

**Assessment of Trauma in School-Aged Children with Significant Emotional and Behavioral Challenges: A Pilot Study**

**FINAL REPORT**

February 2018

Prepared by

Alicia Lukachko, DrPH, MSW, LSW and Lisa Jenkins, MD, MPH

Funded by

**The Rutgers-Newark Chancellor's Seed Grant Program**

Conducted in conjunction with

***The Trauma, Schools, and Poverty Project***

**Rutgers Law School Center for Law, Inequality and Metropolitan Equity**

**Abstract**

The purpose of this study was to assess the prevalence of exposure to childhood trauma and related disorder in a sample of children with significant emotional and behavioral problems, enrolled in a partial-hospitalization program serving the Greater Newark, New Jersey area. This exploratory study took place at a community-based, urban mental health clinic between Dec 2015 and August 2016. Study participants included children aged 8 to 16 years. To assess exposure to traumatic events, children and parents/legal guardians completed the Traumatic Events Screening Inventory (parent version, TESI-PRR; child version, TESI-C). To measure trauma-related symptoms, children completed the UCLA-PTSD Index, and the Traumatic Symptoms Checklist for Children (TSCC). A total of 30 children were enrolled in the study and 22 completed the full battery of both parent and child assessments. The most commonly reported traumatic events experienced by the children in the sample were *witnessing community violence* (67%) and *separation from parents or caretakers* (57%). Roughly 40% of children exhibited symptoms of full or partial PTSD as measured by the UCLA PTSD Index. Despite the small size of the sample, the results of this study are consistent with findings indicating that children living in impoverished urban and suburban communities face a high degree of exposure to trauma, (especially community violence) and similarly high levels of trauma-related symptomatology, thereby placing these children at risk for developing psychosocial, behavior, and academic problems. Some limitations of this study included the small sample size, incomplete child interviews, and lack of access to contextual information.

## **Introduction**

This pilot study was conducted in conjunction with the *Trauma, Schools, and Poverty Project*, directed by the Rutgers Law School Center for Law, Inequality, and Metropolitan Equity (CLiME). The study represented the first phase of a larger planned research effort aimed at better understanding the relationship between exposure to childhood trauma among children living in impoverished communities and psychological/behavioral problems that significantly impede academic functioning. As detailed in a comprehensive review of published literature on trauma conceptualizations, exposure, risk factors and outcomes (See Rutgers CLiME Publications, Margevich, 2016), potentially traumatic events assume multiple forms and are associated with a host of harmful mental and physical health effects, diminished cognitive capacity, and other negative life outcomes in adults and children. Trauma's toll on low-income and non-white communities is especially heavy, with disproportionate burdens of both exposure and its detrimental effects.

## **Study Objectives**

One of the primary objectives of this exploratory research was to assess the prevalence and distribution of exposure to potentially traumatic events, as well as trauma-related symptoms, in a sample of children with significant emotional and behavioral problems enrolled in a partial-hospitalization program serving the Greater Newark, New Jersey area. Another main study objective was to determine the ease and feasibility of administering identified trauma assessments among this population with, as noted above, the ultimate intent of expanding screening to larger school settings and assessing impacts of trauma on school functioning.

The research was made possible through funding provided by the Rutgers Newark Chancellor Seed Grant Program, the Rutgers Law School Center for Law, Inequality and Metropolitan Equity (CLiME), and additional support provided by the former Violence Institute of New Jersey (VINJ).

