Citrus Helping Adolescents Negatively Impacted by Commercial Exploitation (CHANCE) Pilot Study: Progress Report

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# Table of Contents

Table of Contents ................................................................................................................. i

List of Tables ...................................................................................................................... ii

List of Figures .................................................................................................................... iii

Introduction..........................................................................................................................1

  Background ......................................................................................................................1

  Study Purpose & Research Questions......................................................................2

Methods................................................................................................................................2

  Participants ...............................................................................................................3

  Study Design ............................................................................................................3

    Child and Adolescent Needs & Strengths....................................................3

    Behavioral and Emotional Rating Scale .................................................4

    UCLA Post-Traumatic Stress Reaction Index ........................................4

    Traumatic Symptoms ...................................................................................4

  Analytic Approach .............................................................................................4

Results..................................................................................................................................5

  Sample Characteristics .............................................................................................5

  Youth Outcomes ......................................................................................................9

    Youth Strengths ..........................................................................................9

    Youth Functioning ........................................................................................11

    Trauma Symptoms and Reactions to Trauma ........................................13

    Behavioral and Emotional Health Issues .............................................15

    Youth Risk Behaviors ................................................................................16

    Treatment Completion ................................................................................18

Conclusions and Recommendations ..................................................................................19

References..........................................................................................................................21
List of Tables

Table 1 Caregiver Report of Youth Strengths on the BERS-2C ..............................................10
Table 2 Youth Report of Youth Strengths on the BERS-2Y ..................................................10
Table 3 Youth Self-reported Trauma Symptoms on the CROPS ........................................14
Table 4 Caregiver Reported Youth Trauma Symptoms on the PROPS ..............................14
Table 5 Severity of Youth PTSD Symptoms ....................................................................15
List of Figures

Figure 1 Living Situation of Youth at Admission to CHANCE ........................................5
Figure 2 Permanency Caregiver Identified for Youth at Admission to CHANCE ..........6
Figure 3 Assessment of Youth Trauma Experiences .......................................................7
Figure 4 Youth Exposure to Sexual Abuse .................................................................8
Figure 5 Youth Exposure to and Awareness of Exploitation ..................................9
Figure 6 Assessment of Youth Strengths on the CANS-CSE ....................................11
Figure 7 Assessment of Youth Life Domain Functioning on the CANS-CSE ..........12
Figure 8 Assessment of Youth Education Domain on the CANS-CSE ................13
Figure 9 Proportion of Youth Experiencing PTSD Symptoms ................................15
Figure 10 Assessment of Youth Behavioral and Emotional Needs on the CANS-CSE ..16
Figure 11 Assessment of Youth Risk Behaviors on the CANS-CSE .......................17
Figure 12 Assessment of Youth Runaway Behaviors on the CANS-CSE ..............18
Introduction

The problem of human trafficking, including the trafficking of children, has received extensive public attention in recent years. In the United States, there is a growing awareness that considerable numbers of children who are trafficked are in the child welfare system. Thus, child welfare systems are recognizing an emerging demand to develop programs that can respond to the unique needs of this population. Due to its strongly tourist-based culture and economy, Florida is a magnet for sex trafficking, and Miami has been identified by the FBI as one of the nation’s thirteen High Intensity child prostitution areas. Citrus Helping Adolescents Negatively Impacted by Commercial Exploitation (CHANCE) is a pilot treatment program being implemented in Miami-Dade County, Florida to address the unique mental and behavioral health needs of youth in the child welfare system who have been engaged in commercial sexual exploitation. The University of South Florida (USF) has been contracted to conduct an evaluation of the CHANCE pilot program that examines program fidelity and youth outcomes. This progress report presents findings on youth currently enrolled in the CHANCE program.

Background

There is limited research currently available on the commercial sexual exploitation of children (CSEC) and effective treatment approaches to address the unique needs of this population. CSEC victims often have histories of child protective investigation and foster care (Institute of Medicine, 2013; Walker, 2013; Sewell, 2012). Exploiters are attracted to children in foster care due to increased vulnerability (e.g. history of trauma, lack of family and/or social support, insufficient parental supervision). Research indicates that there is a synergistic relationship between sexual exploitation and experiences of child trauma: children with a history of trauma are more likely to be sexually exploited, and the experience of sexual exploitation in turn increases the likelihood that a child will experience symptoms of trauma, thereby increasing their risk for continued or future exploitation (Lalor & McElvaney, 2010). Children who have been sexually abused, for example, have higher rates of arrests for prostitution, indicating that a history of sexual abuse may put youth at higher risk of future CSEC victimization (Sherman & Goldblatt Grace, 2011). In addition, children with trauma histories tend to develop strong bonds with their exploiters, which may make it difficult for them to recognize their exploitation. There is a cyclical nature to CSEC victimization, and multiple returns to their exploiters is not uncommon before youth achieve independence. The justice system, however, often treats these children as criminals rather than victims.

Victims of CSEC have a variety of health needs, including physical trauma and injuries, reproductive health problems, mental health problems related to trauma, malnutrition, and substance use problems (Clawson & Grace, 2007). Longer and more severe experiences of CSEC increase the severity of mental health problems, including symptoms of post-traumatic stress disorder (PTSD), which may remain long after the exploitation has ended (Hossain, Zimmerman, Abas, Light, & watts, 2010). The complexity of intersecting health needs experienced by this population indicates the need for a treatment approach that is holistic, individualized, trauma-informed, and tailored to the unique experiences and needs of youth who have experienced sexual exploitation.
The CHANCE program is based on the premise that a single model of residential care and treatment will not meet all the needs of children who have experienced the trauma of commercial sexual exploitation. Rather, the appropriate level of long-term treatment should be determined by a comprehensive assessment to identify the youth’s unique needs and level of care required. While some children may require a secure residential facility to meet their needs, other children may be able to benefit from community placements and to appropriately transition to specialized treatment in the community. The program proposes that victims of commercial sexual exploitation may best be served in a normalized family environment with intense clinical services and supports if they are receptive to treatment services and intervention. Thus, the program incorporates a range of placement and service options based on the specific identified needs of the youth, which include: residential treatment facility, Specialized Therapeutic Foster Care (STFC), or in-home Community Response Team. Clinical and support services offered through the program include: Trauma-Focused Cognitive-Behavioral Therapy, family therapy, functional behavioral analysis, parenting training, 24-hour crisis intervention and support/advocacy, psychiatric services, targeted case management, and group therapy, including a Psychoeducational Group for child victims of commercial sexual exploitation.

Study Purpose and Research Questions

The goal of the current study is to evaluate CHANCE to determine the program’s impact on affected youth. The study evaluation is intended to assess the appropriateness and effectiveness of treatment interventions, fidelity to the program model, and an evaluation of youth outcomes. The research questions guiding the evaluation are:

1. What are the characteristics of youth served in the CHANCE program?
2. Are the youth in the program being provided the intensity and types of services appropriate to their level of need?
3. What are youth outcomes in terms of problem behaviors and symptoms, and functioning at home, in school, and in the community, with a specific focus on reduction of trauma symptoms?

The current report focuses on youth outcomes associated with the CHANCE treatment program and examines changes in youth functional and strengths outcomes, trauma symptoms, and risk behaviors over time. A fidelity component is currently being developed.

Methods

The study utilizes a mixed-methods approach to provide a comprehensive evaluation of the CHANCE program. All research procedures and protocols described in this report are approved and monitored by the University of South Florida’s Institutional Review Board to ensure adherence with all human subjects research protections. Informed consent or assent is obtained from all youth, foster parents, and legal guardians for their participation in the study. In addition, court authorization is obtained for dependent children if their biological parents are not available. Participation in the study is voluntary and does not affect the youth’s ability to receive services or participate in the CHANCE treatment program. The researchers abide by ethical standards for the conduct of human subjects research and will ensure the privacy and
confidentiality of research participants to the greatest extent possible. All primary data collected by the researchers is de-identified and stored in locked filing cabinets or on password protected computers. Participants are assigned a unique identification number that cannot be traced back to the research participant. The research team will not include personally identifying information in any reports or publications produced as a result of this study.

Participants

The participants for this study are youth who meet the following criteria, and their caregivers:

a. Are 9 through 18 years of age;
b. Are living or have been placed in Miami-Dade County, FL;
c. Have serious mental/behavioral health problems that meet the admission criteria for the CHANCE pilot program;
d. Have been identified by a qualified professional as a victim of commercial sexual exploitation;
e. Are in the child welfare dependency system.

Study Design

A longitudinal study design is used that follows youth over time, from the initiation of CHANCE services through discharge from the program. Data collection and analysis for this evaluation includes a combination of administrative data sources and primary data to assess youth outcomes associated with participation in the CHANCE program. Primary data collection is conducted with participating youth and their foster parents using a set of standardized protocols (described below) to measure youth strengths, functioning, trauma symptoms, and behavioral and emotional health issues. These measures are administered to participants at baseline, every 3 months while youth remained in treatment, and at discharge. A therapist-completed measure is also completed at 3 month intervals for all youth enrolled in the CHANCE program throughout their treatment duration. Further description of each measure is provided below.

