Predictors of Family Engagement in Child Post-Traumatic Stress Disorder Screening Following Exposure to Intimate Partner Violence

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Abstract
Children’s exposure to intimate partner violence (IPV) has numerous negative short- and long-term impacts on children’s development, mental health, physical health, and adult functioning. While community-based organizations have an array of interventions aimed to increase survivor safety and prevent the development of, or treat post-traumatic stress disorder (PTSD), many families experiencing IPV never enter the doors of community-based organizations. To address this gap, there is an increasing number of partnerships between community-based organizations and first responders to increase support to families experiencing IPV. The Child Trauma Response Team (CTRT) is an innovative model that provides a coordinated, immediate, trauma-informed, and interdisciplinary response to families exposed to IPV. Given the lack of

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research on coordinated community interventions, the research questions for this study were as follows: (a) What are the family sociodemographic factors, crime factors, and program services most associated with family engagement in child PTSD screening following exposure to IPV? (b) What are the family sociodemographic factors and crime factors most associated with children screening positive for PTSD following exposure to IPV? The data for this study consist of 244 families with 352 children identified by the pilot CTRT. The results of this study suggest that a collaborative intervention designed to address caregiver and children’s safety and well-being after a police-reported IPV incident is a promising model. Overall, more than 70% of children identified by the CTRT team completed a child PTSD screen, and 74.3% of children who completed the screens were screened positive for PTSD. The safety assessment service provided by the CTRT team was a predictor of the families’ engagement in child PTSD screens. This is a critical finding and suggests the importance of developing program models that comprehensively address the needs of caregivers and children exposed to IPV.

**Keywords**
domestic violence, mental health and violence, PTSD, children exposed to domestic violence, domestic violence

**Introduction**
Children’s exposure to intimate partner violence (IPV) represents a serious public health issue, affecting more than seven million children a year in the United States (McDonald et al., 2006). Overall, studies estimate that children are present in the home for approximately half of IPV incidents, and in most cases, they are directly exposed to the violence (Fantuzzo & Fusco, 2007; Hamby et al., 2011). Researchers have documented numerous negative short- and long-term effects that seeing, hearing, or attempting to intervene in IPV have on children’s development, mental health, physical health, and adult functioning (Evans et al., 2008; Hungerford et al., 2012). Children’s exposure to IPV is associated with difficulties in cognition, academic achievement, socioeconomic development, and behavior that can result in increased contact with law enforcement and the criminal justice system (Margolin et al., 2010; Rigerink et al., 2010; A. L. Roberts et al., 2010). Children exposed to IPV also experience disproportionately high levels of child abuse and injuries (Hamby et al., 2010).

Family violence is most likely to occur during the first 5–7 years of a child’s life (Chu & Lieberman, 2010; Fantuzzo & Fusco, 2007; U.S. Department of Health and Human Services [USDHHS], Administration
on Children, Youth, and Families, 2009) when the child’s brain is actively developing. One of the most common psychological responses to violence exposure is post-traumatic stress disorder (PTSD; Margolin & Vickerman, 2011). Research indicates that 15.9% of children exposed to traumatic events develop PTSD (Alisic et al., 2014). The rate is even higher among children and adolescents exposed to interpersonal traumatic events, with one in four children developing PTSD (Alisic et al., 2014). The large number of children exposed to IPV in the home, who subsequently suffer either transitory or chronic effects from the violence exposure, is compelling evidence that children’s exposure to IPV is one of the leading public health issues in the nation (Berkowitz, 2003; Ford, 2015). The necessity of providing early interventions for children and adolescents witnessing IPV is of the utmost importance.

*Crisis and Early Interventions Among Children Exposed to IPV*

Public health approaches to addressing trauma-related mental health problems prioritize early intervention strategies (Kearns et al., 2012; Magruder et al., 2016; Qi et al., 2016), with growing evidence that early intervention programs can prevent the development of PTSD (Berkowitz et al., 2011; Brunet et al., 2013; Hahn et al., 2016). To date, there exist numerous evidence-based PTSD interventions (Trauma-Focused Cognitive Behavioral Therapy, Cohen et al., 2016; Child and Family Traumatic Stress Intervention, Berkowitz et al., 2011; and others) designed to decrease PTSD symptoms and other serious adverse post-trauma reactions.

In addition to child interventions, caregiver support is a critical moderating factor for how young children respond to trauma exposure (Hahn et al., 2016; Lieberman & Knorr, 2007; McLaughlin & Lambert, 2017; Y. H. Roberts et al., 2014). Caregivers can support their children after witnessing IPV by understanding the child’s perceptions of and reactions to the trauma, engaging in caregiver–child activities that increase the child’s use of healthy coping skills and fostering the child’s ability to decrease their post-trauma reactions. Yet, after experiencing violence themselves, caregivers may struggle to attend to their children’s needs. Early interventions are well positioned to (a) identify how caregivers experiencing violence may be struggling to support their children, (b) support the caregiver by providing developmentally framed psychoeducational information about children’s and adult’s common trauma reactions, and (c) screen for acute and post-traumatic reactions (Berkowitz, 2003). In addition, supporting caregivers to address their own physical and emotional safety needs after a traumatic event helps caregivers attune to their children’s needs. As Berkowitz (2003) notes,
A parent who is able to contain the burden of the experience of a violent event and take the necessary steps to ensure their family’s safety, while attending to their child’s emotional needs, offers more essential ingredients to guaranteeing a child’s psychological well-being than anyone else possibly can. (p. 298)