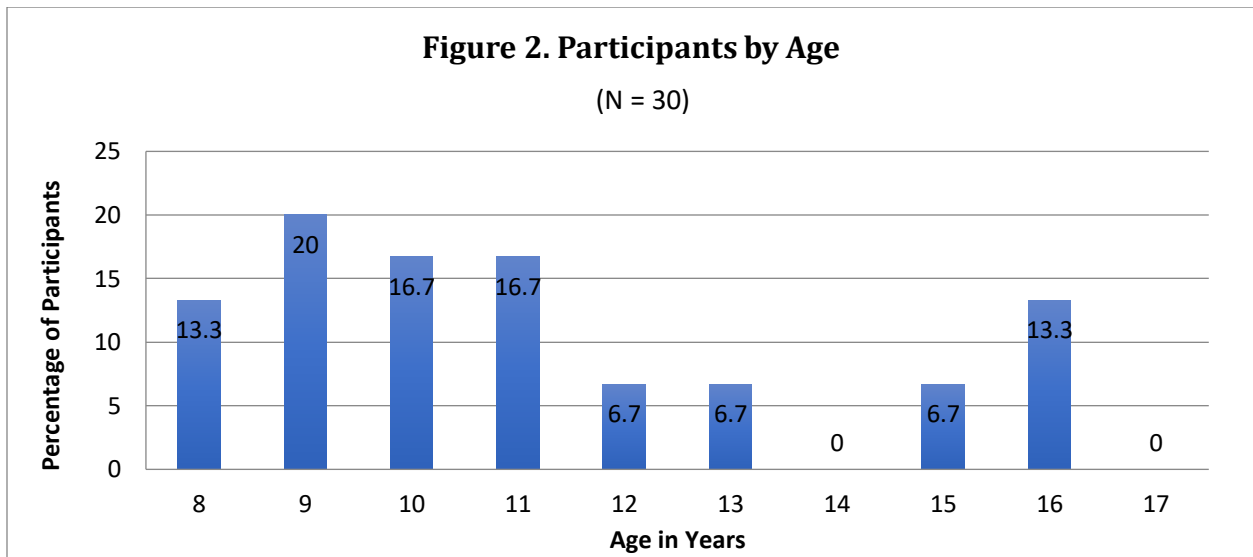
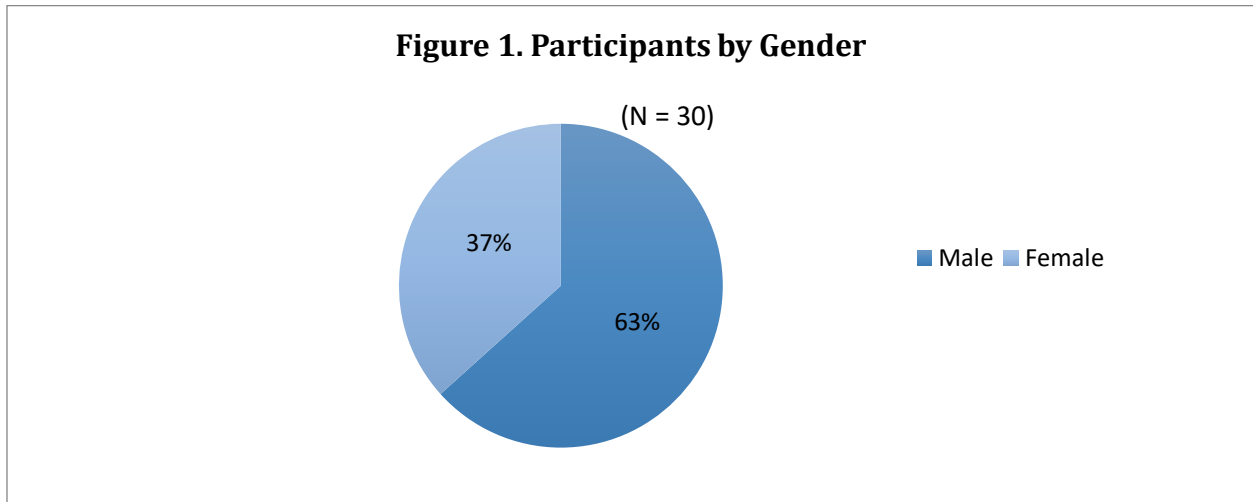
## **Methodology**

