

Complex Trauma and Mental Health in Children and Adolescents Placed in Foster Care: Findings from the National Child Traumatic Stress Network

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Many children in the child welfare system (CWS) have histories of recurrent interpersonal trauma perpetrated by caregivers early in life often referred to as *complex trauma*. Children in the CWS also experience a diverse range of reactions across multiple areas of functioning that are associated with such exposure. Nevertheless, few CWSs routinely screen for trauma exposure and associated symptoms beyond an initial assessment of the precipitating event. This study examines trauma histories, including complex trauma exposure (physical abuse, sexual abuse, emotional abuse, neglect, domestic violence), posttraumatic stress, and behavioral and emotional problems of 2,251 youth (age 0 to 21; $M = 9.5$, $SD = 4.3$) in foster care who were referred to a National Child Traumatic Stress Network site for treatment. High prevalence rates of complex trauma exposure were observed: 70.4% of the sample reported at least two of the traumas that constitute complex trauma; 11.7% of the sample reported all 5 types. Compared to youth with other types of trauma, those with complex trauma histories had significantly higher rates of internalizing problems, posttraumatic stress, and clinical diagnoses, and differed on some demographic variables. Implications for child welfare practice and future research are discussed.

According to the most recent data available from the National Incidence Study (Sedlak, Mettenburg, Basena, Petta, McPherson, Greene, & Li, 2010), 1,256,600 children experienced maltreatment in 2005 to 2006. This total reflects an incidence rate of one child in every 58 in the United States. The child welfare system (CWS) is charged with protecting and caring for youth who have experienced

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maltreatment. Children taken into protective custody by CWS often enter foster care.

In 2010, 408,425 youth were in foster care in the United States (U.S. Department of Health and Human Services, 2011). Those who enter foster care have usually experienced multiple traumatic events perpetrated by a caregiver, which typically serve as the precipitant for removal from their homes (Oswald, Fegert, & Goldbeck, 2010). These traumatic experiences are often multifaceted, chronic, and associated with a diverse range of severe and complicated reactions across developmentally salient domains of functioning (Cook, Spinazzola, Ford, Lanktree, Blaustein, Cloitre, DeRosa, Hubbard, Kagan, Liautaud, Mallah, Olafson, & van der Kolk, 2005). These reactions may be further exacerbated by the loss and separation often associated with placement in foster care. The CWS is challenged by the array of reactions that youth manifest following exposure to multiple traumatic experiences and may benefit from a better understanding of profiles of risk for youth with complex trauma histories (Kisiel, Fehrenbach, Small, & Lyons, 2009).

The growing literature on childhood trauma is replete with terms describing multiple types of maltreatment, interpersonal traumas, and victimization experiences. *Complex trauma*, for example, is a term used to describe both a constellation of causal risk factors involving repeated interpersonal trauma by caregivers early in life; and the resulting dysregulation that occurs across a range of areas including emotional, behavioral, interpersonal, physiological, and cognitive functioning (Cook et al., 2005). The dual meanings attributed to complex trauma contribute to ambiguity in professional discourse, research, and policy relating to this at-risk and underserved population. This duality in meanings underscores the need for greater clarity to prevent conceptual and methodological conflation (Layne, Warren, Watson, & Shalev, 2007).

In addition to *complex trauma*, the term *poly-victimization* is often used to describe the experience of multiple forms of abuse, violence, or other interpersonal victimization experiences (Ford, Wacker, & Connor, 2011). Similarly, *cumulative risk* or *cumulative adversity* are terms used to describe the experience of multiple forms of trauma and

other stressful events (e.g., physical abuse, natural disaster, serious accident/illness, and chronic poverty; Seery, Holman, & Silver, 2010). For the purposes of this paper, the term *complex trauma* is used to describe exposure to *at least two* of the following interpersonal traumas: physical abuse, sexual abuse, emotional abuse, neglect, and domestic violence (Kisiel et al., 2009).