**Access to and Engagement in Treatment Services**

There is significant research indicating that early interventions post-trauma can support children and their caregivers to successfully recover; however, families who experience poverty, social disadvantage, and structural racism are at a higher risk to experience severe IPV (Renzetti, 2009; Sokoloff & Dupont, 2005). These structural barriers create an array of challenges to accessing and engaging in post-trauma support. A. L. Roberts et al. (2010) examined nationally representative data collected by the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC; Grant et al., 2003) and found that while Whites were more likely than other racial groups to be exposed to trauma, Blacks and Hispanics had higher risk of witnessing domestic violence than Whites. Among those exposed to trauma, PTSD risk was slightly higher among Blacks compared with Whites, after adjustment for characteristics of trauma exposure. In addition, all minority groups were less likely to seek treatment for PTSD than Whites (A. L. Roberts et al., 2010). Therefore, despite the known significant consequences associated with children’s exposure to IPV, the children most vulnerable to these sequelae are often the children least likely to access and engage in post-trauma support and treatment.

Moreover, for families accessing post-trauma support and treatment services, the effectiveness of such services depends on the willingness and abilities of families to engage in such services. Research has found that children with parents who confirm past or current IPV are more likely to prematurely terminate from treatment (DeLorenzi et al., 2016). One study documented that between 15% and 45% of children never engage in treatment beyond the initial intake and/or terminate treatment prematurely (Koverola et al., 2007). Among one study of 1,365 children receiving community-based services for exposure to violence (Risser & Schewe, 2013), the results indicated that 22% of children scheduled or completed an intake but did not attend any sessions, and 39% attended sessions beyond the intake but terminated prematurely. The authors noted that the type of treatment a child/family received was significantly related to whether the child engaged in and completed treatment. A higher proportion of families that received multimodal treatment (i.e., individual child therapy and family therapy) completed treatment and a higher proportion of families that received psychoeducation and family support
completed treatment (Risser & Schewe, 2013). Therefore, for early interventions to be effective, we must focus on short-term services that incorporate multimodal treatment approaches and provide education and family support to children and their caregivers. Furthermore, psychoeducation and coping strategies are critical during the initial visit to ensure that families that do not return to treatment receive practical information and skills needed to support children to recover and heal.

**Community-Based Collaborative Interventions**

While community-based organizations, such as victim service organizations and mental health agencies, have an array of interventions aimed to increase survivor safety and prevent the development of, or treat the development of, adult and child PTSD, the majority of families experiencing IPV never enter the doors of community-based organizations. To address this gap, there is an increasing number of partnerships between community-based organizations and first responders to increase immediate access to families experiencing IPV.

To date, there are two evaluated interventions, developed by the Yale Child Study Center, that provide coordinated criminal justice and community-based services to children exposed to IPV with the goal of disrupting the resulting negative outcomes associated with such exposure. The Child Development–Community Policing Program (CD-CP) has operated since 1992 and provides a collaborative law enforcement and mental health response for violence-exposed and traumatized children. CD-CP clinicians ride along with patrol officers and respond to children exposed to violence. In addition, the CD-CP reviews cases of children exposed to violence and develops and implements response plans. Clinicians involved in the program meet separately to review clinical assessments and treatment needs and provide 24-hr response services in acute situations (Murphy et al., 2005).

Murphy and colleagues (2005) conducted an evaluation of the CD-CP program, in which they analyzed 2,361 child clinical records to identify the child and event characteristics associated with the presence of the direct, in-person response at the time of the law enforcement contact. The children in the sample experienced and/or witnessed a range of traumatic incidents including accidents, assaults, property crimes, family violence, drug/alcohol offenses, psychiatric crises, fire, sex crimes, conduct problems, maltreatment, and/or IPV. Their analysis yielded two primary results: (a) Hispanic youth were more likely to make use of the program than their Caucasian counterparts and (b) the more severe the incident, the more likely families were to participate in the program (Murphy et al., 2005). However, Murphy
et al. (2005) found that incidents involving IPV were less likely to result in the presence of the acute response. The researchers noted that IPV is often associated with obstacles to service engagement. Further research is needed to understand how a collaborative law enforcement and community response model can support children exposed to IPV.

The second program, the Domestic Violence Home Visit Intervention (DVHVI), is an intervention similar to the CD-CP, but focuses exclusively on children’s exposure to IPV. In this intervention, a law enforcement officer and a victim service advocate, trained in IPV, trauma, and child development issues, visit families within 2–4 days after a violent IPV incident. The goal of the program is to connect families to services to increase family safety and reduce the likelihood that children will develop PTSD. Stover et al. (2009) conducted a cross-sectional evaluation of the DVHVI. The researchers found that women involved in DVHVI reported more positive feelings toward law enforcement and were more likely to call law enforcement in the future if needed. The evaluation found that Hispanic women served by Spanish-speaking advocate-officer teams were the most likely to engage in services and call law enforcement during subsequent incidents (Stover et al., 2009). Similarly, Stover et al. (2010) conducted a longitudinal evaluation of the DVHVI model. The researchers found that women engaged in DVHVI services were more likely to use court-based services and seek mental health treatment for their children (Stover et al., 2010).