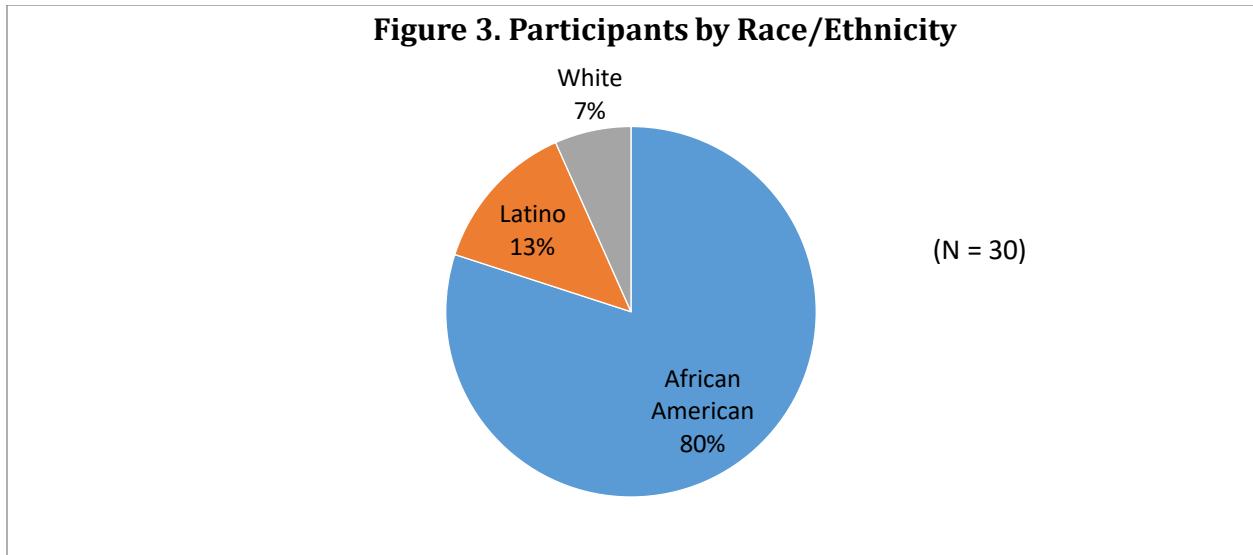
### *Sample Description & Selection*

Study participants included children (aged 8-16) who were referred to and enrolled in a partial hospitalization program serving a predominantly low-income urban/suburban population. The majority of referrals came from local schools, with children demonstrating emotional and associated behavioral problems that significantly impeded their academic functioning and warranted a moderate to high level of intervention. Potential study participants were identified through clinical referrals. Children, aged 8-17, enrolled in the partial hospitalization program, with no reported or apparent history of a traumatic brain injury, neurological or other condition affecting cognitive functioning, comprehension, or communication were eligible for the study.

A total of 61 children and their parents/guardians were referred to the study, however only 30 were enrolled due to eligibility constraints, participant declines, and lack of follow-up participant response. Figures 1, 2, and 3 describe the demographic characteristics of the sample by gender, age, and race/ethnicity. As depicted in Figure 1, a greater proportion of boys than girls were enrolled in the study; 63% of the sample was male (N = 19) and 37% of the sample was female (N = 11). While ages of the sample ranged from 8 to 16 years, the majority of participants (80%) were aged 8 through 13 years (see

Figure 2). Shown in Figure 3, participants in the study were predominantly of African American descent (80%).





### *Data Collection & Measures*

Data were collected through the administration of measures used to assess childhood trauma, trauma-related symptomatology, and post-traumatic stress disorder. The children and parents or legal guardians were consented/assented prior to participation in the study and received a small compensation for completing assessments. Parents of children enrolled in the study completed the *Traumatic Events Screening Inventory, parent version (TESI-PRR)*. The TESI-PRR assesses children's exposure to various types of traumatic events, including current and previous injuries, hospitalizations, domestic and community violence, disasters, accidents, physical and sexual abuse. The inventory is composed of 24 items.

The children enrolled in the study completed the *Traumatic Events Screening Inventory for Children (TESI-C)*, the *UCLA-PTSD Index*, and the *Traumatic Symptoms Checklist for Children (TSCC)*. These instruments assess exposure and/or the effects of traumatic events on children across the lifetime. The TESI-C is a 16-item measure that

assesses children for exposure to traumatic events and includes questions parallel to those described in the TESI-PRR above. The UCLA-PTSD index also assesses the severity of trauma exposure and identifies the likelihood of diagnosable symptoms of post-traumatic stress disorder. The TSCC evaluates the effects of exposure to potentially traumatic events in the form of symptoms of posttraumatic stress and related psychiatric comorbidity including anxiety, depression, anger, dissociation, and sexual concerns. The measure is composed of 54 items.

While not directly administered to the enrolled children, the Adverse Childhood Experience (ACE) Questionnaire (developed for adults aged 18 and older as a broad measure of exposure to potentially traumatic childhood experiences) was also adapted for this study and completed using information gleaned from interviews with the children in the context of completing the assessments noted above. ACE categories span abuse (physical, emotional, sexual), household challenges (witnessing domestic violence, household substance abuse or mental illness, parental separation or divorce, arrest or imprisonment of a family member), and neglect (emotional and physical neglect).

All parents/legal guardians completed parent assessments (i.e. TESI-PRR). However, due to participant refusals and/or program transfers and withdrawals, only 22 children completed the entire battery of child assessments (TESI-C, TSCC, UCLA-PTSD Index).

### **Data Analysis and Results**

Descriptive analyses were used to determine the prevalence and distribution of exposure to potentially traumatic events and trauma related symptoms among the sample.

