

The Safe Babies Court Team Evaluation

Changing the Trajectories of Children in Foster Care

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Table of Contents

	Page
Why This Study?	1
The SBCT Approach	2
Each SBCT site includes local staff who lead implementation through collaborative teamwork.	2
With national support from ZTT, local staff work together to implement the core components of the SBCT approach.	3
Implementing the SBCT approach is intended to reduce the time spent in foster care and improve child safety and well-being.	5
Prior research suggests that the SBCT approach is a promising practice in the child welfare system.	6
The Current Study: A Mixed-Methods Experimental Evaluation of the SBCT Approach	8
What the Study Found	10
SBCT cases exited foster care faster than control cases.	10
Recurrence of abuse and neglect was lowest for the full SBCT group.	11
According to caregiver self-report data, families in the SBCT group were doing well after case closure.	12
Implementation Findings.....	14
Each SBCT site received national support from ZTT and had active local staff and teams.	14
All but one of the SBCT core components were present at each site.	15
According to judicial interviews, SBCT and control judges all used best practices, but SBCT courtrooms differed in two meaningful ways from business as usual.	17
Limitations.....	19
Conclusions.....	20
References	22
Appendix A. Details About the Safe Babies Court Team Study Sites.....	A-1
Appendix B. Methods, Measurement, and Sampling	B-1
Appendix C. Analytic Approach.....	C-1
Appendix D. Detailed Information on the Findings	D-1

Tables

	Page
Table 1. SBCT Implementation at Each Site	15
Table 2. Judicial Practices in Full SBCT, SBCT Judge-Only, and Control Cases	18
Table A1. County-Level Characteristics of Each Safe Babies Court Team Evaluation Site	A-2
Table B1. Data Elements.....	B-4
Table B2. Baseline Characteristics of Children and Removal Reasons for All Contrasts in the Analysis of Time to Permanency	B-12
Table B3. Baseline Characteristics of Children and Removal Reasons for All Contrasts in the Analysis of Recurrence of Abuse or Neglect.....	B-13
Table D1. Descriptive Analysis of Time to Permanency	D-1
Table D2. Cox Proportional Hazards Model Coefficients (Hazard Ratios, Standard Errors, <i>P</i> -Values, and 95% Confidence Intervals) of the Combined Treatment Versus Control and Covariates	D-2
Table D3. Descriptive Analysis of the Outcome Variables for the Full SBCT Versus the Control Group.....	D-3
Table D4. Cox Proportional Hazards Model Coefficients (Hazard Ratios, Standard Errors, <i>P</i> -Values, and 95% Confidence Intervals) of the Experimental Condition (Full SBCT Versus Control) and Covariates.....	D-4
Table D5. Descriptive Analysis of the Outcome Variables.....	D-5
Table D6. Cox Proportional Hazards Model Coefficients (Hazard Ratios, Standard Errors, <i>P</i> -Values, and 95% Confidence Intervals) of the Experimental Condition (SBCT Judge-Only Versus Control) and Covariates	D-6
Table D7. Descriptive Analysis of the Outcome Variables.....	D-7
Table D8. Cox Proportional Hazards Model Coefficients (Hazard Ratios, Standard Errors, <i>P</i> -Values, and 95% Confidence Intervals) of the Experimental Condition (Full SBCT Versus Control) and Covariates	D-8
Table D9. Descriptive Analysis of Recurrence	D-9
Table D10. Logistic Regression Coefficients of Experimental Condition and Covariates Predicting Recurrence of Abuse or Neglect	D-10
Table D11. Logistic Regression Coefficients for Models Comparing the Full SBCT Cases to Control Cases on Recurrence of Abuse or Neglect.....	D-11
Table D12. Logistic Regression Coefficients Comparing the SBCT Judge-Only Cases to Control Cases on Recurrence of Abuse or Neglect.....	D-12
Table D13. Logistic Regression Coefficients of Models Comparing the Full SBCT Cases to SBCT Judge-Only Cases on Recurrence of Abuse or Neglect.....	D-13
Table D14. Sensitivity Analyses: Including Cases With Ambiguous Judge Assignments.....	D-16