The Child Trauma Response Team

Building on the CD-CP and DVHVI programs, the Child Trauma Response Team (CTRT) is a partnership of the New York City Police Department (NYPD), the New York County District Attorney’s Office (DANY), the Mayor’s Office of Criminal Justice, and Safe Horizon, the nation’s leading crime victims’ organization. The goal of the CTRT is to provide a coordinated, immediate, trauma-informed, and interdisciplinary response to children below the age of 18—and their impacted family members—exposed to IPV.

The CTRT identifies children who have witnessed serious incidents of IPV and provides a swift interdisciplinary response to children and their caregivers to reduce the immediate and longer term effects of witnessing such violence. The CTRT team reviews the domestic incident reports (DIRs) filed in the police precinct, and if the DIR indicates that a child is present in the home, families are contacted and offered a trauma-informed intervention that may include a coordinated home-based outreach by law enforcement and
child trauma specialists, victim-centered case management services, and an evidence-based mental health intervention. The CTRT direct service team includes one case manager (bachelor’s level staff) and one child trauma specialist (master’s level staff). Both staff were trained by Safe Horizon on client centered practices, child trauma, and dynamics of domestic violence. Additionally, Safe Horizon trained the child trauma specialist on the evidence-based mental health intervention, the Child and Family Traumatic Stress Intervention (Berkowitz et al., 2011).

To identify children exposed to IPV, (a) the CTRT case manager reviews the domestic violence incident police reports (DIRs), requests the history of IPV incidents in the household from the domestic violence sergeant, and coordinates outreach attempts with the domestic violence sergeant and law enforcement officers and/or (b) the domestic violence sergeant and law enforcement officers and/or the DANY screen IPV incidents and coordinate with the CTRT team to facilitate outreach to families. The CTRT case manager reviews all IPV incident reports from the precinct daily and conducts outreach calls to each victim, while prioritizing victims with children. Once a potential family is identified as having experienced IPV with children in the home, the CTRT begins coordinating outreach via phone calls and home visits; in addition, the CTRT conducts daily consultations with program partners to discuss cases and coordinate responses and conducts bi-weekly case review meetings to further coordinate and discuss follow-up on cases.

Once the CTRT team outreaches to a family, one of the CTRT team members speaks with the victim (via an outreach call, an in-person precinct interview, or a coordinated home visit with the domestic violence police officer or sergeant). During the initial contact, the case manager (a bachelor’s level staff trained in child trauma and IPV) and/or child trauma specialist (a master’s level clinician experienced in clinical trauma interventions) engages the victim, assesses the current safety risks of the victim and their children, provides brief individual supportive counseling and crisis intervention, offers information on criminal justice and/or social service processes and resources, and explains information about the CTRT program and services. If the victim is willing, the child trauma specialist will explore the child’s reaction to the IPV incident. During this section of the interaction, the child trauma specialist conducts the primary care PTSD screen (the PC-PTSD screen; Cameron & Gusman, 2003) to assess for potential indicators that the child may develop PTSD. The veterans’ administration initially developed the PC-PTSD for use in primary care settings. The PC-PTSD screen consists of four items, each with a yes or no response choice (see items below). The PC-PTSD has been used in research among young samples (Chenneville et al., 2018; Kelly et al.,
2016; Schapiro et al., 2018). For the purpose of the CTRT, as the goal of the PTSD screen is to identify any child who may need to be assessed for PTSD, any child who endorses one or more of the four items on the PC-PTSD is considered to have a positive PTSD screen.

1. Have had nightmares about it or thought about it when you did not want to?
2. Tried hard not to think about it or went out of your way to avoid situations that reminded you of it?
3. Were constantly on guard, watchful, or easily startled?
4. Felt numb or detached from others, activities, or your surroundings?

Rather than conducting a formal PC-PTSD screen, the team prioritized relationship building with the caregiver and asked the four PC-PTSD items in conversation by listening to the caregiver and/or child cues regarding trauma symptoms. For example, a staff may state, “You mentioned your son was scared when he saw his father attack you. How has he been sleeping? Has he experienced any nightmares?” The CTRT staff also utilizes the PC-PTSD to engage the child and/or caregiver in a brief conversation about reactions their child(ren) may be experiencing following the IPV incident, to validate the caregiver’s experiences and provide psychoeducation on the impact of trauma, to explore concrete coping skills the family can use to manage post-trauma reactions, and to identify and address the family’s immediate needs. During the conversation, the clinician centers the relationship with the caregiver and communicates to the caregiver that s/he is the expert in their child(ren)’s reactions and needs. If the victim indicates that their child is experiencing at least one of the screening items, then the child trauma specialist will refer the family to mental health treatment for the prevention and/or treatment of PTSD. For caregivers not willing to discuss their children’s reaction to the IPV exposure upon the first meeting, the team focuses on building trust with the caregiver and addressing the caregiver’s needs and concerns. The child trauma specialist will then resurface the needs and experiences of the child in future sessions. Ultimately, the CTRT members were committed to prioritizing family concerns over program design and therefore there was no minimum engagement required to access program services.