Child and Adolescent Needs and Strengths – Commercially Sexually Exploited. The Child and Adolescent Needs and Strengths (CANS) is a multi-purpose tool for children’s services used to support decision making (including levels of care and service planning), facilitate quality improvement initiatives, and monitor outcomes of services. The CANS covers topics such as life domain functioning, youth strengths, acculturation, caregiver strengths and needs, youth behavioral/emotional needs, and youth risk behaviors. Each “needs” item suggests different pathways for service planning using four action levels: (a) no evidence, (b) watchful waiting/prevention, (c) action, (d) immediate/intensive action. Each “strengths” item suggests the following action levels: (a) centerpiece strength, (b) strength that you can use in planning, (c) strength has been identified–must be built, and (d) no strength identified. Research suggests that the CANS is a reliable measure with an average intraclass correlation of .80 (Anderson, Lyons, Giles, Price, & Estle, 2003). The CANS-CSE adds to this measure by the inclusion of items specific to the needs and strengths of sexually exploited minors. This instrument is completed by the youth’s therapist once every 3 months.
**Behavioral Emotional Rating Scale – Second Edition.** The *Behavioral and Emotional Rating Scale* (BERS-2) is a self-report measure that assesses child interpersonal strengths, involvement with family, intrapersonal strengths, school functioning, affective strengths, and career strengths (Epstein, 2004). Both the parent report (BERS-2C) and youth report (BERS-2Y) versions are used to provide caregiver and youth perceptions of youth strengths. This instrument is administered with youth and caregivers at baseline and every 3 months thereafter.

**UCLA Post Traumatic Stress Disorder Reaction Index.** The *UCLA PTSD-RI* is a self-report measure that screens for exposure to traumatic events, as well as severity of trauma symptoms experienced over the preceding 30 days (Steinberg et al, 2013). The instrument is administered with youth at baseline and every 3 months thereafter.

**Child Report of Post-traumatic Symptoms (CROPS) and Parent Report of Post-Traumatic Symptoms (PROPS).** These corresponding scales were developed to screen for post-traumatic symptoms in children who do or do not have an identified traumatic event (Greenwald & Rubin, 1999). The child-report measure primarily assesses internal feelings of the child, while the parent-report measure assesses post-traumatic symptoms evidenced by the child’s behavior. Good internal consistency, test-retest reliability, criterion validity, convergent and discriminant validity, and sensitivity to change have been established through multiple studies with children ages 7 to 17 (Greenwald & Rubin, 1999; Greenwald, Rubin, Jurkovic et al, 2002). The CROPS and PROPS are administered with youth and their caregivers at baseline and every 3 months thereafter.

**Analytic Approach**

Data collection and analysis continue to be an ongoing process. Descriptive statistics of baseline data and follow-up data at 3-, 6-, and 9-months are presented in the current report. Although data collection for some youth enrolled has consisted of completed assessments up to 18 months, the few number of youth with completed assessments beyond 9 months does not allow for sufficient analysis.

Analysis of variance is an appropriate statistical analysis when comparing sample means of multiple groups. Here, four groups are analyzed, which correspond with four waves of data collection at baseline, 3 months, 6 months, and 9 months. Post hoc tests allow for the bivariate comparison of groups to ascertain between which groups significant differences exist. More specifically, Bonferroni post hoc tests were used to provide an assessment of comparisons between data collection waves (Field, 2013).

Each “needs” item suggests different pathways for service planning using four action levels: (0) no evidence, (1) watchful waiting/prevention, (2) action, (3) immediate/intensive action. Each “strengths” item suggests the following action levels: (0) centerpiece strength, (1) strength that you can use in planning, (2) strength has been identified—must be built, and (3) no strength identified. Therefore, improvements in youth outcomes specific to needs and strengths reported from CANS-CSE item are denoted by lower scores at subsequent waves of data collection.
Results

Findings from primary data collection are presented below. Current data includes baseline and 3-, 6-, and 9 month follow up data (to the extent such data is available) for a sample of 87 youth who have received or are currently receiving CHANCE services.

Sample Characteristics

At the end of the reporting period, data had been received for 87 youth being served in the CHANCE program, including children in out-of-home care (e.g. foster care) and youth in the care of their families of origin. These youth identified as predominantly female (94.3%, n= 82), and were primarily Black or African – American (59.3%, n= 51), with 38.4% identified as Hispanic or Latino (n= 33). Youth ranged in age from 12 – 18 years at the time of admission, with the vast majority (88.3%, n=75) between the ages of 15 and 18.

At admission, youth came from a variety of living situations. The majority came from family-based settings, including therapeutic or specialized therapeutic foster care (23%, n= 20), their family of origin (24.1%, n= 21), and traditional foster care homes (24.1%, n= 21) (see Figure 1). Other living situations identified included group care (12.6%, n= 11), residential treatment (n = 4), being homeless (n= 1), runaway (n= 5) and “other” such as being in the Juvenile Addictions Receiving Facility (n= 1).

Figure 1. Living Situation of Youth at Admission to CHANCE (n = 87)
For about half of the youth, 51.7% (n= 45), there was no identified permanency caregiver on admission (see Figure 2). Parents or other family members (e.g. grandparents, other relatives) were identified for 29.8% of youth (n= 26) and foster parents were identified for 9.2% of youth (n= 8).

Figure 2. Permanency Caregiver Identified for Youth at Admission to CHANCE (n = 87)

Data from the CANS-CSE provide information on youth trauma histories and experiences of exploitation. The data indicate that 72.2% of youth served have experienced physical abuse, 78% have experienced neglect, 85.1% have experienced emotional abuse, and 86.6% have experienced sexual abuse prior to the onset of their exploitation (see Figure 3). Exposure to family violence (72.3%), community violence (74.4%) and criminal acts (71.3%) are also traumatic events experienced by the majority of youth. These data contribute to an understanding of CSE youth as victims of complex trauma, as most youth in the study had experienced multiple forms of trauma as well as repeated episodes of trauma prior to their exploitation.
As presented in Figure 4, for the youth who were sexually abused, results indicate that the onset of sexual abuse occurred at age 5 or younger for 8.7% of youth. For 46.4% of youth, sexual abuse began between the ages of 6 and 12 years and, for another 37.7%, the abuse began between the ages of 13 and 15 years. Of the remaining youth who were sexually abused, the abuse began after the age of 16 (7.2%). Results also indicate that the abuse entailed multiple occurrences and lasted at least 6 months for over three-fourths of these youth (77.4%, n= 55). Emotional closeness of the youth to their perpetrators is a significant complicating factor for the majority of youth in the program, as is the reaction of family members to the youth’s disclosure of the abuse.
## Data Analysis

Data gathered from the CANS-CSE indicate that 22.1% of youth were first exploited prior to the age of 12, 35.3% between the ages of 12 and 14 years, 33.8% between the ages of 14 and 16 years, and 8.8% after the age of 16 (not shown). For 56.7% of youth, the exploitation occurred either intermittently or ongoing for 2 or more years (n = 38), as shown in Figure 5. Largely, youth do not consider themselves to have been exploited and do not perceive themselves to be in danger from the exploitation with 65.1% (n = 41) and 61.8% (n = 42) showing moderate to severe deficits in these areas respectively. Seventy-three percent of youth also exhibited some indication of trauma bonding (Stockholm Syndrome) with their perpetrators.

### Figure 4. Youth Exposure to Sexual Abuse (Percentage of Youth Affected)

<table>
<thead>
<tr>
<th>Duration (n=71)</th>
<th>1 episode of SA</th>
<th>6 mos of SA</th>
<th>6-12 months</th>
<th>SA lasted &gt;1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22.5</td>
<td>22.5</td>
<td>21.1</td>
<td>33.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emotional Closeness (n=73)</th>
<th>No Evidence</th>
<th>History</th>
<th>Causing Problems</th>
<th>Causing Severe Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15.1</td>
<td>32.9</td>
<td>19.2</td>
<td>32.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reaction to Disclosure (n=72)</th>
<th>No Evidence</th>
<th>History</th>
<th>Causing Problems</th>
<th>Causing Severe Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13.9</td>
<td>38.9</td>
<td>34.7</td>
<td>12.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency (n=69)</th>
<th>No Evidence</th>
<th>History</th>
<th>Causing Problems</th>
<th>Causing Severe Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>14.5</td>
<td>23.2</td>
<td>34.8</td>
<td>27.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Force (n=73)</th>
<th>No Evidence</th>
<th>History</th>
<th>Causing Problems</th>
<th>Causing Severe Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>37</td>
<td>28.8</td>
<td>17.8</td>
<td>16.4</td>
</tr>
</tbody>
</table>
Figure 5. *Youth Exposure to and Awareness of Exploitation*

### Youth Outcomes

The following youth outcomes are presented below: youth strengths, youth functioning, trauma symptoms, behavioral and emotional health issues, and youth risk behaviors.

