital Psychiatry, 24, 336–342.
- Kim, J., & Cicchetti, D. (2009). Mean-level change and intraindividual variability in self-esteem and depression among high-risk children. *International Journal of Behavioral Development*, 33, 202–214.
- Lipschitz, D. S., Winegar, R. K., Hartnick, E., Foote, B., & Southwick, S. M. (1999). Posttraumatic Stress Disorder in hospitalized adolescents: Psychiatric comorbidity and clinical correlates. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38, 385–392.

- Meadowcroft, P., Thomlinson, B., & Chamberlain, P. (1994). Treatment foster care services: A research agenda for child welfare. *Child Welfare*, 73, 565–581.
- Murray, M. M., Southerland, D., Farmer, E. M., & Ballentine, K. (2010). Enhancing and adapting treatment foster care: Lessons learned in trying to change practice. *Journal of Child and Family Studies*, 19, 393–403.
- Pecora, P. J., Williams, J., Kessler, R. C., Downs, A. C., O'Brien, K., & Hiripi, E. (2003). Assessing the effects of foster care: Early results from the Casey National Alumni Study. Seattle, WA: Casey Family Programs.
- Pynoos, R., Rodriguez, N., Steinberg, A., Stuber, M., & Frederick, C. (1998). *The UCLA PTSD reaction index for DSM IV (Revision 1)*. Los Angeles: UCLA Trauma Psychiatry Program.
- Rivard, J., Bloom, S., Abramovitz, R., Pasquale, L., Duncan, M., McCorkle, D., et al. (2003). Assessing the implementation and effects of a trauma-focused intervention for youths in residential treatment. *Psychiatric Quarterly*, 74, 137–154.
- Ruzek, J. I., & Zatzick, D. F. (2000). Ethical considerations in research participation among acutely injured trauma survivors: An empirical investigation. *General Hospital Psychiatry*, 22, 27–36.
- Scott, K., Smith, D., & Ellis, P. (2010). Prospectively ascertained child maltreatment and its association with DSM-IV mental disorders in young adults. *Archives of General Psychiatry*, 67, 712–719.
- SPSS, Inc. (2007). SPSS 16.0 for Windows. Lead Technologies.
- Stein, B., Zima, B., Elliott, M., Burnam, M., Shahinfar, A., Fox, N., et al. (2001). Violence exposure among school-age children in foster care: Relationship to distress symptoms. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40(5), 588–594.
- Walrath, C., Ybarra, M., Sheehan, A., Holden, E., & Burns, B. (2006). Impact of maltreatment on children served in community mental health programs. *Journal of Emotional & Behavioral Disorders*, *14*, 143–156.