Given the substantially more complete information available through parent report, information from the TESI-PRR is presented below (see Table 2). In reporting the findings, attention is given to the most the commonly cited exposures and violence-specific events. Sixty-seven percent of parents reported that their child was exposed to violence in their neighborhoods, with 90% of these events involving use of a gun. Almost sixty percent of the parents/guardians reported some form of separation or abandonment (57%), and over half (53%), a life threatening medical event or hospitalization experienced by their child. In 50% of parental reports, children were noted as witnessing or otherwise experiencing the arrest, jailing or imprisonment of a family member. Fifty percent of parents also reported that their children had seen or heard acts of terrorism on television or radio. According to parental reports, 40% of children in the sample witnessed physical fighting in the family, roughly 25% of children had “a loved one” attempt suicide, close to 25% were victims of physical harm or assault, are near 25% were also victims of an animal attack (typically involving a dog).

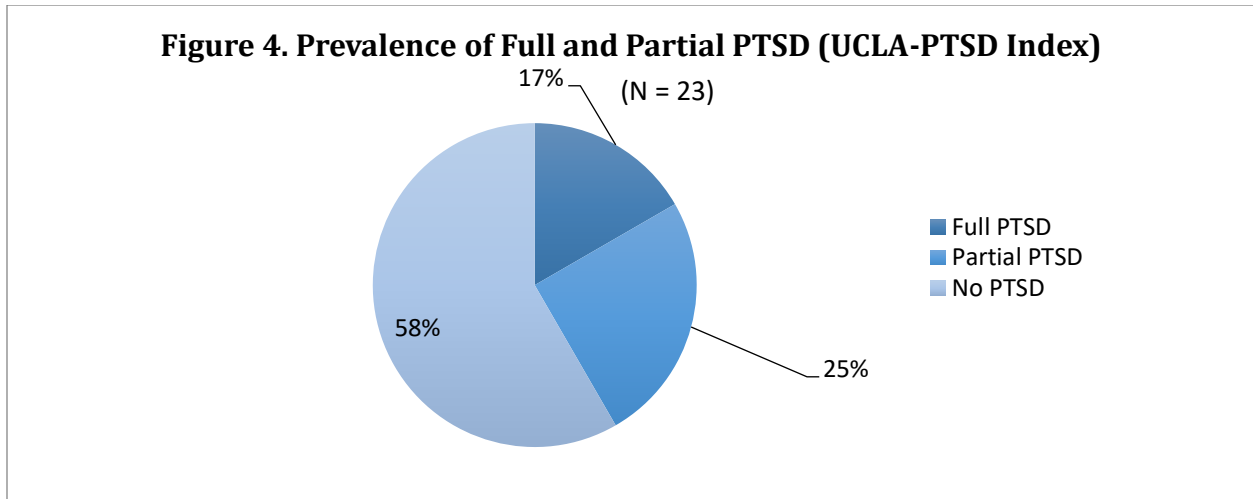
As stated above, out of the 30 children enrolled in the study, only 23 completed one or more of the child trauma assessments (22 completing all child assessments). Given the relative incompleteness of the TESI data for children (compared to the parent-based data presented above), results reported here are limited to the UCLA-PTSD and the TSCC assessing the prevalence of trauma-related diagnosable disorders. According to the **UCLA-PTSD Index**, roughly 40% of children completing assessments exhibited symptoms suggestive of partial or full PTSD. This was ten out of the 23 children (see Figure 4). Just over a quarter of the children met partial PTSD criteria and approximately 17% met full PTSD criteria.