**Youth strengths.** Youth strengths are measured through three mechanisms: youth self-report (BERS-2Y), caregiver report (BERS-2C), and therapist assessment (CANS-CSE). Overall, caregiver reports indicate a slight improvement in caregiver perceptions of youth strengths between baseline and 6 month assessment (See Table 1). There was not sufficient data at 9 months to report. At admission, caregivers identified the greatest youth strengths in terms of their career strengths [mean (X) = 9.0], interpersonal strengths (X = 8.0), and family involvement (X = 7.4). Only career strengths and interpersonal strengths fell within the normative average range of scores. All strengths, with the exception of family involvement, were rated slightly higher by 6 months though not significantly. A summary of overall youth strength is reflected in the Strength Index. At baseline, the strength index was reported to be an average of 80.3. At 3 months it increased to an average of 84.7 and at 9 months, the Strength Index was slightly lower with an average 83.0. All Strength Index scores were below the normal range of 90-110 (Epstein, 2004).
Table 1. Caregiver Reports of Youth Strengths on the BERS–2C

<table>
<thead>
<tr>
<th></th>
<th>Baseline (n=29)</th>
<th>3 months (n=19)</th>
<th>6 months (n=11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal Strengths</td>
<td>8.0</td>
<td>8.7</td>
<td>8.6</td>
</tr>
<tr>
<td>Family Involvement</td>
<td>7.4</td>
<td>7.7</td>
<td>7.3</td>
</tr>
<tr>
<td>Intrapersonal Strengths</td>
<td>7.2</td>
<td>7.5</td>
<td>7.7</td>
</tr>
<tr>
<td>School Functioning</td>
<td>6.5</td>
<td>6.6</td>
<td>8.0</td>
</tr>
<tr>
<td>Affective Strengths</td>
<td>7.3</td>
<td>8.4</td>
<td>7.4</td>
</tr>
<tr>
<td>Career Strengths</td>
<td>9.0</td>
<td>8.3</td>
<td>9.5</td>
</tr>
<tr>
<td>Strength Index</td>
<td>80.3</td>
<td>84.7</td>
<td>83.0</td>
</tr>
</tbody>
</table>

[a] Strength subscales on the BERS–2C range from 1 to 16, and on the BERS–2Y from 1 to 18. Average scores on both instruments range between 8 and 12. Higher scores indicate greater strength.

[b] Strength Indexes for both BERS–2C and BERS–2Y range from 38 to 161, with an average index between 90 and 110. A higher index indicates greater overall strengths.

Youth self-reports of their strengths, on the other hand, indicate a different trend as shown in Table 2. At baseline, youth had a different perception of their strength areas than their caregivers and saw their greatest strengths in the areas of career strength (X = 12.3), intrapersonal strength (e.g. youth’s ability to give and receive affection, ask for help and show concern for others) (X = 10.3), interpersonal strengths (X = 9.3), and school functioning (X = 8.4). These were all in the normal range. In all subscale areas, youth perceptions of their own strengths improved between baseline and the 9 month follow up. In terms of the Strengths Index, youth reported their overall strengths at an average of 88.3 at baseline and 100.1 at 9 months. The latter is within the normal range.

Table 2. Youth Self-reports of Youth Strengths on the BERS–2Y

<table>
<thead>
<tr>
<th></th>
<th>Baseline (n=40)</th>
<th>3 months (n=22)</th>
<th>6 months (n=17)</th>
<th>9 months (n=15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal Strengths</td>
<td>9.3</td>
<td>10.9</td>
<td>10.1</td>
<td>10.9</td>
</tr>
<tr>
<td>Family Involvement</td>
<td>7.8</td>
<td>9.0</td>
<td>9.0</td>
<td>10.3</td>
</tr>
<tr>
<td>Intrapersonal Strengths</td>
<td>10.3</td>
<td>10.6</td>
<td>10.2</td>
<td>11.3</td>
</tr>
<tr>
<td>School Functioning</td>
<td>8.4</td>
<td>9.0</td>
<td>8.4</td>
<td>9.0</td>
</tr>
<tr>
<td>Affective Strengths</td>
<td>8.0</td>
<td>8.0</td>
<td>8.6</td>
<td>9.9</td>
</tr>
<tr>
<td>Career Strengths</td>
<td>12.3</td>
<td>12.8</td>
<td>12.1</td>
<td>13.3</td>
</tr>
<tr>
<td>Strength Index</td>
<td>88.3</td>
<td>92.4</td>
<td>92.1</td>
<td>100.1</td>
</tr>
</tbody>
</table>

[a] Strength subscales on the BERS–2C range from 1 to 16, and on the BERS–2Y from 1 to 18. Average scores on both instruments range between 8 and 12. Higher scores indicate greater strength.

[b] Strength Indexes for both BERS–2C and BERS–2Y range from 38 to 161, with an average index between 90 and 110. A higher index indicates greater overall strengths.
Findings from the CANS-CSE (completed by the therapist) suggest a similar pattern to that found in the youth self-report data, whereby an increase in identified youth strengths was demonstrated between baseline assessment and 9 months on almost all the CANS strength items (see Figure 6). Educational strengths in particular improved significantly ($F= 2.87, p< .05$) although post hoc tests were unable to determine between which waves the statistical significance existed. CANS-CSE scores indicate that the youth’s greatest strengths included resourcefulness, self-expression, and resiliency. Youth’s least developed strengths, on the other hand, were identified as leadership, vocational strengths, and interpersonal strengths. Results show some initial increases in identification of strengths as early as 3 months into treatment and to a greater extent, though not significantly after 6 months of treatment. At 9 months, while strengths still fall within the realm of a useful strength, significant improvements are not observed. Strengths related to education and the youth actively engaging in their recovery (involvement) exhibit marked improvements between baseline and 9 months.

![Figure 6. Assessment of Youth Strengths on the CANS-CSE](image)

Youth functioning. Youth functioning includes data resulting from the Life Domain Functioning and Education Domain sections of the CANS-CSE. These scores indicate that areas of greatest need at baseline were with regard to family functioning, social (peer) functioning, appropriate use of recreational time, and job functioning. These assessments show considerable improvements between baseline and subsequent assessments in all areas (see Figure 7). Significant improvements were observed in family functioning ($F= 6.84, p< .001$), living situation ($F= 3.58, p< .05$), appropriate use of recreational time ($F=3.21, p< .05$), and
developmental difficulties (F=4.81, \( p < .05 \)). Post hoc comparisons determined that mean scores for family functioning at baseline were significantly improved relative to mean scores at 6 months and at 9 months. Mean scores for living situation were significantly lower (indicating improvement) at 6 months (although not at 9 months) compared to baseline scores. Significantly lower mean scores were found in comparing baseline scores on developmental difficulties to scores at 3 months and 6 months.

Figure 7. Assessment of Youth Life Domain Functioning on the CANS-CSE\(^a\)

![Chart showing changes in youth life domain functioning across different time points. The chart includes the following domains and time points: ***Family, *Living Situation, Social, *Recreational, Job, *Developmental, Legal, Sexuality. The x-axis represents time points from Baseline to 9M, with bars indicating extent of problems from 0 to 3 for each domain. The y-axis represents different time points: Baseline (n~85), 3M (n~52), 6M (n~42), 9M (n~34).]

\(^a\)KEY: 0= no evidence of problems; 1= history, minimal; 2= moderate needs; 3 = severe needs

* \( p < .05 \)
*** \( p < .001 \)

Results pertaining to the Education domain also showed some improvements in youth outcomes as shown in Figure 8. Overall, minimal to moderate needs are observed. School achievement and behavior at school were most problematic at baseline followed closely by attainment of educational goals, amount of time out of school, and school attendance. All indicators showed improvements in subsequent assessments. Significant improvements were observed in amount of time out of school (F=5.13, \( p < .01 \)), school behavior (F=3.89, \( p < .05 \)), and school attendance (F=2.71, \( p < .05 \)). Post hoc comparisons determined that mean scores for amount of time out of school at baseline were significantly improved relative to mean scores at 6 months and at 9 months. Also, mean scores for school behavior were significantly lower (indicating improvement) at 3 months (although not at 6 and 9 months) compared to baseline scores.
Trauma symptoms and reactions to trauma. Youth trauma symptoms and reactions to traumatic experiences are measured through youth self-reported data (CROPS, PTSD-RI) and caregiver reported data (PROPS). The CROPS is a 26 item checklist of symptoms that the youth rates ‘0’ (none), ‘1’ (some) or ‘2’ (lots) to express their agreement with each statement. A total score is calculated with higher scores indicating higher levels of trauma symptoms. Youth in CHANCE rated themselves an average total score of 22.1 (SD=10.6) at baseline (n = 29). Ratings improved slightly at each subsequent wave although no significant improvements were observed. These scores can be converted to indicate a clinical concern with their symptomatology in need of further assessment. Almost 60% rated as in need of further assessment at baseline and by 9 months this proportion reduced to 41.2% of youth presenting with clinical concerns (see Table 3).