Organizations that work with youth who have been traumatized, such as child welfare agencies, typically focus on behavioral and emotional reactions that are brought to the attention of providers (e.g., high risk behaviors, externalizing behaviors, mental health diagnoses), without addressing the context of these symptoms, including trauma exposure histories, trauma-specific reactions, and links to an array of challenges across multiple domains of functioning (Kisiel & Lyons, 2001; Kletzka & Siegfried, 2008). Moreover, many CWSs do not routinely screen for trauma exposure and trauma-related symptoms beyond initial assessment of the precipitating event. Yet, comprehensive assessment of traumatic experiences, emotional, behavioral, and trauma-related symptoms, and functional difficulties is essential for making appropriate service recommendations within child welfare (Briggs, Fairbank, Greeson, Steinberg, Amaya-Jackson, Ostrowski, Gerrity, Elmore, Layne, Belcher, & Pynoos, in press; Kisiel et al., 2009). Both research and practice can benefit from a systematic strategy for screening and assessing a child's trauma history and the range of potential sequelae. This information can then be used to refer children to appropriate trauma-informed services.

This exploratory study examined complex trauma histories, post-traumatic stress, and related child behavioral and emotional problems in a large sample of youth with recent CWS contact, subsequent placement in foster care, and referral for treatment at a community practice site associated with the National Child Traumatic Stress Network (NCTSN). The purpose was to explore the potential utility of systematically assessing trauma histories and associated psychosocial consequences for child-serving systems. The authors evaluated whether a standardized protocol could be used to delineate profiles of trauma exposure and identify the varied needs of youth involved with the CWS. It is anticipated that these results will support the

need to improve trauma-informed child welfare policies and practices, including system-wide screening, assessment, and treatment of complex trauma. The study questions included the following:

1. What are the most prevalent forms of trauma exposure among youth with foster care placement, including the average number of trauma types?
2. What are the prevalence rates of exposure to events characteristic of complex trauma?
3. What are the prevalence rates of mental health, behavioral, and emotional problems for the overall sample?
4. Do demographic characteristics distinguish between those who are exposed to complex trauma and those who are not?
5. Do differences in posttraumatic stress, behavioral and emotional problems, and clinical diagnosis exist between those exposed to complex trauma and those experiencing other types of trauma?

Method

Collecting and evaluating clinical data relating to the treatment of trauma-exposed children and families is an integral part of the mission of the NCTSN. The National Center for Child Traumatic Stress (NCCTS), the coordinating center for the NCTSN, and NCTSN partners collaborated to develop a systematic method for assessing children and their families and for integrating these variables into a common dataset. This system, the NCCTS Core Dataset (CDS), includes data from over 56 collaborating NCTSN sites located across the United States that collectively develop and provide a diverse array of trauma-informed mental health services.

This study used de-identified aggregate CDS data collected between spring 2004 and fall 2010. Information was obtained from multiple informants, including the child or adolescent, parents/caregivers, family members, other relatives, and relevant collaterals. For young children and infants, information was gathered from a clinical interview with the pertinent adults, caregiver completion of standardized measures, and review of relevant case records. When

treatment was provided, the intervention included the adult caregiver (e.g., nonoffending parent, foster parent). Study participants included youth age 0 to 21 years experiencing at least one traumatic event and endorsing placement in foster care ($n = 2,251$). All study procedures complied with the Duke University Health System Institutional Review Board and other federal regulations regarding human subject protection.

Measures

Demographics

Demographic variables included gender, age (in years), race (white/non-white), ethnicity (Hispanic/Latino), and type of insurance (public insurance/other type). Primary residence included foster care and other types of living situations (e.g., at home with parents, with relatives, residential care).

