Utilization of evidence-based treatment models at community-based mental health settings for young children exposed to violence

Tamaki H. Urban, Thuy Trang T. Nguyen, Alexandra E. Morford, Tawny Spinelli, Zoran Martinovich, Paul A. Schewe, Heather J. Risser

A R T I C L E   I N F O

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Cognitive Behavioral Therapy (CBT)
Attention, Regulation, and Competency (ARC)
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A B S T R A C T

Background: Little is known about which therapeutic treatment models are being used most commonly at community-based mental health settings to treat young children exposed to violence. Objective: We aimed to (1) explore the use of commonly applied treatment models for young children exposed to violence across community-based clinical sites and (2) examine the associations of the use of these models with child demographics and type(s) of violence to which the child was exposed. The models examined included Cognitive Behavioral Therapy (CBT), Attention, Regulation, and Competency (ARC), Child-Parent Psychotherapy (CPP), and Child-Centered Play Therapy (CCPT). Participants and setting: Participants were 500 children aged 0-6 years, who were exposed to violence and received treatment at 1 of the 12 community-based sites. The mean age was 48.1 months (SD = 13.9 months). Methods: Descriptive analyses were conducted on child demographics, type of violence, and treatment model(s) employed. Binary logistic regressions were conducted to examine the associations of treatment model(s) used with child demographics and type of violence. Results: 76.2% of the sample received CCPT or an integrative approach, rather than evidence-based treatments (e.g., CBT, CPP). Black children were more likely to receive CCPT (OR = 6.490; 95% CI = 1.262, 33.375). Hispanic children were less likely to receive ARC (OR = 0.234; 95% CI = 0.074, 0.738). Associations between type of violence exposure and treatment model utilization were also found. Conclusions: Our results underscore a need to disseminate EBTs, as well as to assure that treatment needs of individual children are met.

1. Introduction

1.1. Childhood violence exposure and its impacts

Children in the United States are exposed to violence at an alarming rate. In a national sample of 4,000 children and youth between 0 and 17 years old, 40.9% had more than one direct exposure to violence, crime, or abuse, while 10.1% had six or more exposures (Finkelhor, Turner, Shattuck, & Hamby, 2015). The U.S. Department of Health and Human Services (USDHHS) reported that children ages 0–6 years were at greatest risk of experiencing child abuse and neglect (USDHHS, 2018).

Exposure to violence, one type of potentially traumatic event, can have a profound impact throughout one's lifespan. Early exposure can encumber cognition, speech, and emotional regulatory abilities in young children (Tarullo, 2012). More specifically, children under 6 years old with experience of violence exposure may experience higher levels of difficulties (e.g., fussiness, crying, sleep disturbance, clinginess, separation anxiety, restrictive play, posttraumatic play, temper tantrums, regression of skills) as compared to their peers (Mongillo, Briggs-Gowan, Ford, & Carter, 2009; Pears & Fisher, 2005; Scheeringa, Zeanah, Myers, & Putnam, 2003). Adolescents exposed to violence as children were more at risk for substance abuse, grade repetition, delinquency, high-risk sexual practices, internalizing disorders, externalizing disorders, and engaging in violence toward others (Fang & Corso, 2007; Felitti & Anda, 2010; Gold, Sullivan, & Lewis, 2011; Ulzen, Psych, & Hamilton, 1998; Wilson, Dolan, Smith, Casanueva, & Ringeisen, 2012). Years later, adults with childhood experiences of...
violence had increased rates of mental illness, multiple chronic diseases, financial stress, poor work performance, lowered educational attainment, lowered quality of life, and premature mortality (Felitti et al., 1998; Risser, Hetzel-Riggin, Thomsen, & McCanne, 2006). Left untreated, the effects of early exposure to violence can negatively influence multiple stages of an individual’s life.

1.2. Treatment models for children exposed to violence

Numerous therapeutic treatment models exist for children and their families that effectively help combat the effects of early exposure to violence. Evidence-based treatments (EBTs) have been shown to effectively reduce symptoms, increase resilience, or reduce incidence of violence in young children exposed to violence (U.S. Departments of Justice and Health and Human Services [USDJJHHS], 2011). These EBTs include Brief Strategic Family Therapy, Alternative for Families-Cognitive Behavioral Therapy (AF-CBT), Child Parent Psychotherapy, Functional Family Therapy, Parent-Child Interaction Therapy (PCIT), Trauma Focused Cognitive Behavioral Therapy (TF-CBT), Combined Parent Child CBT, Eye Movement Desensitization and Reprocessing (EDMR), and Trauma Systems Therapy (TST; USDJJHHS, 2011). Furthermore, the National Childhood Traumatic Stress Network (NCTSN) has identified 48 treatment models as “treatments that work” for exposed children and their families (NCTSN, n.d.). With many options available, understanding factors that are associated with therapists’ treatment model selection may be beneficial for training, service planning, and mitigating the effects of early violence exposure.