Table D15. SBCT Child Health Percentages Compared With Children Nationwide	D-17
Table D16. Mean DECA Attachment T-Scores and Standard Deviations Across Samples	D-18
Table D17. Mean Healthy Families Parenting Inventory Scores Across Samples	D-19

Figures

	Page
Figure 1. The Core Components Implemented at Each Safe Babies Court Team Site.....	4
Figure 2. SBCT Theory of Change	7
Figure 3. Random Assignment and Treatment Contrasts in the SBCT Evaluation	8
Figure 4. Median Time to Permanency in Days for all Three Groups: Full SBCT, SBCT Judge-Only, and Control.....	11
Figure 5. Recurrence Rates of Abuse or Neglect Were Lowest for the Full SBCT Group Compared With the SBCT Judge-Only and Control Groups.....	12
Figure B1. Consort Table for Analytic Sample in the Safe Babies Court Team Natural Experiment	B-8
Figure D1. Survival Function of Time to Permanent Placement for SBCT Versus Control Cases	D-3
Figure D2. Survival Function of Time to Permanent Placement for Full SBCT Versus Control Cases	D-5
Figure D3. Survival Function of Time to Permanent Placement for SBCT Judge-Only Cases Versus Control Cases	D-7
Figure D4. Survival Function of Time to Permanent Placement for Full SBCT Versus SBCT Judge-Only Cases.....	D-9

Why This Study?

Each year more than 260,000 children in the United States are removed from their homes and enter foster care, and more than 680,000 children are in foster care in the United States (U.S. Department of Health and Human Services, 2019a). This includes about 437,000 children who were already in care prior to 2018, and an additional 263,000 children who entered foster care for the first time in 2018. This number has increased each year since 2012, and about 6% of children in the United States will be placed in foster care at least once before they turn 18 (Turney & Wildeman, 2016). Of those children in foster care, nearly a third were infants and toddlers, 3 years and under (U.S. Department of Health and Human Services, 2019b).

Children and youth who enter foster care are at high risk for poor developmental outcomes (Shonkoff, Garner, & Seigel, 2012; Turney & Wildeman, 2016; U.S. Department of Health and Human Services, 2019a). Compared with their nonmaltreated peers, they have poor health, higher rates of depression and anxiety, more attention deficit hyperactivity disorder (ADHD) and conduct disorders, more problems in school, and eventually increased rates of incarceration and suicide (Chisolm, 1998; Jonson-Reid & Barth, 2000; Pilowsky & Wu, 2006; Thompson et al., 2005; Turney & Wildeman, 2016; Zill & Bramlett, 2014; Zlotnick et al., 2012). Children's poor outcomes are due in part to early life experiences but also may be exacerbated by the trauma caused from removal itself (Shonkoff, Garner, & Seigel, 2012; Turney & Wildeman, 2016).

Maltreated infants and toddlers in foster care are particularly vulnerable to poor developmental outcomes because the first 3 years of life are a time of rapid brain growth and a sensitive period when children bond with caregivers (Ainsworth, & Bell, 1970; Bowlby, 1969; National Research Council & Institute of Medicine Committee on Integrating the Science of Early Childhood Development, 2000). When young children are in foster care, their connection with their family is disrupted and they may experience multiple, short-term relationships with caregivers. This lack of consistency can have long-term consequences for their ability to form secure attachments with caregivers in childhood and healthy relationships throughout their lives.

Because young children need stability, ideally foster care would be short term and would end in placement in a safe and permanent home. Unfortunately, some children languish in foster care, waiting years to reunite with their families or be adopted. In 2018, the average time spent in foster care was 19 months (U.S. Department of Health and Human Services, 2019b), and more than 63,000 children had spent 3 or more years in care (U.S. Department of Health and Human Services, 2019b). During this time, children often do not receive the supports they need to successfully navigate the challenges they experience. Similarly, families often do not receive the supports they require to address the initial reasons for removal, such as substance abuse and drug addiction treatment, domestic violence interventions, family care during parental incarceration, or the parents' own childhood trauma. The system also is punitive, and parents are often punished and blamed for the abuse and neglect rather than supported in their efforts to reunify with their children.