Foster Care

Recent history of foster care placement was determined by two questions, "Has the child been placed in foster care (placement in kinship or non-relative foster care) within the past 30 days?" and "Has the child been placed in treatment foster care (with foster parents who receive special training and supervision to help children with specific problems) within the past 30 days?" An endorsement of "yes" on either question was used to identify the "foster care" group.¹

Posttraumatic Stress

The UCLA Posttraumatic Stress Disorder-Reaction Index ([PTSD-RI] Steinberg, Brymer, Decker, & Pynoos, 2004) is a questionnaire to screen both for lifetime exposure to traumatic events and for PTSD symptoms. The PTSD-RI is used as either a self-report or clinician administered instrument, and assesses the frequency of occurrence of PTSD symptoms during the past month, rated on a Likert scale from 0 (none of the time) to 4 (most of the time). Items map

¹ These definitions exclude residential and group home placements.

directly onto DSM-IV PTSD Criterion B (intrusion), Criterion C (avoidance), and Criterion D (arousal). Psychometric properties are robust and have been previously described (Steinberg et al., 2004). A clinical cutoff of 38 or higher on the raw baseline total scale score is used to identify youth who are likely to meet PTSD diagnostic criteria and to define the lower bound of the severe distress range. This cut score has shown acceptable sensitivity and specificity for detecting PTSD (Rodriguez, Steinberg, Saltzman, & Pynoos, 2001a; Rodriguez, Steinberg, Saltzman, & Pynoos, 2001b).

Trauma History

The Trauma History Profile (THP) was derived from the trauma history component of the PTSD-RI. The THP is completed by the provider at intake or early in the course of services, using information gathered from multiple informants. The THP assesses lifetime trauma exposure and includes a comprehensive list of 20 different types of exposure to traumatic, loss, and separation-related events. These trauma types have been previously described (Briggs et al., in press) and are listed in Table 2.²

Complex Trauma

Guided by the definition outlined by leading experts (Cook et al., 2005; van der Kolk, 2005), the authors assessed complex trauma exposure. This definition has been further operationalized in recent empirical studies as having two or more of the following five trauma experiences: sexual abuse, physical abuse, emotional abuse, neglect, or domestic violence (Kisiel et al., 2009). Although it is recognized that this definition could be broadened to include other related traumas (e.g., having an impaired caregiver), the definition operationalized by Kisiel et al. was used for the purpose of this study.³

² All trauma exposure variables were dichotomously coded and a score was computed to reflect the total number of confirmed and suspected trauma types that each youth endorsed (see Briggs et al., in press). A summative variable (total number of trauma types) was also created for each case by summing the dummy variables for each trauma type (possible range = 1 to 20).

³ For each case, a summative variable of complex trauma types was created and then the score was dichotomized (yes/no exposure to complex trauma).

Child Behavior

The Child Behavior Checklist ([CBCL] Achenbach & Rescorla, 2001), completed by a parent/caregiver, is one of the most widely used standardized measures for evaluating maladaptive behavioral and emotional problems across multiple developmental periods (1.5 to 5 years; 6 to 18 years). The CBCL yields two broadband scales for behavior problems: externalizing (e.g., aggressive behavior) and internalizing (e.g., withdrawn). The measure has shown sound reliability and validity across racially and ethnically diverse samples. Both the internalizing and externalizing subscale scores were used. Children and adolescents with baseline *T*-scores greater than 63 on either subscale were classified as having a clinically significant elevation.

Clinical Evaluation

Clinician assessments were used to generate ratings of the degree to which clinical problems, symptoms, or disorders were displayed by the child at baseline and each subsequent follow-up. Ratings were made on a 3-point scale consisting of 0 (not present), 1 (possibly present), and 2 (definitely present).⁴

Data Analysis

PASW statistical software package for the social sciences (version 18; Chicago) was used for all data analyses. Descriptive and inferential statistics were evaluated, including frequencies, Pearson's chi-square test, and multiple logistic regression.