Given the lack of research on coordinated community-based/law enforcement interventions engaging children exposed to IPV to identify and disrupt the negative outcomes associated with trauma exposure, the research questions for this study were as follows: (a) What are the family sociodemographic factors, crime factors, and program services most associated with
family engagement in child PTSD screening following exposure to IPV? (b) What are the family sociodemographic factors and crime factors most associated with children screening positive for PTSD following exposure to IPV?

**Method**

The CTRT staff initially collected the data for this study during the pilot implementation in one police precinct in a large, urban environment. The CTRT program staff entered the program data throughout the length of the pilot program from February 1, 2016 to February 27, 2017. There were 244 families with 352 children identified by the CTRT during that timeframe. The study was approved by the University’s Institutional Review Board.

**Measures**

**Sociodemographic and crime variables.** Sociodemographic variables for the caregiver included age, gender, race, and primary language. The one sociodemographic variable collected for children was gender. Program staff collected the caregiver’s sociodemographic information during the initial contact with the caregiver. Program staff collected data on children’s gender once the caregiver engaged in conversation about the children. Gender for the caregiver and child included male, female, transgender male, and transgender female; however, there were zero caregivers or children who endorsed the transgender male or transgender female categories. Caregiver race consisted of the following categories: White non-Latino, Hispanic or Latino/a, Black or African American, Asian, American Indian/Alaska native, native Hawaiian/other Pacific Islander, Other, or client declined to provide. Race and ethnicity data were only collected for the caregivers. For this data analysis, we utilized the race and ethnicity data of the caregivers for the children as a proxy of race/ethnicity of the child. For the logistic regression models, the race/ethnicity variable was collapsed into Black or African American, Hispanic or Latino/a, and Other. Primary languages included English, Spanish, or Other. Program staff also documented the crime classification that included misdemeanor, felony, or other.

**Program services.** Program staff collected data on 15 services provided to families: initial outreach, safety assessment, safety planning, crisis intervention, assistance with an order of protection, individual counseling, follow-up, case consultation with the NYPD, case consultation with the DANY, case review, CTRT orientation, CTRT information, psychoeducation, trauma education, and child trauma screening.
CTRT initial outreach was the outreach (via telephone or a home visit) conducted to contact the family immediately after the IPV incident. Safety assessments included conversations focused on identifying the range of safety risks and concerns of the caregivers and their children. Safety planning included the development of a safety plan that identified possible options, resources, and supports available to the caregiver and the children to increase their safety. Crisis intervention services were provided if the victim or the children were in a state of crisis in which there were emergent concerns regarding physical and/or emotional safety. Crisis intervention was a time-limited service focused on reducing the effects of the crisis through any combination of support, guidance, education, and/or resources. Assistance with an order of protection included advocacy with or on behalf of the victim in regard to applying for or extending an order of protection through family and/or criminal court. Individual counseling included formal or informal trauma-informed counseling sessions provided to any family member in-person, over the phone, or during a home visit. Follow-up services included anytime a staff contacted the victim (in-person, over the phone, through e-mail, at the precinct, at the victim’s home, or at the organization’s office) to check in on the victim and children’s emotional and/or physical safety or to update the victim on the status of a pending service request.

Case consultation with NYPD occurred when the staff engaged in consultation with a member of the NYPD—typically the DV Sergeant—on the case. Case consultation with the DANY occurred when the staff engaged in consultation with a member of the DANY on the case. Case review was provided when the CTRT team (victim services, police, and attorneys) met during their biweekly case consultation meeting and reviewed and/or problem-solved around a case. These three services only involved members of the CTRT team and did not incorporate the victim and/or child.

CTRT information was a service provided to victims near the start of engagement in which the staff provided information about CTRT services and the victim service/law enforcement partnership to the victim. CTRT orientation was a more in-depth service provided to victims near the start of engagement in which staff provided a detailed explanation of CTRT services. Psychoeducation was provided when staff provided information on post-traumatic stress disorder. Trauma education was provided when staff had a conversation with the caregiver and/or child exploring the impact of trauma on the child (and the caregiver), discussing common trauma responses with children, and practicing techniques that may be helpful in managing trauma reactions. Finally, the child trauma screen was documented anytime the child or caregiver (depending on the age of the child) completed the PC-PTSD screen.
Data Analysis

Descriptive statistics were used to examine the sample’s sociodemographic variables, services received, and results of the child trauma screens.

**Research Question 1:** What are the family sociodemographic factors, crime factors, and program services most associated with family engagement in child PTSD screening following exposure to IPV?

Bivariate analyses were conducted to examine differences in the completion of child trauma screens. Next, classification and regression tree (CRT) analyses were conducted to assess which factors/services were most likely to influence whether children completed a trauma screen. The CRT analyses used recursive partitioning to determine factors influencing group membership and authors presented the findings visually as an inverted tree. Thus, CRT analyses were able to segment mutually exclusive subgroups within the data sample whose members shared characteristics that were important barriers or facilitators of completing child trauma screens (Lemon et al., 2003). The findings provide information on the subpopulations of families that were most likely to engage or not engage in a child trauma screening following exposure to IPV.