Protecting the safety of children formerly in foster care also is a challenge. Once a child enters foster care, they have, on average, a one in 10 chance of reentering care; national averages for recurrence are

as high as 13% (Administration for Children and Families, 2017a, 2017b), Based on the National Data Archive on Child Abuse and Neglect (NCANDS), 17% of children and youth in foster care experience a recurrence of abuse or neglect in the 5 years after case closure, and 8% were revictimized in the year after case closure (U.S. Department of Health & Human Services, 2005). Other studies reported that rates may be as high as 42% over a 5-year period but are lower for families still being monitored by child protective services (as low as 15–26%) (DePanfilis & Zuravin, 1999). Recurrence of abuse and neglect has pervasive, well-documented negative effects on children, especially those who experience multiple recurrences (Jonson-Reid, Kohl, & Drake, 2012; Manly, Chicchetti, & Barnett, 1994; Thornberry, Ireland, & Smith, 2002; Ethier, Lemelin, & Iacharite, 2004). However, rates of recurrence of abuse and neglect are malleable, and can be changed by providing much-needed services to families (DePanfilis & Zuravin, 2002; Jaffee & Maikovich-Fong, 2010).

The SBCT Approach

To address these complex issues, ZERO TO THREE (ZTT) created the Safe Babies Court Team™ (SBCT) approach, which aims to (a) reduce the time required for a child in foster care to reach a permanent, safe home, and (b) support the long-term well-being of children and families. The approach is implemented at the local level and includes national supports from ZTT, such as training and ongoing technical assistance for each SBCT site. Local SBCT staff include the **SBCT judge**, the **SBCT community coordinator**, and two local teams referred to as the “**family team**” and the “**stakeholder team.**” With national support from ZTT, the local staff then implement the core components of the SBCT approach.

Each SBCT site includes local staff who lead implementation through collaborative teamwork.

The judge and the community coordinator hold critical positions in the SBCT approach.



The **judge** champions the implementation of the SBCT approach within their community. Judges have the unique capacity to enact change within child welfare through leadership. To support judicial leadership, ZTT provides judges with trainings about the science of child development and the impacts of trauma, both of which underscore the important judicial practice of creating a less adversarial courtroom and engaging families in a trauma-informed and caring manner. SBCT judges also are active participants in system-level change by combining their advocacy efforts with those of the community and supporting community training and professional development.



Each SBCT site employs its own community coordinator. The **community coordinator** provides expert support at all levels and to all aspects of the SBCT approach. Ideally, the community coordinator is employed full time by ZTT or a local agency. Their responsibilities typically include facilitating all family and stakeholder team meetings, recruiting new members for the stakeholder team, developing trainings, seeking out community resources to support maltreated infants/toddlers and their families, and acting as a support for the judge, family members, and professionals who make up the SBCT teams.

Each SBCT site maintains a stakeholder team that brings together community leaders and professionals who are committed to enacting change within their local child welfare system. Each individual SBCT case has its own unique family team responsible for supporting families and children in ways that are more intensive than usual for the child welfare field.



The goal of the **SBCT stakeholder team** is to support systems-level change. The community coordinator, in partnership with the judge who oversees the SBCT cases, leads the stakeholder team. Team members include child welfare agency leaders, attorneys, court appointed special advocates (CASAs), mental health professionals, early childhood learning and education providers, and any other professionals who engage with families and are committed to changing the child welfare system. At monthly meetings, team members collaborate to make more resources in the community available to the SBCT court team, discuss and solve any barriers impacting the family teams, and review site-specific SBCT outcome data, all with the overarching goal of carrying out positive structural change within the local child welfare system.