Caregivers, by contrast, perceived the child’s trauma symptoms differently. Using the PROPS, the foster parents rated youth lower at baseline with a score of 20.1 (SD=10.6) and rated them higher at 3 months with an average score of 25.4 (SD = 17.2, n = 18). By 6 months, caregiver ratings of the child’s trauma symptoms was similar to the child self-reported rating. In terms of clinical concern, 68% of caregivers felt the youth displayed trauma symptoms worthy of further assessment at baseline. This proportion decreased slightly by the 3 month assessment and fell greatly to 50% by the 6 month follow-up (see Table 4). Due to the small sample size, significance testing was not performed on these data.
Table 3. *Youth Self-reported Trauma Symptoms on the CROPS*

<table>
<thead>
<tr>
<th></th>
<th>Baseline (n=29) (X, SD)</th>
<th>3 month (n=19) (X, SD)</th>
<th>6 months (n=17) (X, SD)</th>
<th>9 months (n=17) (X, SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Score (mean)</td>
<td>22.01 (10.6)</td>
<td>21.5 (12.1)</td>
<td>18.4 (12.1)</td>
<td>15.5 (11.4)</td>
</tr>
<tr>
<td>% with clinical</td>
<td>58.6%</td>
<td>47.4%</td>
<td>52.9%</td>
<td>41.2%</td>
</tr>
</tbody>
</table>

Table 4. *Caregiver Reported Youth Trauma Symptoms on the PROPS*

<table>
<thead>
<tr>
<th></th>
<th>Baseline (n=25) (X, SD)</th>
<th>3 month (n=18) (X, SD)</th>
<th>6 months (n=8) (X, SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Score (mean)</td>
<td>20.1 (13.4)</td>
<td>25.4 (17.2)</td>
<td>19.5 (8.4)</td>
</tr>
<tr>
<td>% with clinical concerns</td>
<td>68.0%</td>
<td>66.7%</td>
<td>50.0%</td>
</tr>
</tbody>
</table>

The PTSD-RI is a 22 item self-report measure used to assess trauma exposure and experience of trauma symptoms. Youth are asked to rate how much of the time during the past month each of the items listed has affected them, using a scale from ‘0’ (none) to ‘4’ (most). The items are grouped into 3 domains for which a composite symptom score is calculated to assess the clinical severity; these domains are re-experiencing, avoidance, and increased arousal. As shown in Figure 9, the proportion of youth that displayed trauma symptoms of re-experiencing traumatic events varied over time with 30.2% (n = 13) showing symptoms at baseline. The proportion increased slightly through the 6 month assessment; however, the proportion of youth showing symptoms of re-experiencing reduced to 21.4% (n = 3) by the 9 month assessment. Also at baseline, 51.2% (n = 22) of youth reported symptoms of avoidance, such as keeping to themselves and avoiding angry and sad emotions. Again, these figures slightly increased through 6 months and fell to 42.9% (n = 6) of youth reporting avoidance symptoms at the 9 month assessment. Reports of increased arousal, such as sleep issues and hypervigilance, varied to a greater degree than other trauma symptoms. Avoidance behaviors and symptoms drastically decreased from 58.1% (n = 25) at baseline to 28.6% (n = 6) at 3 months. A sharp increase in these symptoms was observed at the 6 month assessment which again decreased at the 9 month assessment to 42.9% (n= 6). These results suggest that PTSD symptoms and youth’s response to treatment are complex and may take considerable time to fully stabilize.

As illustrated in Table 5, results also indicate that the severity of youth’s PTSD symptoms increased slightly from baseline (X = 19.0) through the 6 month follow up assessment (X = 21.7). Marked declines in PTSD severity is observed at the 9 month assessment. Given the small sample sizes for later waves, inferential analyses cannot be performed to assess for statistically significant differences.
Figure 9. *Proportion of Youth Experiencing PTSD Symptoms*

![Proportion of Youth Experiencing PTSD Symptoms](image)

Table 5. *Severity of Youth PTSD Symptoms*

<table>
<thead>
<tr>
<th></th>
<th>Baseline (n=43) (X, SD)</th>
<th>3 months (n=21) (X, SD)</th>
<th>6 months (n=17) (X, SD)</th>
<th>9 months (n=14) (X, SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTSD Severity</td>
<td>19.0 (15.7)</td>
<td>19.1 (15.3)</td>
<td>21.7 (14.9)</td>
<td>14.7 (15.6)</td>
</tr>
</tbody>
</table>

**Behavioral and emotional health issues.** Figure 10 illustrates youth outcomes related to their behavioral and emotional needs measured through the CANS-CSE. Not surprisingly, these are areas where CSEC youth exhibit substantial needs when they are admitted for treatment, especially with regard to trauma symptoms. These results indicate that the greatest emotional and behavioral health challenges of these youth at baseline included adjustment to traumatic life events, oppositional and/or defiant behaviors, conduct problems, and depression. Anger control, anxiety, and conduct problems, present as moderate concerns for these youth. With the exception of depression, these are also the indicators where significant improvements were observed (F= 4.59, *p* < .01; F=4.187, *p* <.01; and F= 4.53, *p* <.01, respectively). Significant improvements were also observed with substance use (F= 6.77, *p* <.001). Post hoc comparisons determined that mean scores for adjustment to traumatic life events and conduct problems at baseline significantly improved by the 6 month and 9 month assessment. Mean scores for oppositional and/or defiant behaviors showed significant improvement between baseline and 6
months. Substance use showed significant improvements between baseline mean scores and each subsequent wave analyzed. Additionally, several items, including substance use, anger control, oppositional behaviors, anxiety, depression, and psychosis, showed a slight increase between the 6 month and 9 month waves, although these increases were not statistically significant. Psychosis in particular is an issue for only a very small minority of youth, even at baseline, as evidenced in Figure 10.

Figure 10. *Assessment of Youth Behavioral and Emotional Needs on the CANS-CSE* \[a\]

![Graph showing youth behavioral and emotional needs](image)

\[a\] KEY: 0 = no evidence; 1 = by history; 2 = causing problems; 3 = causing severe problems

* p<.05

**Youth risk behaviors.** The CANS-CSE also assesses specific youth risk behaviors as shown in Figure 11. Results suggest that judgement, intentional misbehavior, and running away are areas in which youth exhibit the greatest needs. Significant improvements were observed in risk of running away (F=7.37, \(p<.001\)) and delinquency (F=3.57, \(p<.05\)). Post hoc comparisons determined that mean scores for runaway risk at baseline showed significant improvements between baseline mean scores and each subsequent wave analyzed. Mean scores for delinquency risk were also significantly improved at 9 months compared to baseline mean scores.
Given the challenges that runaway behaviors pose on effective treatment, Figure 12 provides more detail on these behaviors. Most concerning is that these youth are frequently running away to unsafe environments that cannot meet their basic needs, and to communities unfamiliar to them. Notable improvements, however, are observed as early as 3 months and significant improvements are evidenced for runaway frequency (F= 6.53, \( p<.001 \)) and planning runaway episodes (F= 3.55, \( p<.05 \)). Post hoc comparisons determined that mean scores for runaway frequency at baseline showed significant improvements compared to mean score at both 6 and 9 months. Mean scores for planning runaway episodes also showed significant improvement at 6 months compared to baseline mean scores.
**Figure 12. Assessment of Youth Runaway Behaviors on the CANS-CSE**

<table>
<thead>
<tr>
<th>Destination</th>
<th>9M (n=29)</th>
<th>6M (n=39)</th>
<th>3M (n=48)</th>
<th>Baseline (n=81)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Realistic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involving Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Return</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illegal Activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Planning</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Destination</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em><strong>Frequency</strong></em></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

[a] KEY: 0=no evidence; 1 = recent, act; 2 = history, watch/prevent; 3 = acute, act immediately
* p<.05
***p<.001

**Treatment completion.** Of the 87 youth included in the evaluation to date, 40 have been discharged from the CHANCE program. Of these youth, 22 successfully completed their treatment program and were deemed ready to transition out of CHANCE services based on clinical assessment. Length of treatment for successfully discharged youth ranged from 4 to 19 months, with a median length of treatment of 10 months. The majority (77%; n = 17) of these youth were reunified with biological parents or discharged into the care of other relatives. To date, one youth has re-entered the CHANCE program following a successful discharge.

The other 18 youth exited the program prior to completing treatment through one of the following discharge outcomes: runaway (not yet re-located; n = 8), aged out of foster care and declined further services (n = 6), reunified with family and declined further services (n = 1), or were placed in a different program or out of county (n = 3). Length of treatment for these youth ranged from 1 month to 20 months, with a median length of treatment of 5 months. In addition, many of these youth (n = 14) received insufficient services (fewer than 12 sessions) to be deemed adequately engaged in the treatment program prior to their exit from services, and some youth (n = 4) actually left the program before services were initiated.
Conclusions and Recommendations

The findings presented in this report are preliminary and only represent outcomes of youth up to 9 months of treatment in the CHANCE program. Since enrollment in the evaluation occurs on a rolling basis as new youth are admitted to the program, not all youth have received 9 months of treatment at this time, while some youth have received more than 9 months of treatment, but the small sample size precludes our ability to report on data past 9 months at this time. As more data become available, future reports will continue to expand upon this analysis.

There are a number of promising findings emerging from the evaluation to date. First, the data indicate that youth participating in the CHANCE program have a number of identified strengths, even when they first enter into services. While research on sexual exploitation often emphasizes the vulnerabilities and needs of victims, it is important to also acknowledge the strengths that youth bring with them. Evaluation data also indicate that these strengths have shown improvement over time. Although most of these changes are not statistically significant, gains are clearly being made. Using a strengths-based approach, therapists are working with youth to identify and develop personal strengths, which can be used as building blocks to address needs. In particular, youth have strong perceived career strengths, and although their work experience in the sex industry is not deemed socially appropriate, these youth have developed skills that can be built upon and redirected towards a more appropriate career path. Other useful strengths exhibited by youth include self-expression, resiliency, and resourcefulness.

Youth have also shown significant improvements in both life functioning and educational outcomes. In particular, significant gains have been made in family functioning, living situation, and use of recreational time. Although improvements in educational attainment and school achievement have been slow, youth have attained significant improvements in school behavior, attendance, and time spent in school, which are important first steps towards greater academic success. Extended periods of time spent out of school prior to enrollment in the CHANCE program have unquestionably had a long-term impact on youth educational functioning, and traditional school settings may not be the most appropriate educational environment for these youth. Further research is needed to better assess what educational approaches are most effective for this population.