Finally, a logistic regression was used to validate the CRT analyses. Predictors in the model included the child’s gender, caregiver’s race and age, crime classification, and all 15 services. The logic regression model examined main effects to test whether given correlates and the dependent measure were associated, whereas controlling for confounding factors to determine the average effect of the independent variables (sociodemographic factors, crime, factors, and services) on the dependent variable (completion of a child trauma screen). While the CRT was used to identify subgroups of the sample, the logic regression model was used to test the average member of the population, without consideration of the differences between individuals in the population (Lemon et al., 2003).

**Research Question 2:** What are the family sociodemographic factors and crime factors most associated with children screening positive for PTSD following exposure to IPV?

Bivariate analyses were conducted to examine differences between children who screened positive for PTSD and children who did not screen positive for PTSD. A second set of CRT analyses were conducted to assess which factors/services were most likely to influence whether a child screened positive for
Again, a logistic regression was used to validate the CRT analyses. Predictors in the second model included the child’s gender, crime classification, and caregiver’s race and age. For the logistic regressions, the race variable was limited to only two categories (Hispanic/Latino/a and Black/African American) due to the small subsamples within the other racial categories.

### Sample Characteristics

During the pilot phase, 244 families with 352 children were identified by the CTRT (see Table 1). Most of the primary caregivers were female ($n = 339$, 96.3%) between 21 and 68 years of age, with an average age of 33.8 ($SD = 7.5$). The majority of the primary caregivers was Hispanic/Latino/a ($n = 222$, 63.1%) or Black/African American ($n = 106$, 30.1%) with the remainder of the sample White, non-Latino/a ($n = 12$, 3.4%), Asian ($n = 5$, 1.4%), or Other ($n = 7$, 2.0%). Most of the primary caregivers spoke English ($n = 234$, 66.5%), an additional third of the caregivers spoke Spanish.

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Frequency (%)</th>
<th>M (SD)</th>
</tr>
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<tbody>
<tr>
<td>Caregiver gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>13 (3.7%)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>339 (96.3%)</td>
<td></td>
</tr>
<tr>
<td>Caregiver age</td>
<td>33.8 (7.5)</td>
<td></td>
</tr>
<tr>
<td>Caregiver race/ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White, non-Latinx</td>
<td>12 (3.4%)</td>
<td></td>
</tr>
<tr>
<td>Hispanic/Latinx</td>
<td>222 (63.1%)</td>
<td></td>
</tr>
<tr>
<td>Black/African American</td>
<td>106 (30.1%)</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>5 (1.4%)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>7 (2.0%)</td>
<td></td>
</tr>
<tr>
<td>Caregiver primary language</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>234 (66.5%)</td>
<td></td>
</tr>
<tr>
<td>Spanish</td>
<td>113 (32.1%)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>5 (1.4%)</td>
<td></td>
</tr>
<tr>
<td>Crime classification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Misdemeanor</td>
<td>229 (65.1%)</td>
<td></td>
</tr>
<tr>
<td>Felony</td>
<td>115 (32.7%)</td>
<td></td>
</tr>
<tr>
<td>Child gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>178 (50.6%)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>171 (48.6%)</td>
<td></td>
</tr>
</tbody>
</table>

Note. In Table 1, all data are based on the 352 children in the sample. If one caregiver has two children, the caregiver data in this table are duplicated.
(n = 113, 32.1%), and five caregivers spoke other languages (n = 5, 1.4%). The crime classification of the incident was either a misdemeanor (n = 229, 65.1%) or felony offense (n = 115, 32.7%). Child gender was 50.6% (n = 178) male and 48.6% (n = 171) female.

**Results**

Most children were screened for PTSD (70.7%). Of the 15 services, the most frequently received services were child trauma screenings, safety assessments, safety plans, and individual counseling (see Table 2). On average, families received a total of six services (SD = 4.8), ranging from 0 services to 14 of the 15 services. Almost a third of the families received no services from the CTRT team (n = 104, 29.5%), despite numerous attempts to engage families.

**Research Question 1:** What are the family sociodemographic factors, crime factors, and program services most associated with family engagement in child PTSD screening following exposure to IPV?

In running the bivariate analyses, child gender, crime classification, and caregiver age were not associated with differences in whether a child completed a trauma screen. The only demographic variable found to have a significant bivariate relationship with child trauma screening was race. A smaller proportion of Black/African American children was screened (60.4%, n = 64) compared with Hispanic/Latino/a children (75.2%, n = 167) and White children (100%, n = 12; Pearson $c^2 = 7.59, p < .01$).

The CRT analyses indicated that one of the most important factors in determining whether a child completes a screen is the receipt of a safety assessment (see Figure 1). If this service occurs, then 81.8% of children are screened (Node 1) compared with 53.6% if the service does not occur (Node 2). For families that did not receive a safety assessment, family racial identity affects whether the child is screened. Hispanic/Latino/a children were screened 63.0% of the time (Node 5) whereas Black/African American children and children identified within the racial category “Other” were screened only 40.4% of the time (Node 6). For Hispanic/Latino/a children who did not receive a safety assessment, caregiver age affected whether the child was screened (Nodes 9 and 10). Parents more than the age of 31.5 years were more likely to agree to have their children screened for PTSD (76.5%) than younger parents (53.2%).