1.3. Treatment model selection

When selecting an appropriate therapeutic treatment model, therapists consider an array of factors. Some of these factors include each model’s target populations (e.g., psychiatric disorder, age, sex, race/ethnicity, culture), advantages, limitations, supporting evidence, and level of effectiveness. Most importantly, matching individual children’s mental health needs to treatment models is essential (Eslinger, Sprang, & Otis, 2015). Thus, selecting the most appropriate treatment model can prove arduous for therapists.

Undoubtedly, therapists tend to rely on their own clinical experience above research when making treatment decisions (Stewart, Stirman, & Chambliss, 2012). When therapists rely solely on clinical experience, they may have trouble reasonably predicting the most appropriate treatment models for their clients (Kadden, Cooney, Getter, & Litt, 1989), or they may have difficulty reliably identifying when their clients are not responding to a particular treatment intervention (Hannan et al., 2005). When choosing a specific model, some therapists may feel they are ‘fitting’ their clients into a prescribed treatment, instead of prioritizing individual client variations and contextual needs (Beutler, Someah, Kimpara, & Miller, 2016).

Research indicates that lack of fidelity to a specific model may impact effectiveness (Beutler, Someah, Kimpara, & Miller, 2016). However, relying solely on a specific treatment model can be problematic. For example, when the landscape of treatment changes over time, a treatment model previously used may not align with current research or fit the patient’s present needs. Moreover, some therapists may worry that EBTs may not show evidence outside of the controlled conditions employed in research settings or with complicated client profiles (Stewart, Stirman, & Chambliss, 2012). Therefore, some therapists may opt for an integrative approach and incorporate elements from two or more treatment models without regard for evidence concerning the effectiveness of treatment (Beutler, Someah, Kimpara, & Miller, 2016).

Training can assist therapists with informed decision-making regarding treatment model selection. For instance, one study found that after receiving training for an intensive trauma-focused EBT, therapists were more likely to believe that structured therapy approaches are effective (Allen, Wilson, & Armstrong, 2014). Still, many therapists were deterred by the time and money it takes to learn new treatment models (McCarthy, 2015).

1.4. Key omissions of previous literature

Previous research indicated EBT underutilization (Higa & Chorpita, 2008). For example, using a national sample of 157 therapists, a study found that most therapists had not been trained in and had not employed EBTs on a regular basis (other than TF-CBT) to treat maltreated or violence-exposed children (McCarthy, 2015). To date, however, no existing literature has elucidated which treatment models are being used most commonly in the community with children exposed to violence, nor does it suggest what factors are associated with therapists’ treatment model selection in community-based settings. In particular, it remains unclear whether child demographics (e.g., sex, race/ethnicity), the specific type of violence, or level of supporting evidence influences treatment model selection. Sex and race may impact types of violence or trauma experienced (Hussey, Chang, & Kotch, 2006; Kendler, Thornton, & Prescott, 2001; Mersky & Janzewska, 2018; Scher, Forde, McQuaid, & Stein, 2004; Tolón & Foa, 2008) and subsequent symptomology (Pineles, Arditte Hall, & Rasmussen, 2017; Simmons et al., 2015; Yousef et al., 2017). As such, these factors may influence treatment decisions by proxy and should be examined independently.

1.5. The current study

The main goals of the current study were to explore which treatment models were used in community-based mental health settings for young children exposed to violence and whether those models were used exclusively or as part of an integrative approach to treatment. A secondary aim was to describe whether the use of treatment models was related to specific child demographics (i.e., age, sex, race/ethnicity, or the type of violence to which the child was exposed). Lastly, the study aimed to provide contextual information regarding the level of supporting evidence for the treatment models used in the community. As the current study was descriptive and exploratory in nature, no formal hypotheses were generated. A unique feature of the current study was to investigate the use of different treatment models in regard to child demographics at multiple community-based settings (in both urban and suburban areas).

2. Method

2.1. Procedure

This study reviewed archival data collected from 2001 to 2015 through the Safe from the Start (SFS) program. The SFS program provided community-based mental health services for children who were exposed to violence. Given that we retroactively reviewed data, we were limited to the variables collected in the format used during that time. Unfortunately, we could not reword questions or ask clarifying questions, nor were we able to interview therapists and ask additional questions about their approach, theoretical orientation, delivery of treatment, or decision-making. Methods for the SFS program and data collection were described in detail in previous publications (Schewe et al., 2013, 2015).