Finally, significant improvements can also be seen over time in a number of youth mental and behavioral health outcomes, including adjustment to trauma, conduct problems, oppositional behaviors, substance use, delinquency, and runaway behaviors. Both youth and their caregivers report fewer trauma symptoms over time, although the data suggest that trauma symptoms take some time to stabilize. The trajectory suggests some increases in trauma symptoms initially, followed by a decrease in symptoms. Such findings are not uncommon or surprising when working with sexually abused clients. Trauma in this population in particular is very complex and may take considerable time before youth completely stabilize. Increases in the report of trauma symptoms, as well as related mental health issues such as anxiety and depression, might be the result of youth opening up more and actively addressing their trauma in therapy. Future reports will continue to assess the long term impact of the CHANCE program on youth outcomes and the retention of positive gains over time, but the current findings suggest that some initial gains are evident as early as 3 months into treatment, and a number of substantial gains are realized by 6 to 9 months.

While these findings are encouraging, the data also indicate that not all youth are effectively engaged in the CHANCE program. A number of youth have refused services and/or
were discharged from the program without completing treatment, and in some cases prior to even starting treatment. Given what is known about this population, these findings are not surprising, and it may take multiple attempts at engagement and re-engagement before a youth is ready to participate in treatment. It is important for treatment providers to avoid coercion and to engage youth wherever they currently are at with regard to their readiness to change.

There are some limitations to the current analysis that must be acknowledged. The current study uses a longitudinal design to compare youth outcomes at baseline to subsequent time points. Ideally, a randomized control trial or quasi-experimental design with a comparison group would provide greater rigor for drawing conclusions about the effectiveness of the treatment intervention, but the implementation of such a design is complicated and raises serious ethical questions about withholding treatment from youth in need for the purpose of research. The implications, however, are that the evaluation is limited in terms of the conclusions we can draw from the data, given the lack of a comparison group. Another limitation of the current study involves missing data. Missing data is often inevitable in a longitudinal study, and this particular population is especially challenging. It is not uncommon for these youth to run away, resulting in missed assessments. Furthermore, the inability to access youth for data collection who runaway for extended periods of time or refuse to engage in services means that we do not know how their outcomes compare to other youth who remain in the program. Finally, the variability in treatment duration for youth presents unique analytical challenges. Selecting appropriate analytical techniques for the evaluation when youth may have anywhere from two to eight (or more) data collection points becomes a challenge and is an issue that we continue to explore as more data become available.

Future reports will provide further statistical analyses that assess changes in youth outcomes over time and relationships between outcomes and services that youth received. In addition to the primary data presented in the current report, we expect to incorporate administrative data in future analyses as well. To the extent possible, future reports will also compare youth who were successfully discharged to those who were unsuccessfully discharged from the CHANCE program. This will help to understand whether there are differences in the characteristics of these youth that could be used to predict the likelihood that a particular youth will successfully engage in and complete services. To assess if there are any differences in youth outcomes related to their placement, future reports may also compare youth served in Specialized Therapeutic Foster Care (STFC) with youth in the Community Response Team (CRT). Finally, a fidelity component is being added to the study, which will allow future reports to examine the relationship between youth outcomes and measurements of treatment fidelity.
References


Commercial Sexual Exploitation of Children (CSEC) is a form of child abuse. It happens when individuals buy, trade, or sell sexual acts with a child under the age of 18.

CSEC victims are boys and girls from different cultures, ethnicities and socioeconomic backgrounds. Any child can become a victim; however, children between the ages of 12 and 15 years old, those with emotional and physical needs, runaways, and children experiencing trouble at home are particularly vulnerable.

Pimps are predators who seek out vulnerable victims. They use psychological manipulation to make the child believe that the pimp truly cares for his or her well-being, as well as physical control in the form of threats, violence, or drug addiction, to make the victim feel trapped and powerless. While pimps often target children outside of their family, a family member may also sexually exploit a child.

“Johns” are the customers who solicit and purchase sexual acts performed by victims of CSEC.

If you think you know a child who may be a victim of Commercial Sexual Exploitation, call Dr. Kimberly McGrath at Citrus Health Network:

(305) 424-3031
The CHANCE Program
Citrus Helping Adolescents Negatively impacted by Commercial Exploitation

What SERVICES DOES CITRUS HEALTH NETWORK PROVIDE TO VICTIMS OF COMMERCIAL SEXUAL EXPLOITATION?

**Children in The CHANCE Program**
- Receive individualized clinical treatment primarily centered around Trauma-Focused Care, Cognitive Behavioral Treatment and motivational interviewing.

**Any child in the community who has been a victim of CSEC**
- Can receive services from The CHANCE Program, even if they are not in a Specialized Therapeutic Foster Home.

**Citrus Health Network**
- Provides prospective foster parents with required trainings for licensing, and additional trainings for specialized therapeutic foster care for CSEC victims.

**Psychoeducational group therapy**
- Is provided to both children and caregivers as part of a 16 week curriculum.

**Services provided by The CHANCE Program**
- Follow the child to provide continuity of care across different settings, providers, and levels of care.

The CHANCE Program is a pilot program developed by Citrus Health Network through a partnership with the Florida Department of Children and Families and Our Kids of Miami-Dade/Monroe, with research by the University of South Florida.

How CAN YOU HELP?
Become a Foster Parent!

1. Complete the Citrus Health Network Registration Form
2. Attend the Initial Foster Parent Orientation
3. Proceed with the Full Application and Training Process

Specialized Therapeutic Foster Homes for CSEC Victims:
- Children live with foster families who have been specifically trained to care for children who have been victims of Commercial Sexual Exploitation.

Specialized Therapeutic Foster Homes for CSEC require more training for foster parents, and provide more support for children and caregivers.

Each child in The CHANCE Program is assigned:
1. An Individual Therapist
2. A Family Therapist
3. A Targeted Case Manager
4. A Life Coach
5. Certified Behavioral Analyst services are provided when applicable.

<table>
<thead>
<tr>
<th>Citrus Health Network, Inc.</th>
<th>FOSTER CARE SERVICES &amp; LICENSING</th>
</tr>
</thead>
<tbody>
<tr>
<td>(305) 424-3072</td>
<td><a href="http://www.citrushealth.org">www.citrushealth.org</a></td>
</tr>
</tbody>
</table>

Open Your Home and Your Heart...
Become a Foster Parent!

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Youth Arrested for Trading Sex Have the Highest Rates of Childhood Adversity: A Statewide Study of Juvenile Offenders

Rachel Naramore, Melissa A. Bright, Nathan Epps, and Nancy S. Hardt

Abstract
A history of childhood adversity is associated with high-risk behaviors and criminal activity in both adolescents and adults. Furthermore, individuals with histories of child maltreatment are at higher risk for engaging in risky sexual behavior, experiencing re-victimization, and in some cases, becoming sexual offenders. The purpose of the current study was to examine the prevalence of individual and cumulative adverse childhood experiences (ACEs) reported by 102 offending youth who were arrested for trading sex and 64,227 offending youth who were arrested for various other crimes, using Florida’s Positive Achievement Change Tool. Youth with violations related to sex trafficking had higher rates for each ACE as well as number of ACEs, particularly sexual abuse and physical neglect. These findings have implications for identifying adverse experiences in both maltreated and offending youth as well as tailoring services to prevent re-victimization.

Keywords
sex trafficking, adverse childhood experiences, juvenile offenders, adolescents

A history of childhood adversity—characterized by maltreatment, parental mental illness, exposure to family violence, and abandonment—is associated with high-risk behaviors and criminal activity in both adolescents and adults (Dube, Felitti, Dong,

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Sexual Abuse

Chapman, et al., 2003; Dube et al., 2006; V. J. Edwards, Anda, Gu, Dube, & Felitti, 2007; Reavis, Looman, Franco, & Rojas, 2013). Furthermore, individuals with histories of child maltreatment are at higher risk for engaging in risky sexual behavior, experiencing re-victimization, and, in some cases, becoming sexual offenders (Greene, Ennett, & Ringwalt, 1999; Kaestle, 2012; Reid, 2014; Roe-Sepowitz, 2012). Juvenile offenders with histories of childhood adversity are more difficult to rehabilitate and are more likely to re-offend than youth without these histories (Baglivio et al., 2014). Thus, knowledge of a juvenile offender’s history of adverse experiences has important implications both for predicting high-risk sexual or delinquent behavior and for tailoring interventions to prevent their occurrence or, in the case of an offender, re-offense or recidivism.

Currently, the United States is in the midst of a policy and practice shift in the way it conceptualizes juvenile involvement in the sex trade industry (Mitchell, Finkelhor, & Wolak, 2010). Previously known as child prostitution, commercial sexual exploitation of children (CSEC) is now defined by the U.S. Department of Justice as “sexual abuse of a minor for economic gain” and includes “physical abuse, pornography, prostitution, and the smuggling of children for unlawful purposes” (National Institute of Justice [U.S.]. Office of Justice Programs, 2007, p.1). Thus, in its newest definition, CSEC is no longer a form of criminality on the part of the child, but rather child abuse for profit. This important reconceptualization shifts the way unlawful sexual activity of victims of maltreatment is described. These individuals are not committing crimes, per se, but are rather repeatedly victimized.