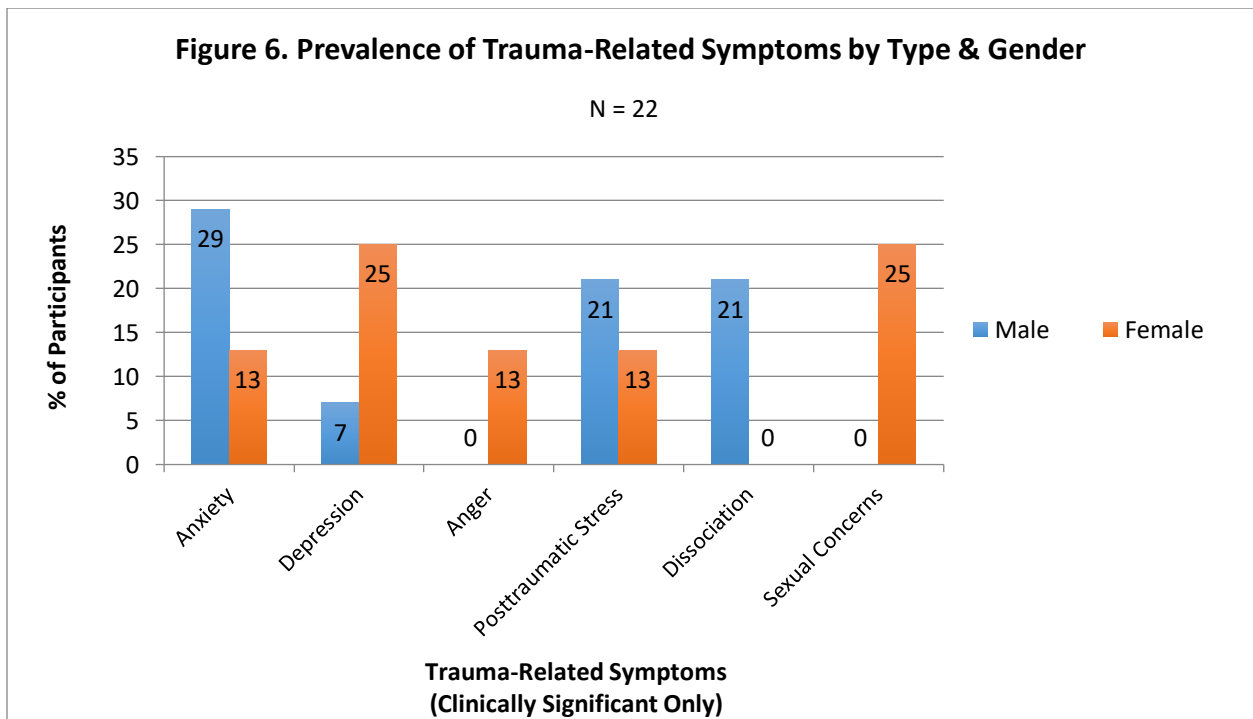
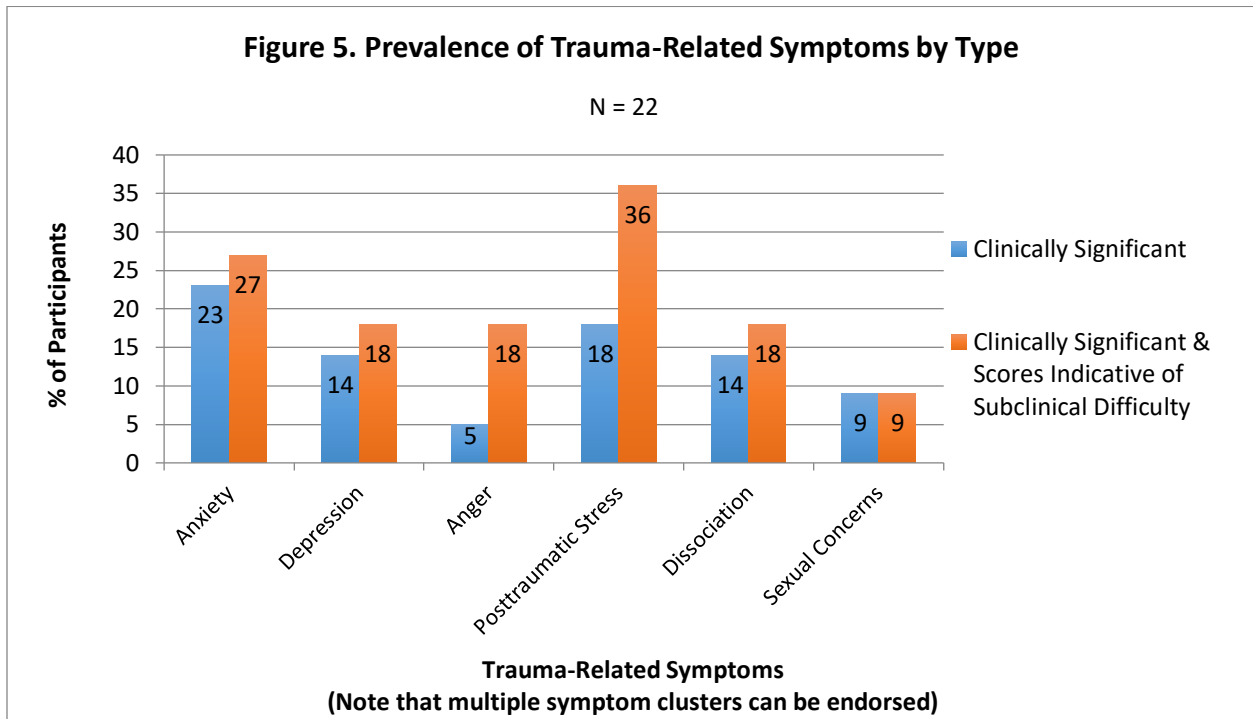
**Table 1. Traumatic Events by Type**