Children were referred for SFS services from several sources, including self-referral and referral by police departments, schools, medical settings, mental health agencies, violence victim advocates, and the Illinois Department of Child and Family Services. Children aged 0–6 years were referred if they had witnessed or been victims of child abuse, community violence, or domestic violence. Caregivers and siblings of the referred children, who had experienced violence within the home or community, were also provided the opportunity to engage in SFS services. To address the effects of violence, one or more service...
formats were used such as therapy, crisis intervention, and support services. Session format (individual child, parent–child, or family therapy) was tailored to each families’ needs.

SFS services were provided at no cost to the participating families at 12 community-based clinical sites in Illinois. The sites were located in various regions of the state including northeast, northwest, west central, east central, and southwest in the following counties: Cook, Rock Island, Peoria, McLean, Macon, and Madison. Despite representation from across the state, seven sites were located in Cook County, four of which were inside Chicago city limits. Nine of the sites were in major metropolitan urban areas (> 1 million people), 2 were in minor metropolitan urban areas (< 1 million people), and 1 was in a non-metropolitan area (i.e., suburban area). No SFS sites were located in rural areas.

The current study examined four treatment models using data collected from the community-based sites described above. Data from these sites showed that the following four models were most commonly used to treat young children exposed to violence: 1. Attachment, Regulation, and Competency (ARC); 2. Cognitive Behavioral Therapy (CBT); 3. Child-Parent Psychotherapy (CPP); and 4. Child-Centered Play Therapy (CCPT). The current study also examined the association between the use of these models and child demographics (age, sex, race/ethnicity, type of violence to which the child was exposed). These four treatment models are described below and also summarized in Table 1. Although other treatment models were employed within SFS, including Parent-Child Interaction Therapy (PCIT), Eye Movement Desensitization and Reprocessing (EMDR), and Behavioral Therapy, data from sites revealed that only a small number of young children received those treatments (9.5%). Thus, we excluded those treatment models from examination in the current study.

CBT. Although Cognitive Behavioral Therapies (CBTs) can be an umbrella term used to describe various treatments focused on changing cognitions and behaviors, CBT also exists as a separate treatment. CBT was designed to serve both children and adults who are experiencing psychological problems or disorders (Beck, 2011). CBT is grounded in cognitive-behavioral principles and focuses on teaching skills to manage psychological challenges, mitigate symptoms, and promote remission of disorders. Treatment typically lasts from 6 to 14 sessions. Trauma-Focused CBT (TF-CBT), a commonly used derivative of CBT to treat children exposed to violence, was designed to serve children aged 3–18 years who have experienced trauma, have a verbal memory of the trauma, and who are showing trauma symptoms (Cohen, Mannarino, & Deblinger, 2017).

ARC. ARC was designed to serve children and young adults aged 2–21 years who have experienced complex trauma, particularly attachment-related traumas such as child abuse and neglect (Blaustein & Kinniburgh, 2018; NCTSN, n.d.). ARC focuses on improving attachment between children and their caregivers, children’s affect regulation, and children’s resilience and strengths. Therapists are encouraged to use their clinical experience to determine treatment duration and other clinical decisions.

CPP. CPP was designed to serve children aged 0–6 years and their caregivers who were exposed to domestic violence (Lieberman & Van Horn, 2005). CPP uses joint sessions with the child and caregiver to improve their interactions and promote children’s optimal growth and development, in addition to one-on-one sessions with caregivers to offer them further support (Lieberman, Ippen, & Van Horn, 2015; Reyes, Stone, Dimmler, & Lieberman, 2017).

CCPT. CCPT is a modality of Play Therapy and is likely the most commonly used Play Therapy among therapists (Lin & Bratton, 2015; VanFleet, Sywulak, & Sniscak, 2011). CCPT was designed to serve children aged 3–10 years who are experiencing psychological difficulties (Substance Abuse and Mental Health Services Administration, 2017). CCPT targets a broad range of symptoms, including traumatic stress symptoms, using play and therapeutic relationships to facilitate positive changes.

California Evidence-Based Clearinghouse (CEBC). In order to provide contextual information regarding the level of supporting evidence for each of these treatment models, this study relied heavily on a rating scale developed by the CEBC, whose work aims “to advance the effective implementation of evidence-based practices for children and families involved with the child welfare systems.” Instead of labeling practices as evidence-based, the CEBC developed a Scientific Rating Scale which ranges from 1 (well supported by research) to 5 (concerning practice that may harm children and families). More specifically, ratings indicate the following:

- “1 Well-Supported by Research Evidence” including at least two randomized controlled trials (RCTs), sustained effects for at least one year, measures that are reliable and valid, overall findings supporting benefit of program for outcomes specified, no harm suggested, and a book, manual, or other available writing that specifies components of service and how to administer it;
- “2 Supported by Research Evidence” including at least one RCT, sustained effects for at least six months, measures that are reliable and valid, overall findings supporting benefit of program for outcomes specified, no harm suggested, and a book, manual, or other available writing that specifies components of service and how to administer it;
- “3 Promising Research Evidence” including at least one study utilizing some form of control group, measures that are reliable and valid, overall findings supporting benefit of program, no harm suggested, and a book, manual, or other available writing that specifies components of service and how to administer it;
- “4 Evidence Fails to Demonstrate Effect” including two or more RCTs that found the program did not result in improved outcomes, measures that are reliable and valid, overall findings not supporting the benefit of the program, no harm suggested, and a book, manual, or other available writing that specifies components of service and how to administer it;
- “5 Concerning Practice” including (a) either that multiple studies have been conducted but overall findings support that program has negative effect, case data suggests risk of harm, or legal or empirical basis suggests risk of harm; and (b) has a book, manual, or other available writing that specifies components of service and how to administer it;
- “Not Able to Be Rated (NR)”: Lacking published, peer-reviewed studies utilizing some form of control group, not generally accepted in child- and/or family-serving systems as appropriate for use with children, not meeting criteria for any other level of CEBC scale, and/or lacking data suggesting harm, but including a book, manual, or other available writing that specifies components of service and how to administer it.

Table 1
Summary of treatment models.

<table>
<thead>
<tr>
<th>Treatment models</th>
<th>CBT</th>
<th>ARC</th>
<th>CPP</th>
<th>CCPT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target population</td>
<td>Young children to older adults</td>
<td>2–21 years</td>
<td>0–6 years</td>
<td>3–10 years</td>
</tr>
<tr>
<td>Treatment length</td>
<td>6–14 sessions</td>
<td>12–52 or more sessions</td>
<td>20–30 weeks or more</td>
<td>16–20 sessions</td>
</tr>
<tr>
<td>Format</td>
<td>Individual, family, couple, group</td>
<td>Individual (often with caregiver)</td>
<td>Co-joint sessions of child and caregiver</td>
<td>Individual</td>
</tr>
<tr>
<td>CEBC rating</td>
<td>Not evaluated, level 1 for TF-CBT</td>
<td>Not evaluated</td>
<td>Level 2</td>
<td>Level 3</td>
</tr>
</tbody>
</table>
administer it.

The Scientific Rating Scale was developed according to guidelines from the Office for Victims of Crime (Saunders, 2003) and is used to help child welfare agencies select evidence-based practices and treatments (Martin, Walsh, & Reutz, 2015). Furthermore, CEBC developed a registry of over 350 programs and therapies that includes program descriptions and Scientific Ratings. In 2018, the registry was accessed by more than 23,000 people in the United States and across 190 counties each month (Nwabuzor Ogbonnaya, Martin, & Walsh, 2018).

Since the current study focuses on young children exposed to violence, reporting on the CEBC Scientific Rating Scale scores for each examined treatment model seemed valuable as one objective measure, especially as definitions of “evidence-based” vary widely (Bellamy et al., 2013).

2.2. Study sample

The current study examined data from 4,909 children who participated in the Safe from the Start (SFS) program. We included children who met all of the following criteria: (1) received any of the four treatment models at SFS sites; (2) had complete data for treatment model(s) used for the child and for demographic variables (i.e., age, sex, race/ethnicity); (3) were between 0 and 6 years old; and (4) were victims of at least one form of violence (e.g., child abuse, domestic violence, community violence). Fig. 1 illustrates the process of finalizing the sample based on inclusion/exclusion criteria.

Table 2 shows the demographics of the final sample of 500 children. The mean age was 48.1 months (SD = 13.9). Males represented 55.8% of the sample. The sample was 42.6% White/Caucasian, 23.6% Black/African American, 19.8% Hispanic/Latinx, 12.4% multiracial, and 1.6% other. As the current study was exploratory in nature, we chose to examine violence types by distinct combinations of violence type experienced. Exposure to different types of violence (e.g., interpersonal, familial, and community) or having multiple exposures (versus one exposure) can result in differential symptomology (Kisiel et al., 2014), which may impact treatment model selection. Children in the sample were exposed to domestic violence only (40.6%), child abuse only (6.2%), community violence only (2.4%), domestic violence and child abuse (12.4%), domestic violence and community violence (22.2%), child abuse and community violence (3.8%), all of the mentioned (10.4%), and other (2%).

Appendix A shows the demographics of the sample by the 12 clinical sites. Seven of the 12 clinical sites served a majority of male children. Six of the 12 clinical sites served a majority of White children, while three served a majority of Black children and three served a majority of Hispanic/Latinx children. The most reported violence type for 9 of the 12 clinical sites was domestic violence only. Table 3 shows the distribution of violence type by race/ethnicity. Across all violence types (i.e., domestic violence, child abuse, community violence), 14.1% of Hispanic/Latinx children experienced all violence types, followed by 9.4% of White, 7.6% of Black, 7.0% of multiracial, and 2% of others.