Although the covert nature of CSEC makes incidence reporting difficult, more than 105,000 children annually are indicated to be sexually abused (Estes & Weiner, 2001). Estes and Weiner define youth at risk of sexual exploitation as children who are runaways, throwaways, victims of physical or sexual abuse, users of psychotropic drugs, members of sexual minority groups, illegally trafficked children, and children who cross international borders in search of cheap drugs and sex. In a meta-analysis of research on prevalence of domestic minor sex trafficking, estimates varied significantly, leading authors to conclude that research methodologies could be improved to reduce this variability to consider any figure reliable (Finkelhor & Stransky, 2008).

Primary risk factors for a youth’s involvement in the sex trade include running away from home or being forced to leave home without safe alternative housing arranged, also known as thrown away (Cobbina & Oselin, 2011; J. M. Edwards, Iritani, & Hallfors, 2006; Estes & Weiner, 2001; Greene et al., 1999). Throwaway and runaway children, homeless children, and youth aging out of foster care may find themselves living on the streets in locales where the adult prostitution market suggests a way for youth to secure their own shelter, food, and clothing (Estes & Weiner, 2001). Children who run away or are thrown away are often victims of physical or sexual maltreatment (Cobbina & Oselin, 2011; Greene et al., 1999; Kaestle, 2012; Reid, 2014; Wilson & Widom, 2008). Predictors less frequently cited in the literature include poverty (Estes & Weiner, 2001; Klatt, Cavner, & Egan, 2014), gang membership (Estes & Weiner, 2001; Institute of Medicine & National Research Council, 2013), involvement of family or friends in the sex trade (Estes & Weiner, 2001; Klatt et al., 2014; Wilson & Widom, 2008), and a history of child maltreatment (Greene et al., 1999; Kaestle, 2012; Reid, 2014).
2014; Tyler, 2009), and recruitment by organized crime groups (Estes & Weiner, 2001; Institute of Medicine & National Research Council, 2013).

This review of prior research on CSEC risk factors suggests that these youth are more likely to have experienced multiple types of adversity during childhood. Theories of cumulative risk suggest that it is not a single adversity that leads to the worst outcomes for children but instead the accumulation of stressors associated with adversity (Evans, 2004). The Adverse Childhood Experiences (ACEs) study uses the sum of adverse experiences to predict health and developmental outcomes (Anda et al., 2006; Dube, Felitti, Dong, Giles, & Anda, 2003; Felitti et al., 1998). In the original ACE study, researchers measured child maltreatment (physical abuse, emotional abuse, sexual abuse, and physical and emotional neglect) and household dysfunction (criminal history of household members, mental illness of household members, parental separation or divorce, household substance abuse, and violent treatment of mother in the household) as indicators of adverse experiences. These adversities were scored as either present or absent, without regard to the frequency or severity of abuse, and the individual adversities were added together to develop an overall ACE score (Felitti et al., 1998). High-risk ACE scores (sometimes reported as 3 or more, sometimes reported as 4 or more) have repeatedly been linked to increased risk of adverse physical and behavioral health outcomes for both adults and adolescents (Anda et al., 2006; D. W. Brown et al., 2009; Dube et al., 2001; Felitti et al., 1998; Flaherty, 2009; Flaherty et al., 2013; Reavis et al., 2013).

The existing literature on predictors of sexual trafficking is limited by relatively small sample sizes of sexually trafficked youth and a limited focus on family or caregiver characteristics that predict sexual exploitation. In the current study, we aim to address these gaps by using a relatively large and well described sample of youth with violations related to sex trafficking to answer the following question: Is a history of multiple childhood adversities, as modeled by the ACE study, related to an increased risk of juvenile involvement in illegal sexual activity? To address this question, we examine the prevalence of individual and cumulative ACEs reported by youth with violations related to sex trafficking and compare the reported ACEs with a sample of youth with violations not related to sex trafficking. In so doing, we hope to identify risk factors for trafficking so that interventions can be tailored to prevention of the further victimization of at-risk youth.

**Method**

**Sample**

The study population consisted of 64,329 youth who have aged out of the juvenile justice system, and were between the ages of 11.4 and 22.5 at the time of their last assessment. All youth were younger than 18 years when they were adjudicated. All youth in this data set were charged with a crime in the state of Florida and were evaluated with the Positive Achievement Change Tool (PACT) full assessment (detailed below) between December 14, 2005, and December 30, 2012. All youth were younger
than 18 years at the time of their delinquency referral although some received their last assessment as adults.

A cohort of youth arrested for offenses related to sex trafficking \((n = 102)\) were identified as those taken into custody for violations of Florida Statute 796.07 Sections 2e and 2h, both of which relate to trading sex. Statute 796.07 Section 2e states, “It is unlawful to offer to commit, or to commit, or to engage in, prostitution, lewdness, or assignation.” Section 2h states, “It is unlawful to aid, abet, or participate in any of the acts or things enumerated in this subsection,” where the subsection refers to committing or facilitating prostitution, or to visiting a prostitute. The first and second violations of any of these statutes are misdemeanors, whereas all subsequent violations are felonies (“Prohibiting Prostitution and Related Acts,” 2007). All youth charged with either or both types of violations were included in the cohort of youth arrested for trading sex, regardless of additional charges. Demographic information for the Florida juvenile justice population \((N = 64,329)\) can be found in Baglivio and Epps (2015). The prevalence of race, sex, and age at first offense for the cohorts presented here are summarized in Table 1.

Measures

The Positive Achievement Change Tool (PACT) is a fourth-generation actuarial risk/needs assessment designed to assess a youth’s overall risk to reoffend and is administered by Florida Department of Juvenile Justice (FDJJ) employees trained in Motivational Interviewing techniques. The assessment process is designed as a semi-structured interview rather than simply reading questions to the youth. The answers to the questions are drawn from one or more meetings and discussions between the youth and DJJ employees. For this data set, which covers the youth’s entire history with the Department, the ACE scores are drawn from any and all PACT screenings the youth may have had while under the Department’s supervision, to both capture ACEs that may have accumulated as the child aged and to allow for a youth’s greater willingness to disclose personal history and circumstances across the time of supervision. The PACT items and responses are not read aloud to the youth. The domains and items are covered throughout the course of the interview. All PACT screeners received a standardized 3-day PACT and case planning training, in addition to a 2-day motivational interviewing training. Information gleaned from the interview, as well as collaborative sources (such as grades from the Dept. of Education databases) are used to select the most appropriate response for each item. The PACT can be administered as a pre-screen or a full-screen questionnaire. The pre-screen is given to all youth arrested in the state of Florida, and the full screen is given to those whose pre-screen score indicates that they are moderate-high to high-risk to reoffend. Either assessment yields the same risk score for recidivism for a given youth.

The PACT assessment has been validated across multiple samples of youth in the FDJJ, and this validation has been published in multiple peer-reviewed journals and independent research agency reports, as well as the National Council on Crime and Delinquency (NCCD; Baglivio, 2009; Baglivio & Jackowski, 2013; Baird et al., 2013;
These validation studies have shown the PACT overall risk score, criminal history sub-score, and dynamic social history sub-score to be significant predictors of reoffending across gender and racial and ethnic sub-groups, and for all disposition placements (probation, diversion, day treatment, etc.). Logistic regression models and overlapping 95% confidence intervals for area under curve (AUC) statistics have all illustrated similar findings. The criminal history items of the PACT are completely automated from the FDJJ information system, and as such are 100% reliable. An independent reliability analysis conducted by NCCD found an intra-class correlation (ICC) for the PACT risk level of .825, and a kappa of .5 (Baird et al., 2013). ICC more than .8 is considered extremely strong, and the kappa value considered moderate. Each measure has strengths and limitations, but the PACT performed relatively well in comparison with other instruments examined in the Baird et al. study.

<table>
<thead>
<tr>
<th>Age at first offense</th>
<th>Sexually trafficked</th>
<th>Non-sexually trafficked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Younger than 16 years</td>
<td>32 (31.4)</td>
<td>25,278 (39.4)</td>
</tr>
<tr>
<td>≥16 years</td>
<td>70 (68.6)</td>
<td>38,949 (60.6)</td>
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<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>16 (15.7)</td>
<td>50,375 (78.4)</td>
</tr>
<tr>
<td>Female</td>
<td>86 (84.3)</td>
<td>13,852 (21.6)</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
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<tr>
<td>White</td>
<td>35 (34.3)</td>
<td>24,560 (39.2)</td>
</tr>
<tr>
<td>Black</td>
<td>54 (52.9)</td>
<td>27,529 (42.9)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>11 (10.8)</td>
<td>9,876 (15.4)</td>
</tr>
<tr>
<td>Other</td>
<td>2 (2.0)</td>
<td>2,262 (3.5)</td>
</tr>
<tr>
<td>ACE score</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0 (0)</td>
<td>1,793 (2.8)</td>
</tr>
<tr>
<td>1</td>
<td>3 (2.9)</td>
<td>6,256 (9.7)</td>
</tr>
<tr>
<td>2</td>
<td>9 (8.8)</td>
<td>10,457 (16.3)</td>
</tr>
<tr>
<td>3</td>
<td>7 (6.9)</td>
<td>13,570 (21.1)</td>
</tr>
<tr>
<td>4</td>
<td>10 (9.8)</td>
<td>12,202 (19.0)</td>
</tr>
<tr>
<td>5</td>
<td>19 (18.6)</td>
<td>9,168 (14.3)</td>
</tr>
<tr>
<td>6</td>
<td>12 (11.8)</td>
<td>5,663 (8.8)</td>
</tr>
<tr>
<td>7</td>
<td>16 (15.7)</td>
<td>3,214 (5.0)</td>
</tr>
<tr>
<td>8</td>
<td>13 (12.7)</td>
<td>1,393 (2.2)</td>
</tr>
<tr>
<td>9</td>
<td>10 (9.8)</td>
<td>432 (0.7)</td>
</tr>
<tr>
<td>10</td>
<td>3 (2.9)</td>
<td>79 (0.1)</td>
</tr>
<tr>
<td>High-risk ACE score</td>
<td>83 (81.4)</td>
<td>32,151 (50.1)</td>
</tr>
</tbody>
</table>

Note. ACE = adverse childhood experience.