The goal of the **SBCT family team** is to provide timely, responsive, and personalized services to families and children in foster care to achieve a safe and permanent placement quickly and support long-term well-being. The family team includes family members, their support persons, and attorneys, the child welfare caseworker, foster parents, and clinicians who all support the family's unique needs. This team meets monthly to review each family's case and address any family or child needs, as well as parental or agency concerns. The dedicated, monthly meeting time allows SBCT family team members to communicate and interact with each other frequently and quickly solve any emerging problems. The family team links families quickly with needed services, improves shared problem solving among all team members, and facilitates sensitive communication in what can be very emotionally charged and traumatic experiences for families. Ultimately, the aim of the meetings is to create an environment in which birth families, foster parents, and child welfare staff can collaborate on promoting child and family well-being and working toward a permanent placement for the child. The frequent contact keeps families fully engaged and supported while their infant or toddler is in foster care.

With national support from ZTT, local staff work together to implement the core components of the SBCT approach.

Together, with judicial leadership from the SBCT judge, guidance from the community coordinator, active practice of monthly family teams meetings, and the maintenance of an active stakeholder team focused on the bigger picture, each site implements the core components of the SBCT approach. The core components include activities necessary to implement the SBCT approach as a developmentally appropriate and trauma-informed method of supporting maltreated infants, described in Figure 1 below. Implementation of the SBCT approach may look different across sites because there is flexibility for local variation and innovation. Each site's practice, however, is anchored in the core components.

Figure 1. The Core Components Implemented at Each Safe Babies Court Team Site

Preremoval Conferences	Preremoval conferences are meetings that involve key stakeholders (families and social workers) before a child is removed from the home and enters foster care. The community coordinator works collaboratively with child protection investigators to identify and engage with families who have infants and toddlers before the children are removed. At sites where engagement is not possible until removal occurs, the community coordinators attend the initial court hearing so as to introduce themselves to parents and invite them to participate in SBCT services. Case planning for SBCT cases is more involved than the status quo, and because maltreated infants and toddlers are at considerable risk for medical problems and developmental delays, all children involved in SBCT services receive timely comprehensive medical, developmental, and mental health screenings.
Concurrent Planning	The SBCT approach promotes concurrent planning—or working toward a primary permanency goal (for example, reunification) while also concurrently planning for a secondary permanency goal (for example, adoption by kin). Concurrent planning is considered a best practice because it can shorten the time to achieve permanency if the primary permanency goal ends up not being feasible. Ideally, concurrent planning provides parents and their children with every opportunity to reunify while simultaneously involving the child’s current caregiver in the permanency plan.
Limiting Placements	To achieve healthy development, all infants and toddlers require sensitive care from a consistent and supportive caregiver. For children who have been removed from their parents, that means minimizing the number of placements they experience before permanency.
Frequent Family Time	Secure relationships are at the basis of healthy infant and toddler development and well-being. The SBCT approach recognizes that supporting regular visitation reduces time to permanency and, as such, supports frequent visitation. Members of the family team and the judge view frequent family time as a priority and work to achieve it by regularly problem solving and thinking creatively about different opportunities for families to spend time with their child.
The Foster Parent Intervention: Mentors and Extended Family	Foster parents play a key role in the child welfare process. The foster parent intervention refers to efforts made on behalf of the SBCT family team to change the ways in which foster parents are regarded, trained, and engaged by child welfare professionals. This in turn changes the foster parents’ own engagement with birth parents. The SBCT approach recommends that foster parents should be treated as valued team members who are invited to participate in family team meetings, court hearings, and community trainings.
Valuing Birth Parents	In the SBCT approach, reunification is always the primary goal. Family team members must effectively respond to the needs and real-life challenges faced by birth parents in order to make reunification a feasible outcome. As a rule, all birth parents are treated with respect and dignity. Family team members must work to overcome individual prejudices to develop meaningful working relationships with parents that are anchored in genuine care and support.
Continuum of Mental Health Services	To achieve healthy parent-child relationships and long-term healing, many parents and children within child welfare require relationship-based and trauma- and evidence-informed mental health interventions. The SBCT approach supports access to these interventions by working with clinicians who specialize in assessing the individual parent and the parent-child relationship. These assessments are then used as the basis for recommendations for services, such as visitation coaching, individual psychotherapy, child-parent psychotherapy, and one-on-one parent education.
Understanding the Impact of the Work	Each SBCT site engages in an evaluation of its own work. Information and outcomes on each site are compiled by the community coordinator in a shared ZTT SBCT database. Local outcomes are shared with the family team and the stakeholder team, as well as legislators at the state and national levels. Sharing these outcomes at the local level supports buy-in from service providers and potential stakeholders, and comparisons across sites nationally provide evidence of the approach’s effectiveness and supports replication.