2.3. Measures

Demographics. The Background Information Form was created for the evaluation of SFS (Schewe et al., 2015). At SFS sites, therapists used this form during intake interviews with caregivers to collect information about children’s background. After intake interviews, therapists entered the information into a digital form. This form includes a series of multiple-choice questions about the child’s demographic information, developmental history, reason for referral, and the type of violence the child experienced. The types of violence were coded as domestic violence only, child abuse only, community violence only, domestic violence and child abuse, domestic violence and community violence, child abuse and community violence, all of the mentioned, and other. The “other” category included media violence and violence in utero.

Treatment Information. The Child Completion of Services Form was created for the evaluation of SFS (Schewe et al., 2015). At SFS sites, therapists used this form following the final session of therapy to collect information about services provided by the therapist. The form included a series of questions, including treatment models used for the child and the number of sessions the child attended. Of note, a small number of therapists (6.6%) reported that they specifically used TF-CBT, whereas most therapists did not. Therefore, our analyses included TF-CBT in the category of CBT. Treatment models and formats were chosen at the therapists’ discretion.

2.4. Data analysis

Descriptive statistics and frequencies were examined to assess normality and describe child demographics (i.e., age, sex, race/ethnicity), type of violence exposure, and treatment model(s) used for the child.

Support demonstrating the effectiveness of the four treatment models examined in this study. For instance, a review study supported a substantial evidence base for different CBT treatment modalities (e.g., TF-CBT, Child-Only CBT, and Parent-Only CBT) for children exposed to traumatic events and considered these models “well-established psychosocial treatments” (Silverman et al., 2008). TF-CBT and CPP are considered the most well-supported EBPs for trauma- or violence-exposed young children (Vanderzee, Sigel, Pemberton, & John, 2019).

Furthermore, the NCTSN has endorsed ARC, CPP, and TF-CBT for treating childhood trauma (NCTSN, n.d.). The CEBE was not able to rate ARC partly because ARC is a newly designed model and a randomized controlled trial is currently being conducted (Attachment, Regulation and Competency, 2016). Yet some studies demonstrated its positive effects for child welfare populations (Hodgdon et al., 2013, 2016) and for children who have experienced complex trauma (Arvidson et al., 2011).

Meta-analyses reported positive, meaningful effects for children being treated with CCPT (Bratton, Ray, Rhine, & Jones, 2005; Lin & Bratton, 2015; Ray, Armstrong, Balkin, & Jayne, 2015) and one controlled trial demonstrated that CCPT is effective at reducing young children’s anxiety symptoms (Stulmaker & Ray, 2015). On the other hand, evidence from a systematic review appeared inconclusive regarding the effectiveness of CCPT for treating children exposed to violence (Humble et al., 2019). The CEBE rating of 3 in CCPT suggests that it is a promising practice, but CCPT has not yet reached the criteria for a rating of 1 or 2 based on the available evidence.

There are also several critiques regarding the use of EBPs in psychology (Berg & Slaattelid, 2017). The authors would like to acknowledge that the availability of studies on treatment models’ effectiveness may be impacted by unexamined political, socio-economic, cultural, and other conditions. These issues may facilitate the proliferation of certain treatment models while restricting others in terms of funding and dissemination. In other words, these issues may be unrelated to or remain independent of the models’ actual effectiveness.

Systematically reviewing treatment model effectiveness was not a main goal of this study, and therefore, evidence cited in this study is not exhaustive. Rather, we aimed to contextualize the examined models in an effort to better understand which EBPs are used in community-based settings and how levels of evidence for effectiveness might influence therapists’ use of certain treatment models.

### 3. Results

#### 3.1. Evidence for treatment models examined

The CEBE Scientific Rating for each of the four treatment models examined in this study are described below and also summarized in Table 1. At the time of this study, CBTs had a range of CEBE ratings. For instance, Combined Parent-Child CBT was rated a “3” while TF-CBT was rated a “1” with a high level of child welfare relevance for child and adolescent trauma treatment. ARC was rated “NR,” with a high level of child welfare relevance for child and adolescent trauma treatment. CPP was rated “2” with a high level of child welfare relevance for child and adolescent trauma treatment and services for domestic violence survivors and their children. CCPT was rated “3” with slightly less relevance for child welfare for treatment of child and adolescent anxiety, disruptive behaviors, and services for domestic violence survivors and their children.