For families that received a safety assessment, the crime type was also an important factor as to whether the child completed the trauma screen. Within this subgroup, families that had experienced a felony were more likely to be
Table 2. Services Received \((N = 352)\).

<table>
<thead>
<tr>
<th>Services</th>
<th>Families That Successfully Received Service (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child screened</td>
<td>249 (70.7)</td>
</tr>
<tr>
<td>Positive child screen</td>
<td>185 (74.3)</td>
</tr>
<tr>
<td>Safety assessment</td>
<td>214 (60.8)</td>
</tr>
<tr>
<td>Safety planning</td>
<td>216 (61.6)</td>
</tr>
<tr>
<td>CTRT information</td>
<td>200 (56.8)</td>
</tr>
<tr>
<td>CTRT orientation</td>
<td>203 (57.7)</td>
</tr>
<tr>
<td>Psychoeducation</td>
<td>191 (54.3)</td>
</tr>
<tr>
<td>Counseling</td>
<td>197 (60.0)</td>
</tr>
<tr>
<td>CTRT outreach</td>
<td>177 (50.3)</td>
</tr>
<tr>
<td>Follow-up</td>
<td>195 (55.4)</td>
</tr>
<tr>
<td>Home visit</td>
<td>87 (24.7)</td>
</tr>
<tr>
<td>Case consultation with NYPD</td>
<td>203 (57.7)</td>
</tr>
<tr>
<td>Case Consultation with DANY</td>
<td>90 (25.6)</td>
</tr>
<tr>
<td>Case review</td>
<td>44 (12.5)</td>
</tr>
<tr>
<td>Assistance with OP</td>
<td>60 (17.0)</td>
</tr>
<tr>
<td>Trauma education</td>
<td>14 (4.0)</td>
</tr>
<tr>
<td>Crisis intervention</td>
<td>5 (1.4)</td>
</tr>
<tr>
<td>Other</td>
<td>7 (2.0)</td>
</tr>
</tbody>
</table>

*Note. CTRT = Child Trauma Response Team; NYPD = New York City Police Department.*

screened (91.4%, Node 4) compared with families that had experienced a misdemeanor (77.1%, Node 3). Of families experiencing a misdemeanor, successful CTRT outreach was the next important predictor of the child trauma screen completion, with 81.6% (Node 8) of children completing trauma screens when successful CTRT outreach occurred, compared with 67.4% (Node 7) of children being screened when CTRT outreach did not occur. Caregiver age also influenced whether a child was screened. As with the other branch of the tree, a larger proportion of parents over the age of 27.5 agreed to have their children screened (87.3%) than younger parents (66.7%).

The logistic regressions lent support to the CRT findings (see Table 3). Mirroring the CRT analysis, the strongest predictor in the logistic regression model of whether a child completes a trauma screen is receipt of a safety assessment \((b = 1.099, SE = .256, p < .001)\). Families that received a safety assessment were 3.0 times more likely to consent to a trauma screening than families that did not receive a safety assessment \((OR = 3.00, 95\% \text{ CI} [1.81, 4.95])\). The only other significant predictor of child trauma screening within the logistic regression was race/ethnicity. Similar to the CRT analysis, children from Hispanic/Latino/a families were almost twice as likely to be
Figure 1. Classification tree analysis results: completion of child trauma screen.

Note. CTRT = Child Trauma Response Team.
screened as children from Black/African American families ($b = 0.634$, $SE = 0.263$, $p < .05$, OR = 1.885, 95% CI [1.125, 3.157]). The model was mildly effective at predicting screening, explaining only 11.2% of the variance ($−2$ log likelihood [2LL] = 364.522, Nagelkerke $R^2 = 0.112$, $\chi^2 = 26.428$, $p < .001$). The model was more effective at predicting which children would be screened (90.9% correct) as opposed to which children would not be screened (28.7% correct).

**Research Question 2:** What are the family sociodemographic factors and crime factors most associated with children screening positive for PTSD following exposure to IPV?

In the second set of bivariate analyses, child gender, crime classification, and caregiver age were not associated with whether the child screen resulted as positive for PTSD. The only demographic variable found to have a significant bivariate relationship with positive child trauma screens was race. Black/African American children were more likely to have a positive PTSD screen (85.9%, $n = 55$) compared with Hispanic/Latino/a children (69.5%, $n = 116$) and White children (75.0%, $n = 9$; $\chi^2 = 6.53$, $p < .05$).

Of the children who completed trauma screens, 74.3% ($n=185$) had a positive PC-PTSD screen. Figure 2 indicates which children are more likely to have a positive PTSD screen. As seen in the bivariate results, Black/African American children and children whose racial identity is within the Other category have higher rates of positive screens (Node 2; 85.7%) compared with White or Hispanic/Latino/a children (Node 1; 69.8%). Among Black/African American/Other children, children who were exposed to a misdemeanor incident had higher rates of positive PTSD screens (Node 5; 91.2%) compared with those who were exposed to a felony (Node 6; 61.5%). For White and Hispanic/Latino/a children, those with older caregivers (over the age of 38.5)
Figure 2. Classification tree analysis results: primary care PTSD positive screen.