Results

Sample Characteristics

About half of the sample was female (52.2%). More than one-third were black (38.6%), about half (49.1%) were white, and 15.7% were

⁴ "Possibly present" and "definitely present" were aggregated into one category, thereby creating a dichotomous dummy variable (no diagnosis; possibly or definitely present clinical diagnosis) for each diagnosis. Next, a summative variable (total number of diagnoses) was created for each case by summing the dummy variables for each of the different diagnoses (possible range = 0 to 20), which were then dichotomized (no diagnosis; any diagnosis).

Hispanic/Latino. The average age was 9.5 years ($SD = 4.3$). Nearly 80.0% of the sample was eligible for public insurance. About 54.1% currently reside in foster care as their primary residence.

Trauma Exposure

Table 1 presents the frequencies of trauma types for the overall sample as well as for the subsample exposed to complex trauma. The most common trauma type for both groups was neglect. The mean number of types of traumatic exposure was 4.7 ($SD = 2.5$) for the overall sample, and 5.8 ($SD = 2.1$) for the complex trauma

Table 1

Frequency of Trauma Types for Children and Adolescents with Placement in Foster Care for Total Sample ($n = 2,251$) and Complex Trauma Subsample ($n = 1,584$)

Variable	Total Sample (%)	Complex Trauma Subsample (%)
Neglect	68.0	82.6
Traumatic loss/bereavement/separation	63.1	66.2
Impaired caregiver	59.8	74.4
Domestic violence	54.2	72.0
Emotional abuse	51.4	71.9
Physical abuse	48.4	64.0
Sexual abuse	32.0	41.9
Sexual assault	15.1	17.2
Community violence	14.3	16.7
Physical assault	12.0	14.6
Other trauma	11.8	12.8
Illness/medical trauma	8.3	9.7
School violence	8.0	8.8
Serious injury/accident	7.5	8.8
Extreme interpersonal violence	5.4	6.7
Natural disaster	3.0	3.2
Forced displacement	2.2	2.4
Kidnapping	1.8	2.3
War/terror in United States	0.3	0.4
War/terror outside United States	0.5	0.4

subsample. Youth with complex trauma histories experienced significantly more trauma types overall than those without such histories, $t(2,249) = -42.6, p < 0.00$.

Mental Health Symptoms and Diagnoses

The means for the total sample on the CBCL internalizing and externalizing subscales were 59.2 ($SD = 11.0$) and 62.6 ($SD = 11.9$), respectively. The mean for the PTSD-RI overall severity scale was 25.1 ($SD = 14.7$). The authors also assessed the percentage of the total sample that scored within the clinical range for all three indices. The scores of 36.7% of the sample fell in the clinical range of the CBCL internalizing scale, and the scores of nearly 49.1% of the sample fell in the clinical range of the externalizing scale. Further, 22.0% of the total sample fell in the clinical range for posttraumatic stress, and 83% received at least one clinical diagnosis.

Complex Trauma and Demographic Characteristics

Approximately 20.1% of the total sample reported two types of caregiver interpersonal trauma, 19.2% reported three types, 19.4% reported four types, and 11.7% reported all five types. Race, ethnicity, and primary residence had significant associations with complex trauma. Youth with such histories were significantly more likely to be white (54.0%), $\chi^2(2, 1930) = 115.0, p = 0.00$, non-Hispanic (82.3%), $\chi^2(1, 1962) = 13.5, p = 0.00$, and currently residing in foster care (59.5%), $\chi^2(1, 2141) = 64.3, p = 0.00$.

Complex Trauma and Mental Health Symptoms and Diagnoses

Four multiple logistic regression analyses with simultaneous entry of variables were performed on the four outcome variables with complex trauma exposure as the predictor of interest. Therefore, youth in foster care with a history of complex trauma were compared to those without such a history. The authors controlled for race, ethnicity, gender, age group, eligibility for public insurance, and foster care as current primary residence in each model. Table 2 shows odds ratios and 95% confidence intervals for each of the four models.