In addition to CEBE ratings, other organizations and research lend support demonstrating the effectiveness of the four treatment models examined in this study. For instance, a review study supported a substantial evidence base for different CBT treatment modalities (e.g., TF-CBT, Child-Only CBT, and Parent-Only CBT) for children exposed to traumatic events and considered these models “well-established psychosocial treatments” (Silverman et al., 2008). TF-CBT and CPP are considered the most well-supported EBPs for trauma- or violence-exposed young children (Vanderzee, Sigel, Pemberton, & John, 2019).

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#### 3.2. Utilization of treatment model by clinical site

Appendix B and Fig. 2 represent the results of descriptive analyses that examined the utilization of each treatment model across clinical sites. Appendix B includes both Version 1 (i.e., the number of children who received a specific treatment model “exclusively or only” at each clinical site) and Version 2 (i.e., the number of children who received that treatment model in addition to others at each clinical site “non-exclusively or any”). Fig. 2 focuses on the results of Version 1.

Regarding Version 1 results, across clinical sites, almost half of the...
Appendix C represents the results of two binary logistic regression models that explored the relationships between the four treatment models (i.e., ARC, CBT, CPP, CCPT) and age, sex, race/ethnicity, and violence type exposure, respectively. Regressions focused on Version 2 models (i.e., ARC, CBT, CPP, CCPT) and age, sex, race/ethnicity, and models that explored the relationships between the four treatment models. With respect to Version 2 results, six sites mainly used CCPT, four sites mainly used ARC, one site mainly used CPP, and one site mainly used CBT.

### 3.3. Association of treatment model with age, sex, race/ethnicity, and violence type

#### Appendix C

No statistically significant relationships were found between the use of any of the treatment models and child age. Of note, age was the only continuous variable in the study, which may contribute to lower odds ratios.

**Sex.** No statistically significant relationships were found between the use of any of the treatment models and child sex.

**Race/Ethnicity.** Compared to their non-White peers, children identified as White were associated with significantly higher utilization of ARC (OR = 3.773; 95% CI = 1.648, 8.637) and with lower utilization of CBT (OR = 0.219; 95% CI = 0.085, 0.565). Compared to their non-Black peers, children identified as Black were associated with significantly higher utilization of CCPT (OR = 6.490; 95% CI = 1.262, 33.375). Compared to their non-Hispanic/Latinx peers, children identified as Hispanic/Latinx were associated with significantly lower utilization of ARC (OR = 0.234; 95% CI = 0.074, 0.738), as well as higher utilization of CCPT (OR = 7.054; 95% CI = 2.753, 18.073). There were no statistically significant associations between either multiracial or other racial/ethnic categories and any treatment model. Small sample sizes for these categories may have contributed to lower odds ratios.

**Violence Type.** Children exposed to ‘child abuse only’ were associated with significantly higher utilization of CCPT than their peers (OR = 15.411; 95% CI = 1.674, 141.863).

### 4. Discussion

Our study explored which treatment models are employed to treat young children exposed to violence at multiple community-based mental health settings in urban and suburban areas. In particular, we examined the use of four treatment models (ARC, CBT, CPP, CCPT) across 12 clinical sites in Illinois. We also examined the associations of treatment model utilization with age, sex, race/ethnicity, and type of violence to which the child was exposed.

#### 4.1. Treatment model utilization across clinical sites

We found that CCPT and an integrative approach were more widely used in community-based settings than CBT, CPP, or ARC. We speculate some possible reasons for these findings. First, our sample consists of young children whose language and cognitive abilities are more restricted than older children (Tandon, Cardeli, & Luby, 2009). CBT often requires a higher level of language and cognitive capabilities to comprehend the cognitive-behavioral model and learn coping skills (Beck, 2011), whereas CCPT does not. Thus, therapists may have found CCPT more appropriate for use in young children than CBT. Other factors may also help explain why some therapists employed CCPT instead of CBT or CPP. For instance, there are often barriers such as time and financial resources for practicing therapists to receive additional training in EBTs, including CBT and CPP (McCarthy, 2015). By contrast, training in CCPT may have fewer barriers because it tends to be less structured (Bratton, Ray, Rhine, & Jones, 2005). CCPT has also been widely used in different theoretical schools and professions (e.g., social workers, licensed clinical professional counselors, marriage and family therapists), meaning more types of providers may have been trained in CCPT. Also, CCPT has been used in training programs since the 1940s, suggesting a much longer time period of training and cultural infusion than many of the newer EBTs.

Furthermore, a frequent use of an integrative approach may reflect a change of culture within the field; more and more therapists are beginning to identify themselves as using integrative or eclectic approaches to treatment (Feixas & Botella, 2004). In a sample of over 1000 therapists, only 15% indicated that they used only one theoretical model in their practice, while the median was using four different orientations (Tasca et al., 2015). Not only do integrative treatments...
appear to be effective for several mental health issues but they are perceived by therapists as flexible to patients’ needs and sensitive to treatment alliance (Zarbo, Tasca, Cattafi, & Compare, 2016). Since we did not interview therapists, we cannot be certain whether therapists were using an integrative approach or if they switched models during treatment, maybe abandoning an initial approach that was proving to be less effective for a particular client.