*aDifference in proportions for sexually trafficked and non-sexually trafficked is statistically significant, p < .05.

Winokur-Early, Hand, & Blankenship, 2012). These validation studies have shown the PACT overall risk score, criminal history sub-score, and dynamic social history sub-score to be significant predictors of reoffending across gender and racial and ethnic sub-groups, and for all disposition placements (probation, diversion, day treatment, etc.). Logistic regression models and overlapping 95% confidence intervals for area under curve (AUC) statistics have all illustrated similar findings. The criminal history items of the PACT are completely automated from the FDJJ information system, and as such are 100% reliable. An independent reliability analysis conducted by NCCD found an intra-class correlation (ICC) for the PACT risk level of .825, and a kappa of .5 (Baird et al., 2013). ICC more than .8 is considered extremely strong, and the kappa value considered moderate. Each measure has strengths and limitations, but the PACT performed relatively well in comparison with other instruments examined in the Baird et al. study.
The ACE scores were not based on single items in the PACT assessment but instead on aggregates of terms derived from multiple validated survey tools. For instance, physical abuse was assessed with two PACT items: history of violence/physical abuse (not a victim of violence/physical abuse; victim of violence/physical abuse at home; victim of violence/physical abuse in a foster/group home; victimized or physically abused by family member; victimized or physically abused by someone outside the family; attacked with a weapon) and level of conflict between parents, between youth, and parents, and among siblings (some conflict that is well managed; verbal intimidation, yelling, heated arguments; threats of physical abuse; domestic violence: physical/sexual abuse). Physical abuse was coded as present if the answer to the former question was anything other than “Not a victim of violence/physical abuse” or if the answer to the latter question was “Domestic violence: physical/sexual abuse” as long as the same juvenile gave a negative answer to later PACT questions about history of sexual abuse or rape. The methods and rationale for this conversion are described in more detail in a previous study (Baglivio et al., 2014). Each ACE was coded as “0” for absent and “1” for present. The individual ACEs were then added together to make a cumulative ACE score ranging from 0 to 10. Because previous studies have indicated that risk of adverse outcomes generally increases with an ACE score of 4 or more, the ACE scores were separated into binary categories of low risk (0-3 ACEs), and high risk (4-10 ACEs).

### Analytic Plan

Descriptive statistics were used to examine frequency of each ACE and a cumulative ACE score for both the youth with arrests not related to trafficking (n = 64,227) and the youth with arrests related to trafficking (n = 102). Bivariate analyses were used to compare the proportion of ACEs in both cohorts. Logistic regressions were conducted to predict the likelihood of sexually trafficked versus non-sexually trafficked arrest status based on each ACE and a high-risk ACE score, controlling for risk factors that have been previously established in the literature.1 Because of the imbalanced sample sizes of youth arrested for sex trafficking versus youth arrested for other violations, a random sample of 102 youth arrested for non-trafficking violations was selected for multivariate analyses. Data were analyzed using SPSS 22 (Armonk, NY 2013).

### Results

#### Descriptive Analyses

Descriptive statistics for the prevalence of each charge, the proportion of females for each charge, and age at time of adjudication (mean and range) for youths arrested for trading sex can be found in Table 2. The majority of youth (72.5%) were arrested on charges of violating 796.07 Subsection 2e only while an additional 11.8% were charged with violating Subsection 2h only and 5.9% were charged with violating both. The remaining 9.8% received one or both of these charges in addition to another charge (see Table 2).
For both violations of subsection 2e and 2h, the majority (83%-100%) of youth charged were female. The ages across all three groups of adolescents arrested for trading sex were similar. All adolescents were between 12 and 18 years at the time of adjudication with a mean age of approximately 16 years (Table 2).

For the youth charged with non-trafficking violations, the most prevalent ACE was household violence; for the youth charged with trafficking violations, the most prevalent ACE was parental separation or divorce. The least prevalent ACE for both groups was household mental illness (Figure 1). All youth charged with trafficking violations experienced at least 1 ACE, and 97.1% had more than 1; the vast majority (81.4%) experienced at least 4 ACEs (Figure 2). Among the youth charged with non-trafficking violations, 97.2% experienced at least 1 ACE; approximately half (50.1%) experienced 4 or more. Among the youth charged with non-trafficking violations, the mean ACE score was 3.65 ($SD = 1.89$); among the youth charged with trafficking violations, the mean ACE score was 5.74 ($SD = 2.31$). When comparing the youth charged with trafficking violations by charge, there were no significant differences in age at first offense, prevalence of high-risk ACE scores, sex, or race, all $p$ values >.05.

### Bivariate Analyses

For all 10 ACEs, the proportion of individuals endorsing any individual ACE was higher for the youth charged with trafficking violations than for the youth charged with non-trafficking violations (all $p$ values <.05; Figure 2). The prevalence of ACE high-risk scores ($\geq$4 ACEs) was significantly higher among the youth charged with trafficking violations (81.4%) than among the youth charged with non-trafficking violations (50.1%; $\chi^2 = 39.94, p < .001, \text{Cramér’s } V = .03$).

### Multivariate Analyses

We then conducted logistic regressions predicting likelihood membership in the sex-trafficking violations group using the cohort of youth charged with trafficking

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**Table 2.** Descriptive Statistics for Types of Charges Among Sexually Trafficked Cohort ($n = 102$).

<table>
<thead>
<tr>
<th>Charge</th>
<th>Prevalence $n$ (%)</th>
<th>Proportion female $n$ (%)</th>
<th>Age (years) at first adjudication</th>
</tr>
</thead>
<tbody>
<tr>
<td>2e only</td>
<td>74 (72.5)</td>
<td>62 (83.8)</td>
<td>16.4 (1.2)</td>
</tr>
<tr>
<td>2h only</td>
<td>12 (11.8)</td>
<td>11 (91.7)</td>
<td>16.7 (.7)</td>
</tr>
<tr>
<td>2e and 2h</td>
<td>6 (5.9)</td>
<td>6 (100)</td>
<td>16.4 (1.0)</td>
</tr>
<tr>
<td>2e and/or 2h and another charge</td>
<td>10 (9.8)</td>
<td>7 (70.0)</td>
<td>15.9 (1.0)</td>
</tr>
<tr>
<td>Total</td>
<td>102 (100)</td>
<td>86 (84.3)</td>
<td>16.3 (1.2)</td>
</tr>
</tbody>
</table>

Note. No statistically significant differences for any characteristics based on charge.
Figure 1. Prevalence of adverse childhood experiences among sexually trafficked and non-sexually trafficked offending juveniles.

Figure 2. Prevalence of ACE scores among sexually trafficked and non-sexually trafficked offending juveniles.

Note. ACE = adverse childhood experience.
violations and an equal, random sample of youth charged with non-trafficking-related violations. The odds of being adjudicated for sex trafficking were 4.09 to 7.53 times higher for youth who experienced sexual abuse, physical neglect, and parental separation than youth who did not experience those events (Table 3). In addition, the odds of being adjudicated for sex trafficking were 3.27 times higher for youth with a high-risk (i.e., greater than 4) ACE score. These associations go beyond the relations between previously established risk factors for sexual exploitation (e.g., gang membership, being a runaway).

### Table 3. Likelihood of Being ST Offending Juveniles Compared With a Random Sample of Non-ST Offending Juveniles Based on ACEs, Total n = 204.