<b>Traumatic Events*</b>	<b>Frequency</b>	<b>% (Total N = 30)</b>
1. Community Violence-Witnessed	20	66.7 (90% of these involving gun violence)
2. Parent/Caretaker Separation	17	56.7
3. Life Threatening Medical Condition or Medical Intervention	16	53.3
4. Family Member Arrested, Jailed, Imprisoned	15	50.0
5. Seen/Heard Acts of Terrorism	15	50.0
6. Severe Illness/Injury of Loved One	14	46.7
7. Death of a Loved One	12	40.0
8. Family Physical Fighting (Actual)	12	40.0
9. Attempted Suicide of Loved One	8	26.7
10. Physical Harm/Assault	7	23.3
11. Animal Attack	7	23.3
12. Serious Accident	6	20.0
13. Family Physical Fighting (Threatened)	6	20.0
14. Emotional Abuse (Denigration, Threatening to Abandon)	6	20.0
15. Threatened Physical Harm	5	16.7
16. Serious Accident (Witnessed)	4	13.3
17. Sexual Abuse	4	13.3
18. Mugging/Theft of Child or Loved One	3	10.0
19. Neglect (Basic Needs Not Met)	3	10.0
20. Natural Disaster	2	6.7
21. Kidnapping	1	3.3
22. Exposure to War, Terrorism, Other Armed Conflict	1	3.3
23. Sexual Abuse (Witnessing)	1	3.3

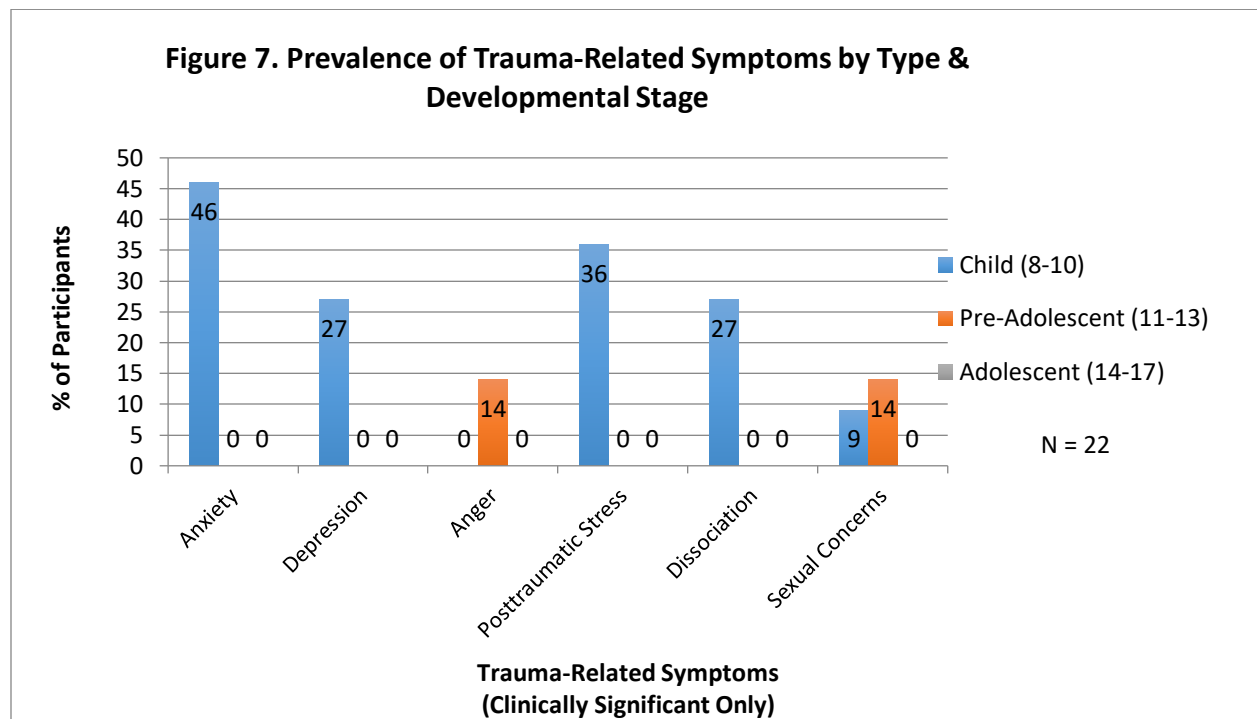
\*Information obtained from parental report (TESI-PRR)