Differences in education may also impact whether therapists are trained in, and ultimately select, EBTs or other models for treatment. For instance, therapists with an educational background in psychology may have been afforded with more opportunities for training in multiple specific treatment modalities than therapists with a background in social work whose training prepares them for broader roles. However, social workers are the nation’s largest group of mental health service providers (National Association of Social Workers, 2019) and often work in community-based mental health settings. Additionally, therapists at the master’s level may have less exposure to research about EBTs than therapists at the doctoral level. This can lead to difficulty with appraisal of research when interpreting research methods or statistics. The limited exposure can also lead to a sense of disconnect between practice context and available evidence, which further increases negative attitudes toward EBTs (Wike et al., 2014). Perhaps for those with limited exposure to research, additional training could be offered and made more available in terms of costs and time. These opportunities could help therapists better versed regarding various treatments, new modalities, and the benefits of using various EBTs for specific populations.

4.2. Treatment model utilization in terms of clinical sites

Previous research suggests that clinical settings are associated with the use of different treatment models and therapists’ attitudes toward the use of treatment protocols (e.g., CBT) (Addis & Krasnow, 2000; Higa & Chorpita, 2008). Consistent with these findings, our results demonstrated variation in the use of treatment models across the 12 clinical sites. Five sites mainly employed an integrative approach. Additionally, there were more sites that used CBT or ARC with other models than sites that used only CBT or ARC. Given this, components of CBT and ARC were likely to be used in combination with other treatment models. Perhaps this variability is related to various factors, including the characteristics of the populations they serve (e.g., demographics, presenting issues, socio-economic status), therapists’ training experience, the site’s theoretical orientation, and/or institutional restrictions (e.g., the number of sessions therapists can provide at the site).

4.3. Association between treatment model use and child demographics

The results showed that age and sex of the child were not associated with the chosen treatment model, whereas race and ethnicity were. In particular, Black children were 6 times as likely to receive CCPT as children of other racial/ethnic categories. The effectiveness of CCPT for Black children has been shown in previous research (Patterson, Stutey, & Dorsey, 2018). Additionally, CCPT focuses less on the use of language and value systems than does CBT, and play has long been considered the cross-cultural “language of children” (Lanbreth, 2002). Although both CCPT and CPP incorporate an element of “play,” CCPT training may be more available than CPP training as noted above. These may be reasons why therapists employed CCPT to treat Black children.

Moreover, White children were less likely to receive CBT and more likely to receive ARC as compared to children in other racial/ethnic categories. Among 213 White children in this sample, less than 5% received CBT while almost 20% received ARC. Conversely, Hispanic/Latinx children were less likely to receive ARC, whereas they were 7 times as likely to receive CBT as compared to children in other racial/ethnic categories. In our sample, the rates of children who experienced child abuse as well as complex violence exposure (i.e., experiencing all violence types such as child abuse, domestic violence, community violence) were highest in Hispanic/Latinx children. Complex violence exposure can compromise child-caregiver attachment (Cook et al., 2005), which is one of the conditions that ARC addresses (Blaustein & Kinniburgh, 2018). Children who experience complex violence like the Hispanic/Latinx children in our sample may benefit from ARC. It is unclear why Hispanic/Latinx children received ARC at lower rates. It is possible that ARC training in Spanish may have been limited. Therefore, some therapists who treated Spanish-speaking Hispanic/Latinx children may have not had received ARC training. Another possibility is that because researchers were still gathering the evidence of ARC’s effectiveness at the beginning of this project, there may have been questions about the cultural appropriateness of ARC in Hispanic/Latinx populations.

The findings showed that violence type was associated with treatment model utilization. Children exposed to “child abuse only” were 3 times more likely to receive CBT as compared to children exposed to different types of violence. Additionally, children exposed to “child abuse and domestic violence” were 3 times more likely to receive ARC. Children exposed to “child abuse and community violence” were 15 times more likely to receive CCPT.

Although there has been growing evidence of TF-CBT and CBT for children with complex traumatic experiences, TF-CBT was originally designed for sexual abuse, and CBT tends to focus on addressing particular violence exposure experience. By contrast, ARC and CCPT are intended to address broader psychological difficulties and treat children with complex traumatic experiences (Cohen, Mannarino, & Deblinger, 2017; Lambolt, Clotire, & Schnyder, 2017; Silverman et al., 2008; SAMHSA, 2017). Our findings reflect the differences in how these treatment models were originally designed. To summarize, CBT may have been used to treat children who experienced a particular violence exposure (child abuse), whereas ARC and CCPT may have been used to treat children who experienced multiple types of violence exposure.