Some of the SBCT core components align with best practices that are already in place (e.g. concurrent planning and limiting placements) while other core components differ from business as usual in child welfare agencies and the courts. For example, SBCT encourages more frequent family visitation and court

hearings than typical child welfare cases. In addition, SBCT requires increased collaboration among stakeholders within the welfare system and community service providers than is typically seen in foster care. Finally, SBCT may require a value change from all key stakeholders to create a more trauma-informed experience for children and families in foster care.

Implementing the SBCT approach is intended to reduce the time spent in foster care and improve child safety and well-being.

By implementing these core components, the SBCT approach is intended to reduce the time spent in foster care, increase child safety by reducing the recurrence of abuse or neglect, and improve the well-being of maltreated infants, toddlers, and families (see the SBCT theory of change in Figure 2). The theory of change demonstrates how the SBCT core components, as a collection of national and local inputs and activities, are applied toward improved immediate and long-term outcomes for young children, their families, and the child welfare system. The theory of change, presented in Figure 2, moves from left to right and demonstrates how the SBCT approach changes outputs, intermediate outcomes, and, eventually, long-term outcomes for children and families. On the far left, the theory of change names the national inputs, including ZTT and other funding agencies. Next, the theory of change names the key local actors, including the judge, the community coordinator, and the two SBCT teams that meet monthly to implement the core components. Then, the theory of change describes how the core components lead to outputs and changes in intermediate outcomes.

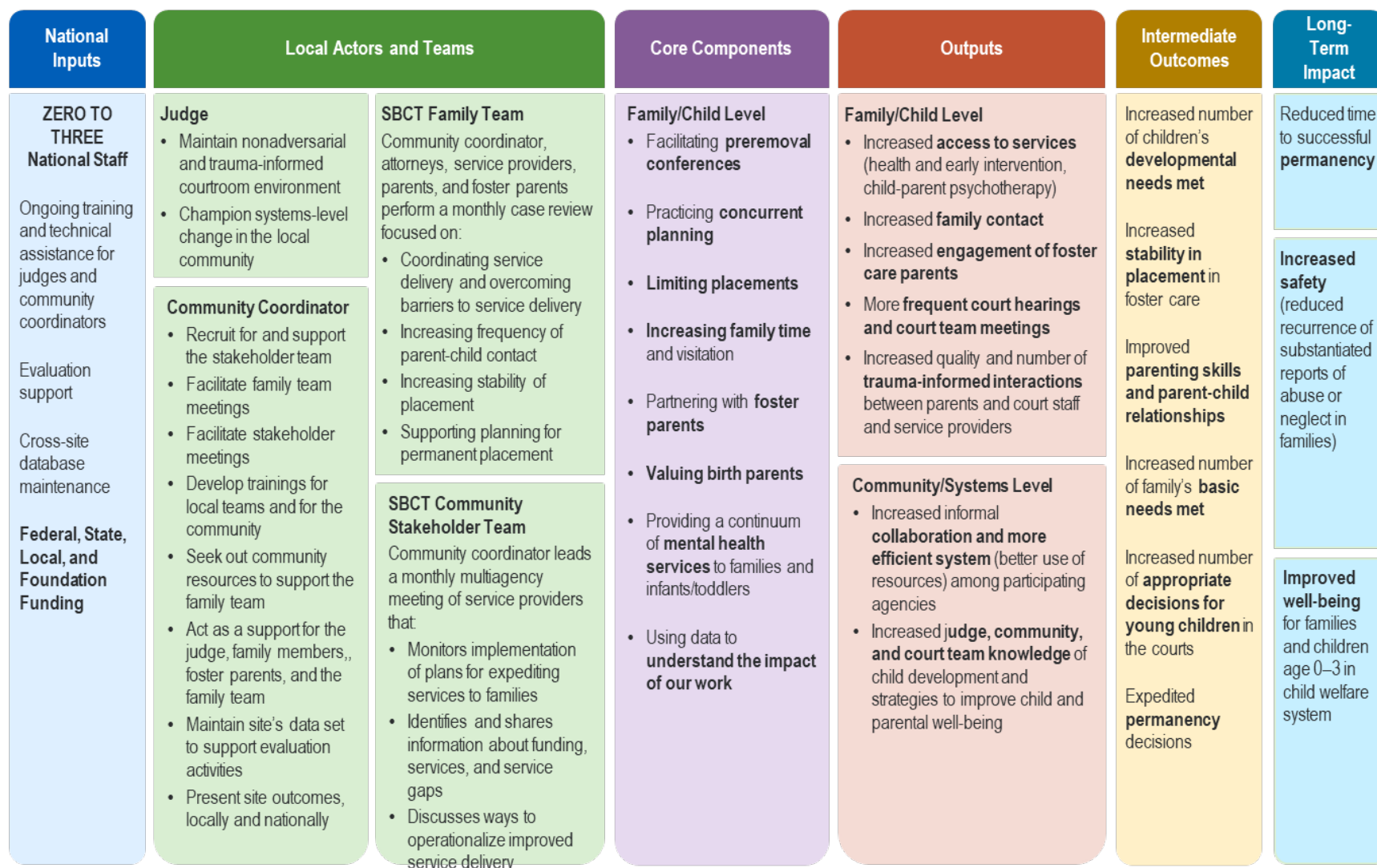
If the core components are implemented well, it is theorized that families and children in foster care will have increased access to services and more family contact. These outputs would lead to better intermediate outcomes, such as meeting the developmental needs of children and basic family needs, improved parenting skills, and enhanced parent-child relationships. Families also would have more frequent court hearings and family team meetings. In addition, these interactions with court staff and service providers would be more trauma-informed due to increased knowledge of child development and strategies to improve child and parent well-being. By increasing the frequency of hearings and providing training on trauma-informed decision making, these outputs are theorized to lead to an increased number of appropriate decisions for young children in the courts and expedited permanence decisions. The SBCT approach also theorizes that the core components would lead to better collaboration with and support for foster families, which in turn would then result in fewer disruptions in placements. Finally, these intermediate outcomes would lead to the long-term outcomes evaluated in this study: reduced time to permanency, decreased recurrence of abuse and neglect, and long-term well-being for children and families.