According to the **TSCC**, 36% of the children exhibited symptoms suggestive of PTSD, with 18% meeting clinically significant *post-traumatic stress* criteria. The TSCC, containing subscales of other trauma-related disorders, further indicated that 27% of assessed children exhibited symptoms suggestive of anxiety; 18% exhibited symptoms of depression; 18% exhibited symptoms of anger; 18% exhibited symptoms of dissociation; and, 9% exhibited symptoms of sexual concerns (see Figure 5). Examining how these trauma-related symptoms varied by gender (see Figure 6), male youth showed higher rates of *clinically significant* anxiety (males: 29%; females: 13%), post-traumatic stress (males: 21%; females: 13%), and dissociation (males: 21%; females: 0%). Alternatively, female youth exhibited higher rates of *clinically significant* depression (female: 25%; male 7%) and sexual concerns (female: 25%; male 0%). Note that when considering both clinically significant symptom levels and those levels that are subclinical but indicative of difficulty, distributions across gender may present a somewhat different picture.

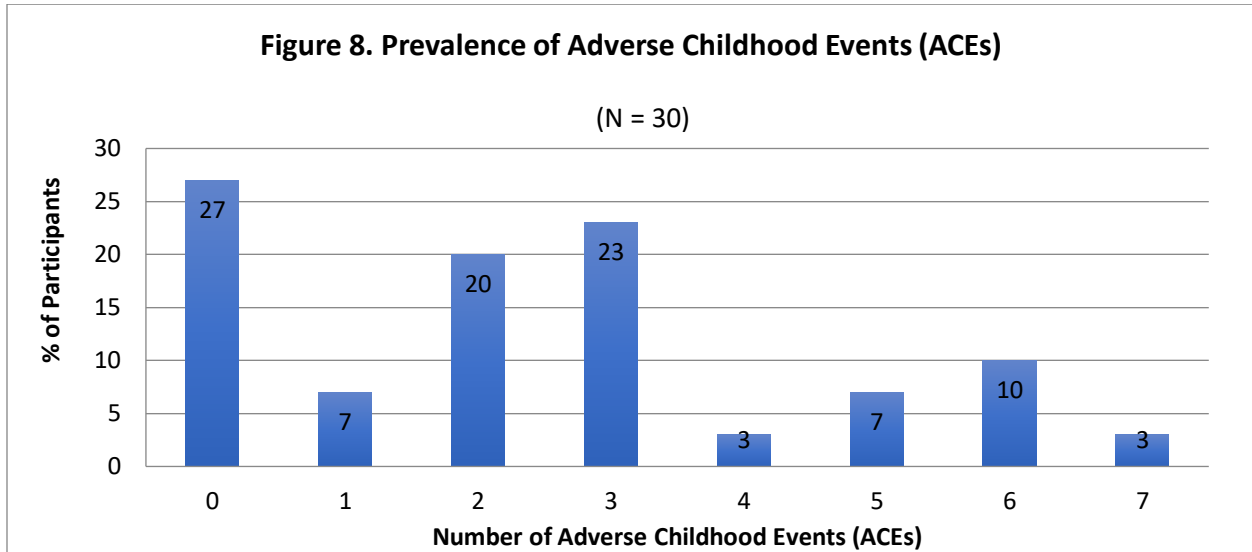


Trauma-related symptom clusters were also examined across developmental stages: childhood (ages 8-10), pre-adolescence (ages 11-13), and adolescence (ages 14-17) (see Figure 7). The youngest group in the sample (8-10 year-olds) was revealed to carry the greatest symptom burden, with highest rates of *clinically significant* anxiety, depression, post-traumatic stress, and dissociation. Adolescents in the sample by comparison carried the lowest burden of *clinically significant* trauma-related symptoms. Again, these distributions across developmental stage may shift when considering both clinically significant symptom levels and those levels that are subclinical, but indicative of difficulty.



As stated above, while not directly administered to participants, responses to the Adverse Childhood Experience (ACE) Questionnaire were approximated using information obtained from related trauma assessments. Approximated ACE scores, or the number of

adverse childhood experiences across categories of *abuse*, *household challenges*, and *neglect* (see description of measure above), ranged from 0 to 7, with a mean of 2.47. Close to 75% of the sample experienced at least one ACE, with nearly 50% experiencing three or more ACEs (see Figure 8).