Note. PTSD = post-traumatic stress disorder.
had higher rates of positive PTSD screens (Node 4; 84.2%) than those children with younger parents (Node 3; 66.0%). White and Hispanic/Latino/a children with older caregivers who were exposed to a felony were most likely to have a positive PTSD screen (Node 10, 100%) compared with children who witnessed a misdemeanor (Node 9; 75%). The logistic regression examining which children screen positive for PTSD was limited by the small sample size and the lack of sociodemographic predictors ($-2LL = 257.511$, Nagelkerke $R^2 = .044$, $\chi^2 = 7.116$, $p < .01$). The only significant predictor was race/ethnicity ($b = -.988$, $SE = 0.397$, $p < .05$). Black/African American children were 2.7 times more likely to have a positive PTSD screen than Hispanic/Latino/a children (95% CI [1.23, 5.85]).

**Discussion**

This study aimed to contribute to the literature by examining the family sociodemographic variables, crime factors, and program services associated with family engagement in child PTSD screening following IPV exposure and with children screening positive for PTSD. This research has important practice implications because children’s exposure to violence affects their development, physical health, mental health, and adult functioning (Holt et al., 2008; Hungerford et al., 2012; Rigterink et al., 2010; A. L. Roberts et al., 2010). Although there are a range of services available to families experiencing violence, we know that many families experiencing violence never enter the doors of a victim service or mental health organization (A. L. Roberts et al., 2010) or quickly disengage with services (DeLorenzi et al., 2016; Koverola et al., 2007; Risser & Schewe, 2013). Furthermore, for families seeking support after an IPV incident, the domestic violence field has historically served a higher number of adults than child victims (National Network to End Domestic Violence, 2020). To address this practice gap in the field, the CTRT is an innovative model that conducts coordinated outreach to families experiencing severe IPV to enhance family engagement in services and, when needed, in clinical treatment.

Among this sample of families experiencing IPV, 70.5% of families engaged in services from the CTRT, with the average family receiving six services. More than two thirds of the children (70.7%) completed child PTSD screenings and of those children who completed the screens 74.3% screened positive for one or more trauma symptoms suggesting they would benefit from further assessment and trauma-focused services. As one of the main goals of the CTRT was to screen children exposed to IPV for post-traumatic stress responses, this pilot suggests that the CTRT is a promising practice for providing a swift interdisciplinary response to children and their caregivers to reduce the immediate and long-term effects of witnessing such violence.
There were multiple subgroups of families more/less likely to complete a child PTSD screen and more/less likely to screen positive for PTSD. Hispanic/Latino/a and White families, as well as families with older primary caregivers, were more likely to complete a child screen than Black/African American families and families with younger caregivers. As the pilot was implemented in a historically Hispanic/Latino/a neighborhood, the case manager and the child trauma specialist were bilingual and bicultural staff. Therefore, it is not surprising, given the staff expertise and identities, that Hispanic/Latino/a families were more engaged in the intervention. These results also mirrored the findings from the evaluations of the CD-CP program (Murphy et al., 2005) and DVHVI (Stover et al., 2009), which found Hispanic women and children were most likely to engage in the interventions. The findings in this sample are limited, as the small number of White families prevented any analysis comparing White families to Black/African American families and/or Hispanic/Latino/a families. Further research, among larger samples, is needed to better understand these results.

Furthermore, given the history of racism enacted both on individual and structural levels against Black/African American families in the United States, it is not surprising that Black/African American families in this sample were less likely to complete a child screen. Studies among Black or African American caregivers have identified barriers to engagement in mental health services that include fear of losing their children, economic stressors, role strain, and negative experiences with the system including racism and discrimination (Copeland & Snyder, 2011; Gaston et al., 2016). This preliminary finding suggests the continued need for the field to adapt interventions to encompass cultural and racial differences that may decrease treatment success for African American families (Williams et al., 2014). They also highlight the potential importance of hiring staff with similar identities to the families and communities served. In light of these findings, the CTRT made critical practice enhancements including centering families’ experiences with system responses as a core engagement strategy. Staff acknowledge the ways in which the formal systems designed to help families are rooted in oppression and racism to create a safe space for families to discuss system-level concerns. For example, staff may ask families, “What was it like for you to have police officers in your home?” “What have been your past experiences when seeking mental health support?” In addition, the clinician’s relationship to the caregiver is viewed as primary and critical to the wellbeing of the child. The staff continually emphasize that the caregiver is the expert of their child. The staff prioritize family-wellbeing and focus on the healing of both the caregiver and the children. Lastly, CTRT increased supervision, opportunities for self-reflection, and guidance around engaging in organic conversations to assess child trauma symptoms and to explore experiences with systemic oppression.
This study also found that children witnessing felony crimes were more likely to receive a screen than children exposed to misdemeanor crimes. These findings were consistent with the CD-CP program evaluation (Murphy et al., 2005). This result may be related to the caregiver’s perception of the seriousness of the event and/or the CTRT staff’s persistence in completing trauma screenings for children witnessing violent traumas. However, children exposed to misdemeanor crimes were more likely to have a positive PTSD screen than children exposed to felony crimes. While this finding initially appears counterintuitive, the field of domestic violence has long emphasized the impact of nonphysical violence on families (Katz, 2016; Stark, 2009). Research has emphasized how coercive control within domestic violence often isolates, disempowers, and constrains the worlds of children and can hamper children’s resilience and development (Katz, 2016). The data in this study captured exposure to one domestic violence incident but did not collect data on other forms of direct or indirect abuse/violence. In addition, the overlap between exposure to domestic violence and child abuse and neglect, well documented in the literature (Hamby et al., 2010; Osofsky, 2003), was unable to be examined with this dataset.