Moreover, each site may also have unique features (e.g., qualifications of therapists, clinical training curricula, work culture, different target populations and their needs). All of these factors add to the complexity in understanding treatment model selection and utilization.

4.4. Limitations

Although the study’s sample size was deemed to be sufficient (N = 500), there were organizational differences among sites that may have impacted our findings. For example, some sites were large and employed many therapists (n = 11), while others were smaller and may have had only had one therapist at any given time who practiced a specific model. Thus, the former sites may have had more flexibility in actively choosing a model than the latter. Although we controlled for site features in the analyses, it may be difficult to generalize the results across agencies without acknowledging the extent to which site-level factors affected treatment decisions.

Second, our findings may not represent or generalize to treatment for older children or adolescents since our sample only includes children up to 6 years old. Third, although we can report statistically significant trends of which treatment models are being used in community-based clinical sites, we cannot determine therapists’ rationale for using a specific treatment model.

Fourth, we excluded many children (n = 4,409) from the analyses due to incomplete demographic and treatment information. It may be that children with and without complete data were different in terms of severity of symptoms, psychosocial environments, or length of time in treatment. It is also possible that children without complete data received different or more or less complicated treatment regimens than children with complete data. Thus, the study results may not generalize to all violence-exposed children in the SFS program. Fifth, the study results may not reflect the most recent trends of the use of treatment models since the data were collected between 2001 and 2015, given
recent and continued efforts to advance the use of EBTs (Higa & Chorpita, 2008; Wonderlich & Simichon, 2011).

Sixth, our data did not include information regarding how different treatment models were used for individual children. That is, the “integrative” category in our study did not distinguish between when a therapist incorporated some elements from one model with another and when a therapist used one model in its entirety prior to another one being initiated. In some instances, behavior problems may have gotten in the way of treating traumatic stress reactions and addressing behavioral issues before addressing trauma may be effective. The “CBT” category in our study also did not distinguish between CBT and TF-CBT.

Seventh, our data did not include information about the languages spoken among therapists and children in the sample. The languages spoken among therapists may be associated with the availability of training of specific treatment models.

4.5. Implications

Regardless of efforts to increase EBT training and dissemination, EBTs are still underutilized in community-based mental health settings (Higa & Chorpita, 2008; McCarthy, 2015; Wonderlich & Simichon, 2011). Our findings support previous literature that indicated EBT underutilization as well as a trend using integrative approaches. A majority of young children exposed to violence received CGPT or an integrative approach across clinical sites, and there were large variations across community-based mental health settings in terms of treatment model utilization. These findings underscore a necessity to improve utilization of EBTs at community-based settings.

Formal training at the graduate level and ad-hoc training after graduate training on a systemic level may promote the use of EBTs in community-based treatment settings. Clinical training to build skills and knowledge in different treatment models may also help therapists make informed decisions about which treatment model to use.

Aligned with increased awareness of EBTs, researchers and therapists have highlighted the importance of matching a child’s individual needs to treatment protocol (Edling et al., 2015). Treatment decisions should consider research evidence for a treatment model, as well as how the model fits to individual needs. We found that child race/ethnicity and violence exposure experience were associated with the use of a particular model. While we provided some speculations regarding why a particular model was used for a particular population, it is still unknown whether the most informative and appropriate treatment selections were made for individual children. These findings highlight a need to evaluate the extent to which treatment models meet children’s needs, as well as a need for additional research to help determine what factors contribute to the most effective treatments for whom.

Since we cannot speculate as to why therapists in our study used a particular treatment model, future research is needed to better understand the factors that contribute to model utilization, and how to overcome barriers to wider utilization of EBTs. Researchers should investigate treatment models’ effectiveness in real-world practice settings while considering child, family, and provider characteristics (e.g., age, sex, race/ethnicity, type of violence exposure, therapists’ training, agency resources). Additionally, since nearly one-third of the children in our sample were being treated with more than one model, it may be beneficial to assess how an integrative approach compares to other models in reducing symptoms in young children, or to deconstruct the effective elements or components of each treatment model. Furthermore, researchers should examine which components of certain therapies (e.g., ARC, CBT) are most widely used in practice with other treatment models. Next, the field would benefit from continued research on training opportunities for therapists including what training opportunities exist, which trainings are offered in languages other than English, how training impacts treatment model selection and therapists’ views of various treatment models, and how cost of training/availability of financial resources at clinical sites affects accessibility. Lastly, more research funding should be allocated to examining effectiveness of promising practices as many practices do not yet have enough evidence to qualify as an EBT at the highest CEBC Scientific Rating.

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary material

Supplementary data to this article can be found online at https://doi.org/10.1016/j.childyouth.2020.105233.

References