### Discussion and Next Steps

This exploratory study was undertaken to examine exposure to trauma and trauma-related symptomatology among a sample of youth demonstrating emotional and behavioral problems. These problems were significant enough to disrupt functioning across multiple life domains (importantly school functioning) and to warrant referral to a partial hospitalization, behavioral health program (often made by local area schools). This study had several limitations including: 1) challenges to recruitment and follow-up, 2) small sample size, 3) limited generalizability given a clinical sample, and, 4) lack of contextual information, such as detailed information on school performance and functioning. Despite

these limitations, core study objectives of assessing measurement feasibility and prevalence of trauma exposure and related disorder were achieved.

Given the low-income, urban, and largely non-white population served by the program, rates of trauma exposure and adverse childhood experiences were *high*, as expected. For example, 67% of this sample reported directly witnessing community violence. By comparison, a nationally representative study of violence, abuse and crime exposure (Finkelhor et al, 2009) reported that among 12-17 years old, 39% witnessed violence. Of note too is that among those witnessing community violence in this study sample, the overwhelming majority of incidents involved particularly lethal, and potentially more traumatizing, gun violence. Separation from parents or caregivers represented another particularly common traumatic event, endorsed by close to 60% of the sample. These familial separations have the potential to disrupt critical primary attachments and lead to attachment-related disorders and symptoms that impede emotional-regulation and the ability to form close interpersonal relationships.

Exposure to *adverse childhood experiences* or ACEs was also substantially elevated in this sample. As reported by Child Trends, a non-profit research organization, utilizing data from the National Survey of Children's Health, 46 percent of children in the United States have experienced at least one ACE (Sacks, Murphey, and Moore, 2014). In New Jersey overall, this percentage drops to 40%, but in the current sample, 75% of children experienced one or more ACEs.

In addition to trauma exposure, rates of trauma-related disorder were also high in this sample. Focusing on PTSD specifically, results from the National Comorbidity Survey Replication-Adolescent Supplement (NCS-A) suggest that among adolescents (ages 13-18),

lifetime prevalence of PTSD is approximately 5% overall (Kessler et al., 2012). In our sample, PTSD prevalence was considerably higher. As measured by both the UCLA-PTSD Index and the TSCC, approximately 20% of children met PTSD criteria—roughly 40% meeting criteria for full- and partial-PTSD, clinically significant and subclinical symptoms. The NCS-A also indicates an increased prevalence of PTSD among girls versus boys, however this sample showed opposite findings with boys exhibiting higher rates of PTSD.

Given the increased risk of exposure to trauma among communities of color, low-income populations, and clinical samples, the high rates of trauma exposure and related disorder found in this study corroborated expectations. The findings also underscore a larger imperative expressed by David Troutt (2017) to identify and prioritize multiple levels of prevention that address both underlying risk factors or causes of trauma exposure (e.g. poverty, structural racism) and concomitant adverse health and other life outcomes.

In an effort to help mitigate the harmful effects of trauma on children, particularly as trauma impacts school functioning in impoverished communities, the next phase of this study involves implementation of a school-based, trauma-informed intervention aimed at assessing and improving coping skills, social decision-making, cognitive and family functioning in children with behavioral problems (commonly associated with trauma). The intervention, and related trauma and educational assessments, will take place in four school districts across New Jersey beginning February 2018.

## References

Finkelhor, D., Turner, H., Ormond, R., & Hamby, S. (2009). Violence, abuse, and crime exposure in a national sample of children and youth. *Pediatrics*, *124*, 1411-1423.

Kessler, R., et al (2012). Prevalence, persistence, and sociodemographic correlates of DSM-IV disorders in the National Comorbidity Survey Replication Adolescent Sample. *Archives of General Psychiatry*, *69*, 372-380.

Margevich, A.K. (2016). A Critical Review of the Psychological Literature. Trauma, Schools, & Poverty Project. Rutgers Center for Law, Inequality and Metropolitan Equity (CLiME).

Sacks, V., Murphey, D., & Moore, K. (2014). Adverse Childhood Experiences: National and State-Level Prevalence. Child Trends Publication #2014-28. Available at: Childtrends.org.

Troutt, D. Trapped in Tragedies: Childhood Trauma, Spatial Inequality and Law (April 6, 2017). Rutgers Law School – Newark Working Paper Series, Research Papers Series Paper No: 154. Available at

SSRN: <https://ssrn.com/abstract=2948001> or <http://dx.doi.org/10.2139/ssrn.2948001>