In addition, among this sample, Black/African American children were more likely to have a positive PTSD screen than White or Hispanic/Latino/a children. As Black/African American children were less likely than Hispanic/Latino/a and White children to complete the PTSD screen, it is possible that a higher proportion of Black/African American children without PTSD symptoms did not complete the screen. However, it is also possible that Black/African American children, due to exposure to structural and racial trauma, had higher rates of post-traumatic symptoms than White or Hispanic/Latino/a children (Khaylis et al., 2007; Pieterse et al., 2012). Again, the findings in this sample are limited, as the small number of White families prevented any analysis comparing White families to Black/African American families and/or Hispanic/Latino/a families. Further research should examine the interactions of racism—among other forms of structural violence—and domestic violence and the ways in which the intersecting oppressions affect families’ engagement in child trauma screenings and post-traumatic symptoms. It is also an important limitation to note that data for this study utilized caregiver race/ethnicity as a proxy data point for child race/ethnicity. Further research should focus on collecting race/ethnicity data from both caregivers and the children to gain a more accurate understanding of the relationship between race/ethnicity of children and PTSD symptoms.

Among the services provided in the CTRT model, there were two services associated with increased rates of child trauma screening: safety assessments and outreach. The findings from both the classification tree and
the logistic regression indicate that safety assessments might be a successful strategy for increasing engagement with the CTRT and increasing the screening of children for trauma. It is possible that focusing on the immediate safety needs of the caregiver and children, through a survivor-focused conversation, may create the trust needed to pave the way for deeper conversations about child well-being. The results suggest that certain subgroups, namely, Black/African American families, families with young caregivers, and families exposed to misdemeanors offenses—would especially benefit from enhanced outreach by the CTRT.

Limitations

It is important to take the study’s limitations into account when interpreting the findings. First, due to the pilot nature of the intervention, the timeframe of the study is relatively short and the data consist only of program data. Small samples limit the potential for subgroup analyses or the ability to see change over time. While our initial study suggests that the program may be effective in engaging families in child PTSD screening, the lack of a comparison or control group limits our ability to draw definitive conclusions. Second, the generalizability of the findings is limited due to the sample size and the inability to conduct split-sample validation of the classification tree analyses. While cross-validation was used to limit the probability that the findings are capitalizing on peculiarities within the sample, it does not eliminate this risk. Furthermore, the generalizability of the findings is limited to this CTRT model within this sample of families. This CTRT model is housed within a large, urban, well-funded, nonprofit organization with a long history of collaboration with police, criminal justice, and other community service providers. The financial and social resources available to the agency to carry out the CTRT program goals might not be available to all jurisdictions. The crime classifications may be affected by the location of the intervention and are therefore likely not generalizable to all cities. Finally, we did not have data available to control for other critical variables, such as exposure to multiple forms of trauma, access, and engagement in non-CTRT services, and additional sociodemographic data for the caregivers and children. Nor did we have the same CTRT staff complete all the PC-PTSD screens, which may have biased the results. Additionally, this analysis does not factor in staff identity (e.g. race, gender) which may have influenced family engagement. We recommend that future research collects additional data points to facilitate an examination of differences in profile of CTRT families as well as their levels of engagement with child PTSD screening. If this program ultimately proves effective, it could provide a model for early intervention programs that could be applied in jurisdictions across the country.
Conclusion

The results of this study suggest that a criminal justice and community-based collaborative intervention designed to address caregiver and children’s safety and well-being after a police-reported IPV incident is a promising model warranting future program development and research. More than 70% of children identified by the CTRT team completed a child PTSD screen, and 74.3% of the children who completed the screens were screened positive for PTSD. The safety assessment service was a predictor of the families’ engagement in child PTSD screens. This suggests the importance of developing program models that comprehensively address the needs of caregivers and children exposed to IPV. The findings also suggested racial/ethnic differences in families that complete child PTSD screens and which screen positive. Practitioners should consider how their engagement approach should take caregiver identity, child identity, and their own identity into consideration—deepening and broadening the conversation with families around structural and individual risks that may shape their ability to engage in services. Researchers, policymakers, and practitioners should continue to invest in evaluating criminal justice and community-based collaborative models designed to engage all families and children in child PTSD screening in the context of IPV. Truly accessible early intervention models, responsive to the unique risks and needs of all families, can play a critical role in identifying and linking children at risk of PTSD, and the cascading impact of PTSD, to early intervention mental health programs.

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