Table 2

Odds Ratios Estimated from Logistic Regression Analyses of Behavioral Problems, PTSD Symptoms and Having at Least One Clinical Diagnosis as a Function of Complex Trauma and Demographics

Dependent variable 5 Internalizing problems (<i>n</i> = 1,184)		
Parameter	Est. Odds Ratio	95% CIs
White vs. non-white	1.1	0.9, 1.4
Hispanic vs. non-Hispanic	0.9	0.7, 1.4
Female vs. male	0.8*	0.6, 1.0
13+ years vs. 0–12 years	1.4*	1.1, 1.9
Public insurance vs. no public insurance	1.1*	0.8, 1.5
Foster care is current primary residence	0.8*	0.6, 1.0
Complex trauma	1.6*	1.2, 2.2
Dependent variable 5 externalizing problems (<i>n</i> = 1,184)		
Parameter	Est. Odds Ratio	95% CIs
White vs. non-white	1.1	0.8, 1.3
Hispanic vs. non-Hispanic	0.7	0.5, 1.1
Female vs. male	0.9	0.7, 1.1
13+ years vs. 0–12 years	0.9	0.7, 1.3
Public insurance vs. no public insurance	1.0	0.8, 1.4
Foster care is current primary residence	1.1	0.8, 1.3
Complex trauma	1.2	0.9, 1.6
Dependent variable 5 PTSD symptoms (<i>n</i> = 877)		
Parameter	Est. Odds Ratio	95% CIs
White vs. non-white	1.2	0.9, 1.7
Hispanic vs. non-Hispanic	1.1	0.8, 2.0
Female vs. male	1.4	1.0, 1.9
13+ years vs. 0–12 years	1.1	1.0, 1.1
Public insurance vs. no public insurance	1.3	0.8, 2.2
Foster care is current primary residence	0.9	0.7, 1.4
Complex trauma	1.5*	1.0, 2.3
Dependent variable 5 any clinical diagnosis (<i>n</i> = 2,251)		
Parameter	Est. Odds Ratio	95% CIs
White vs. non-white	1.9*	1.3, 2.7
Hispanic vs. non-Hispanic	1.1	0.6, 1.9
Female vs. male	1.0	0.7, 1.3
13+ years vs. 0–12 years	0.8	0.6, 1.1
Public insurance vs. no public insurance	4.9*	3.5, 6.8
Foster care is current primary residence	1.4*	1.0, 1.9
Complex trauma	1.2*	1.1, 1.4

**p* < 0.05

Complex trauma emerged as a significant predictor for the CBCL internalizing scale, the PTSD-RI, and for having at least one clinical diagnosis. Tests of the full model versus the constant-only models yielded significant effects for complex trauma for internalizing behavior problems, $\chi^2(1, n = 1,184) = 9.1, p < 0.05$. This signified that the odds that youth would have internalizing problems were 1.6 times higher for those who experienced complex trauma compared to those who did not (i.e., a history of complex trauma exposure increases the odds of having internalizing problems by 60.0%). In addition, gender, age group, eligibility for public insurance, and foster care as current primary residence were significant predictors for the CBCL internalizing scale. The odds of youth having internalizing problems were higher for girls, older youth, those eligible for public insurance, and those currently residing in foster care (Table 2).

Tests of the full model versus the constant-only models yield significant effects for posttraumatic stress symptoms, $\chi^2(1, n = 797) = 4.4, p < 0.05$. The odds of youth having posttraumatic stress symptoms were 1.5 times higher for those who experienced complex trauma compared to those who did not experience complex trauma (i.e., a history of complex trauma exposure increases the odds of falling within the severe distress range of posttraumatic stress symptoms by 53.2%; Table 2).

Tests of the full model versus the constant-only models yield significant effects for having at least one clinical diagnosis, $\chi^2(1, n = 2,251) = 11.4, p < 0.05$. The odds of youth having at least one clinical diagnosis were 1.2 times higher for youth who experienced complex trauma compared to those who did not experience complex trauma (i.e., a history of complex trauma exposure increases the odds of having at least one clinical diagnosis by 21.3%). Race, eligibility for public insurance, and foster care as current primary residence were also significant predictors. The odds of having at least one clinical diagnosis were greater for youth who are white, those eligible for public insurance, and those currently residing in foster care (Table 2).