<table>
<thead>
<tr>
<th>Model 1: Type of ACE</th>
<th>Non-ST n (%)</th>
<th>ST n (%)</th>
<th>−2 log likelihood</th>
<th>Pseudo $R^2$</th>
<th>$\chi^2$</th>
<th>df</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual abuse</td>
<td>13 (12.7%)</td>
<td>61 (59.8%)</td>
<td>4.09</td>
<td>[1.32, 12.71]</td>
<td>.015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical neglect</td>
<td>8 (7.8%)</td>
<td>42 (41.2%)</td>
<td>7.53</td>
<td>[2.12, 26.73]</td>
<td>.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental separation</td>
<td>83 (81.4%)</td>
<td>94 (92.2%)</td>
<td>6.22</td>
<td>[1.30, 29.85]</td>
<td>.022</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical abuse</td>
<td>32 (31.4%)</td>
<td>61 (59.8%)</td>
<td>.77</td>
<td>[.26, 2.23]</td>
<td>.645</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household member</td>
<td>67 (65.7%)</td>
<td>86 (84.3%)</td>
<td>.99</td>
<td>[.33, 2.97]</td>
<td>.985</td>
<td></td>
<td></td>
</tr>
<tr>
<td>incarceration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional neglect</td>
<td>19 (18.6%)</td>
<td>37 (36.3%)</td>
<td>1.39</td>
<td>[.50, 3.87]</td>
<td>.524</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional abuse</td>
<td>28 (27.5%)</td>
<td>53 (52%)</td>
<td>1.32</td>
<td>[.48, 3.64]</td>
<td>.598</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household violence</td>
<td>82 (80.4%)</td>
<td>92 (90.2%)</td>
<td>.89</td>
<td>[.19, 4.16]</td>
<td>.877</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household substance</td>
<td>26 (25.5%)</td>
<td>41 (40.2%)</td>
<td>1.53</td>
<td>[.52-4.47]</td>
<td>.441</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household mental illness</td>
<td>9 (8.8%)</td>
<td>18 (17.6%)</td>
<td>.22</td>
<td>[.05, 1.07]</td>
<td>.061</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model 2: Number of ACEs</th>
<th>Non-ST n (%)</th>
<th>ST n (%)</th>
<th>−2 log likelihood</th>
<th>Pseudo $R^2$</th>
<th>$\chi^2$</th>
<th>df</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four or more ACEs</td>
<td>54 (52.9%)</td>
<td>83 (81.4%)</td>
<td>3.27</td>
<td>[1.25, 8.58]</td>
<td>.016</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Models were adjusted for sex, race, age at first offense, history of gang affiliation, and being a runaway or thrown out of the home. ST = sexually trafficked; ACE = adverse childhood experience; Adj. OR = Adjusted odds ratio; CI = confidence interval.
Discussion

The state of Florida, particularly the southern region, serves as a major hub for sex trafficking in the United States and is currently ranked third nationally in the number of potential human trafficking calls to the National Human Trafficking Resource Center (Polaris Project, 2013). Previous literature demonstrates that juvenile offenders engaged in the sex trade industry have a high likelihood of a history of maltreatment (Diaz, Clayton, & Simon, 2014; Kaestle, 2012). In the current study, we utilized data from a unique assessment developed by the FDJJ to examine the prevalence of individual and cumulative ACEs reported by adolescents arrested for trading sex and compared these rates with rates for a sample of adolescents arrested for other reasons.

We found a disproportionate number of females and Black youth in the cohort of youth arrested for trading sex relative to the general population of offenders. These findings are consistent with previous literature on gender and racial differences in youth arrests for prostitution (Clawson, Dutch, N., Solomon, A., & Grace, 2009; Flowers, 2001). In addition, each of 10 ACEs was more prevalent among youth charged with trafficking violations when compared with youth charged with non-trafficking violations. In addition, juveniles charged with trafficking violations were more likely to have high-risk ACE scores. These high rates of ACEs among youth charged with trafficking violations are particularly noteworthy because juvenile offenders already tend to have the richest histories of adversity and maltreatment when compared with the general population of youth (Baglivio & Epps, 2015). Youth charged with trafficking violations have the highest rates of adverse experiences above the general populations of youth and other offending youth, making them particularly vulnerable to re-victimization throughout adulthood and in most need of psychosocial services. These consequences are above and beyond the already documented adverse effects of ACEs on health (Flaherty et al., 2013; Flaherty et al., 2009).

The fact that youth charged with trafficking violations were more likely to report nearly every ACE suggests that youth with histories of maltreatment and household dysfunction are extraordinarily vulnerable to sexual predation and re-victimization by traffickers; they are more likely to be re-victimized in this way than the general population of offenders. This finding has important implications for services provided to maltreated youth and juvenile offenders.

Children who suffer physical and emotional abuse and neglect as well as sexual abuse have not successfully had their physiological or safety needs met, which likely affects their ability to develop self-esteem (Miller, 1976; Mullen, Martin, Anderson, Romans, & Herbison, 1996) and a sense of belonging (Maslow, 1943). As a result, these children may run away (Tyler, 2009) and/or seek a sense of belonging from another source to avoid the home environment that permitted or perpetuated these abuses. In addition, child abuse and neglect survivors may seek the approval of gangs (Thompson & Braaten-Antrim, 1998) or predatory adults. Maltreatment victims are prime candidates to be groomed by sex traffickers, as these victims may be in a vulnerable situation (e.g., homeless, living in poverty) that affords control to the trafficker (Hodge & Lietz, 2007), typically have low self-esteem (Mullen et al., 1996), and may
already be engaging in risky sexual behavior (see Tyler for a review). Interventions for these children need to assure their consistent contact with caring adults who can create protective environments that meet belonging and self-esteem needs while monitoring the youth peer relationships and social media contacts for possible predators. For maltreated youth, foster parents and caregivers should be made aware of this vulnerability, and informed enough to identify potential predators in their environments and to correctly interpret the signs of sex trafficking.

For social services, including those provided through the juvenile justice system, evidence-based practices should be used to thwart the trajectory toward re-victimization or criminal activity. For juvenile offenders, arrest is still seen as a primary means of offering a protective environment (Musto, 2013). As of 2012, there were only 438 residential beds available in 37 facilities in the United States especially designed for underage victims of sexual exploitation, and 28 states have no beds at all designated exclusively for this group (Reichert & Sylwestrzak, 2013). Current capacity, then, is inadequate to deal effectively with a high number of extraordinarily vulnerable youth (Kotrla, 2010). Because of the inadequacy of the current infrastructure to meet the needs of this unique population, arrest is still seen as a primary means of offering a protective environment (Flock, 2013; Musto, 2013). This is problematic both because the juvenile justice system is not, for the most part, set up to address the complex struggles faced by the population and because many trafficked youth already have a deep-seated mistrust of law enforcement that is counterproductive to their recovery (Musto, 2013). Secure shelters for these youth should therefore be strategically placed so that one is easily geographically accessible to every community.

In practice, juvenile justice systems are encouraged to screen juveniles for ACEs. The PACT assessment, developed by the FDJJ (Baglivio, 2009; Winokur-Early et al., 2012) and modeled after similar assessments in Washington state, measures both risk (i.e., ACEs) and protective factors and is used to identify the juveniles at highest risk for re-offending. When using such an assessment, social workers and correctional officers working with offending youth should be prompted by affirmative responses to take further action. Specific services for these maltreated youth need to be developed, including emphasis on evidence-based psychosocial services targeting sexual victimization.

This study is not without limitations. Although the majority of the 102 youth in the arrest for sex-trafficking violations was charged under subsection 2e of Florida statute 796.07 (i.e., offering to commit, or to commit, or to engage in prostitution, lewdness, or assignation), 16 youth were charged under the more ambiguously worded subsection 2h (e.g., to participate in any of the acts listed in the subsection describing prostitution and related acts). It is possible that these latter participants committed crimes more consistent with criminal activity (e.g., visiting a sex worker, pimping out another youth) than victimization (e.g., being forced into sexual activity by a pimp) and should be conceptualized differently than the other youth arrested for trading sex in this sample. Comparisons of sex, age at first adjudication, race, and ACE scores, however, revealed no statistically significant differences between these groups, suggesting they are likely more similar than not. Second, it is possible that a greater proportion of the offending youth in this sample were sexually trafficked than were identified through adjudication. As
previously described, sexual exploitation of children is a relatively well-hidden activity and many instances go unreported. In addition, many children who are victims of sex trafficking are not arrested for it, and there may be substantive differences between those who are adjudicated on charges of prostitution and those who are not. Third, this study relied on a mix of self-reports and caseworker reports of childhood adversity, the self-reports of which may be biased by current experiences or socially desirable reporting. Fourth, given the differences in the effects of ACEs on boys versus girls described elsewhere in the literature (M. J. Brown, Masho, Perera, Mezuk, & Cohen, 2015; Duke, Pettingell, McMorris, & Borowsky, 2010; Isohookana, Riala, Hakko, & Räsänen, 2013), and given the relative paucity of programs targeted toward male sex-trafficking victims (Institute of Medicine & National Research Council, 2013), analysis of any differences between genders of the effect of ACEs on vulnerability to sex trafficking would have been informative. Unfortunately, however, this present sample is underpowered for such an analysis both with respect to ACE score and to individual ACEs.

The findings from this study have important implications for prevention and intervention services provided for both maltreated and offending youth. First, maltreated youth—particularly those with histories of sexual abuse—need consistent, protective environments with adults who can monitor their behavior and be alert to signs of sex trafficking and re-victimization. Second, juvenile justice systems should utilize screening tools similar to Florida’s PACT to identify offending youth with histories of maltreatment. Services for both maltreated and offending youth should be tailored to assist them in first meeting their most basic needs—safety and security—and then identifying appropriate relationships with adults.

Declaration of Conflicting Interests

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Notes

1. Models were adjusted for sex, race, age at first offense, ever being a runaway or kicked out of the home, and history of gang involvement. An additional risk factor, homelessness, was measured in the PACT data but the prevalence was too low (<1%) for inclusion in analyses.
2. Analyses were run excluding youth who were charged with section 2h as this charge is more vague in its relation to sex trafficking (i.e., these youth may be trafficking instead of being trafficked). There were no differences in findings after excluding this group.

References