Discussion

Over the last decade, there has been an increased awareness of the prevalence and impact of traumatic events on youth. It is estimated that 26% of youth in the United States will witness or experience a traumatic event before the age of 4 years (Briggs-Gowan, Ford, Fraleigh, McCarthy, & Carter, 2010), many of whom will experience multiple types of trauma (Briggs et al., in press; Kisiel et al., 2009). The goal of this study was to support the development of a trauma-informed perspective in child welfare by delineating a more comprehensive view of the trauma exposure histories of youth who come to the attention of the CWS and use these services. A trauma-informed perspective includes providing routine screenings for trauma exposure, using evidence-based practices to treat sequelae, making resources on trauma available, and emphasizing continuity of care across child-serving systems (Ko, Ford, Kassam-Adams, Berkowitz, Wilson, Wong, Brymer, & Layne, 2008).

Youth with complex trauma histories were more at risk for internalizing behavior problems, posttraumatic stress, and having at least one clinical diagnosis than those without these histories. These findings are an important step toward identifying subgroups in the CWS who face challenging issues. Such groups include young children who may be at increased risk for complex trauma histories and multiple placements, older youth who may be at risk for crossing over from child welfare to juvenile justice and/or at risk for foster care drift (i.e., those children who languish in foster care for extended periods), and youth who have experienced complex traumas.

The findings related to maltreatment prevalence are consistent with previous research including the LONGSCAN (longitudinal studies of child abuse and neglect) study, a multisite, longitudinal study exploring child maltreatment (English, Bangdiwala, & Runyan, 2005). Neglect in the LONGSCAN sample is also the most common form of child maltreatment. Rates of other types of maltreatment (i.e., emotional abuse, physical abuse, sexual abuse) are also

comparable (Litrownik, Lau, English, Briggs, Newton, Romney, & Dubowitz, 2005).

Study strengths include the large sample size and the use of multiple measures to examine the relations between complex trauma exposure, behavioral problems, and PTSD symptoms. This study also focused on an underinvestigated area of child welfare practice—the rate of complex trauma in a foster care sample and its association with mental health and behavioral problems. Study limitations include using a quasi-experimental design and a clinical sample that was not randomly selected or nationally representative. Both features restrict the ability to generalize the findings to settings and populations beyond those of the participating NCTSN centers.

Practice Implications

The findings demonstrate that children involved in the CWS who were served at one of 56 NCTSN sites have high prevalence rates of trauma exposure and that these types of traumas are associated with increased risks for adverse mental health outcomes including internalizing problems, severe posttraumatic stress, and meeting criteria for at least one mental health diagnosis. **The findings also imply that children in the CWS often present with complicated trauma histories and that they will be best served by professionals who have expertise in assessing trauma exposure, evaluating trauma-related distress, and implementing appropriate trauma-focused treatments.** Accordingly, clear communication regarding the relevance of these findings among child welfare professionals will help professionals learn more about how children in foster care with multiple caregiver-related, interpersonal traumas are impacted by their experiences. An increased awareness of these issues will help child welfare professionals prioritize competing responsibilities and initiatives to address gaps in services.

In addition, the findings suggest the importance of learning more about state- and county-level screening and assessment tools to determine their appropriateness (including reliability, validity, and sensitivity) for identifying children who have trauma histories and relevant functional or psychological impairment. Brief child

interview trauma screening tools can also be used by frontline child welfare workers to provide a better understanding of children's experiences, gauge the need for further trauma-focused assessment, and/or make relevant referrals to trauma-informed community partners. Therapists and child welfare workers often share similar goals for the children they serve (e.g., reduced placement disruption, better academic and health outcomes, improved emotional and social functioning), but often confront barriers that prevent nurturing of long-term professional relationships. Thus, further establishing and strengthening ongoing partnerships across disciplines such as mental health, child welfare, schools, and other child-serving professions can ensure that children have the best chance to get their needs met.

Future Research

This study carries important implications for future research. One issue is how to best define different types of trauma exposure (e.g., exposure to multiple traumas, exposure to specific constellations of types of traumas). Currently, the child trauma field uses multiple terms for similar phenomena, including *complex trauma*, *polyvictimization*, and *cumulative risk/adversity*. Therefore, it will be important to unpack the conceptual similarities and differences inherent in these phenomena in an effort to reach consensus about terminology and meanings. Establishing a common language in turn will provide greater clarity for researchers, clinicians, and policymakers, which can facilitate greater synergy across professional discourses (Layne et al., 2007).

Approximately half of the sample was non-white and race and ethnicity were found to have significant associations with complex trauma, but the nature of these associations need further investigation. Both this sample and the CWS in general have a diverse racial and ethnic population. Thus, future research should further explore the relationship between complex trauma and race, particularly among urban minority children/adolescents at heightened risk for placement in foster care/residential treatment facilities and other adversities.

Similarly, further examination of the relationship between complex trauma and internalizing problems appears warranted. The findings with respect to age and internalizing problems suggest that intervening earlier may help create alternative trajectories for many of the youth in the CWS. Moreover, both the interpersonal nature of complex trauma and the fact that many children in the CWS are at increased risk for involvement with the juvenile justice system because of dysregulation of affect/behavior make understanding the factors and mechanisms involved an important goal for future research. Such efforts may be helpful in designing effective interventions and reducing the number of youth who "crossover" from one system to the other.

Findings for older youth, along with the other significant demographic variables related to internalizing problems, suggest the utility of understanding "profiles of risk" for such behavioral problems and symptoms vis-à-vis prevention and early intervention efforts. In addition to older youth, girls, eligibility for public insurance, and residing in foster care as current primary residence increased the likelihood of experiencing internalizing problems. Lastly, future investigations could make an additional contribution to the study of trauma in children in foster care by examining types of complex trauma, and assessing whether there is differential risk for mental health and behavioral problems depending on the constellation of these traumas, as well as whether certain problems/impairments are more likely. By building on this study's findings, these areas of future research may advance the understanding of assessment, treatment, caregiving, and recovery of youth with complex trauma histories in the child welfare system, and subsequently further improve practice in this setting.

References

Achenbach, T. M., & Rescorla, L. A. (2001). *Manual for the ASEBA school-age forms and profiles*. Burlington: University of Vermont, Research Centre for Children, Youth, and Families.

Briggs, E. C., Fairbank, J. A., Greeson, J. K. P., Steinberg, A. M., Amaya-Jackson, L. M., Ostrowski, S. A., Gerrity, E. T., Elmore, D. L., Layne, C. M., Belcher, H. M. E., & Pynoos, R. S. (in press). Links between child and adolescent trauma exposure and service use histories in a national clinic-referred sample. *Psychological Trauma*.

Briggs-Gowan, M. J., Ford, J. D., Fraleigh, L., McCarthy, K., & Carter, A. S. (2010). Prevalence of exposure to potentially traumatic events in a healthy birth cohort of very young children in the northeastern United States. *Journal of Traumatic Stress, 23*, 725–733.

Cook, A., Spinazzola, J., Ford, J., Lanktree, C., Blaustein, M., Cloitre, M., DeRosa, R., Hubbard, R., Kagan, R., Liautaud, J., Mallah, K., Olafson, E., & van der Kolk, B. (2005). Complex trauma in children and adolescents. *Psychiatric Annals, 35*, 390–398.

English, D. J., Bangdiwala, S. I., & Runyan, D. K. (2005). The dimensions of maltreatment: Introduction. *Child Abuse & Neglect, 29*(5), 441–460.

Ford, J. D., Wasser, T., & Connor, D. F. (2011). Identifying and determining the symptom severity associated with polyvictimization among psychiatrically impaired children in an outpatient setting. *Child Maltreatment, 16*, 216–226.

Kisiel, C. L., Fehrenbach, T., Small, L., & Lyons, J. (2009). Assessment of complex trauma exposure, responses and service needs among children and adolescents in child welfare. *Journal of Child and Adolescent Trauma, 2*, 143–160.

Kisiel, C. L., & Lyons, J. S. (2001). Dissociation as a mediator of psychopathology among sexually abused children and adolescents. *American Journal of Psychiatry, 158*(7), 1034–1039.

Kletzka, N. T., & Siegfried, C. (2008). Helping children in child welfare systems heal from trauma: A systems integration approach. *Juvenile and Family Court Journal, 59*(4), 7–20.

Ko, S. J., Ford, J. D., Kassam-Adams, N., Berkowitz, N., Wilson, S. J., Wong, M., Brymer, M. J., & Layne, C. M. (2008). Creating trauma-informed systems: Child welfare, education, first responders, health care, juvenile justice. *Professional Psychology: Research and Practice, 39*(4), 396–404.

Layne, C. M., Warren, J., Watson, P., & Shalev, A. (2007). Risk, vulnerability, resistance, and resilience: Towards an integrative model of posttraumatic adaptation. In M. J. Friedman, T. M. Kean, & P. A. Resick (Eds.), *PTSD: Science and practice: A comprehensive handbook* (pp. 497–520). New York: Guilford.

Litrownik, A. J., Lau, A., English, D. J., Briggs, E., Newton, R. R., Romney, S., & Dubowitz, H. (2005). Measuring the severity of child maltreatment. *Child Abuse & Neglect*, 29(5), 553–573.

Oswald, S. H., Fegert, J. M., & Goldbeck, L. (2010). Posttraumatic stress symptoms in foster children following maltreatment and neglect. *Verhaltenstherapie*, 20(1), 37–44.

Rodriguez, N., Steinberg, A. S., Saltzman, W. S., & Pynoos, R. S. (December 2001a). *PTSD Index: Psychometric analyses of the adolescent version*. Symposium conducted at the Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA.

Rodriguez, N., Steinberg, A. S., Saltzman, W. S., & Pynoos, R. S. (December 2001b). *PTSD Index: Preliminary psychometric analyses of child and parent versions*. Symposium conducted at the Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA.

Sedlak, A. J., Mettenburg, J., Basena, M., Petta, I., McPherson, K., Greene, A., & Li, S. (2010). *Fourth national incidence study of child abuse and neglect (NIS-4): Report to congress*. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families.

Seery, M. D., Holman, E. A., & Silver, R. C. (2010). Whatever does not kill us: Cumulative lifetime adversity, vulnerability, and resilience. *Journal of Personality and Social Psychology*, 99(6), 102–1041.

Steinberg, A. M., Brymer M., Decker, K., & Pynoos, R. S. (2004). The UCLA PTSD reaction index. *Current Psychiatry Reports*, 6, 96–100.

U.S. Department of Health and Human Services. (June 2011). *Adoption and foster care analysis and reporting system (AFCARS) FY 2010 data (October 1, 2009 through September 30, 2010)*. Retrieved October 19, 2011, from www.acf.hhs.gov/programs/cb/stats_research/afcars/tar/report18.htm.

U.S. Department of Health and Human Services, Administration for Children and Family. (March 2000). *National child abuse and neglect data system (NCANDS) glossary (SDC and DCDC Combined)*. Retrieved August 24, 2011, from www.acf.hhs.gov/programs/cb/systems/ncands/ncands98/glossary/glossary.htm.

van der Kolk, B. A. (2005). Developmental trauma disorder. *Psychiatric Annals*, 35, 401–408.

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