Prior research suggests that the SBCT approach is a promising practice in the child welfare system.

The SBCT approach demonstrates promise in improving the lives of families and children in foster care. SBCT has been recognized by the California Evidence-Based Clearinghouse for Child Welfare as being highly relevant to the child welfare context and demonstrating promising research evidence, based on three prior research projects that used quasi-experimental or cost-benefit analyses to evaluate SBCT. Prior quasi-experimental research shows that SBCT promotes better long-term developmental outcomes for maltreated infants and toddlers, including faster time to permanency, more frequent visitation, improved placement stability, and prevention of maltreatment (Hafford & DeSantis, 2009; McCombs-Thornton, 2012). In addition, the costs of SBCT are low relative to similar early childhood interventions (e.g., Nurse-Family Partnership, Early Head Start), at just \$10,000 per child, and more than 70% of the direct costs of SBCT participation are recouped in the first year alone (Foster & McCombs-Thornton, 2012). A recent implementation study across multiple SBCT sites documented promising results, in which children achieved permanency faster and had lower rates of recurrence when compared with national averages (Casanueva, Harris, Carr, Burfeind, & Smith, 2017). These studies have established that SBCT is a promising approach, but, to date, there has not been an experimental study of the SBCT approach.

Experimental designs are considered the “gold standard” of research and are prized by policymakers because they allow us to make causal inferences about whether an approach is effective. Random assignment results in a treatment group and a control group that are similar in all ways except their exposure to the intervention, allowing us to infer that any differences in child outcomes between the treatment and control groups are caused by the intervention. Because the current study uses a natural experiment, policymakers and practitioners can use the findings to determine whether the approach works and is worth implementing in their state or city.

Figure 2. SBCT Theory of Change



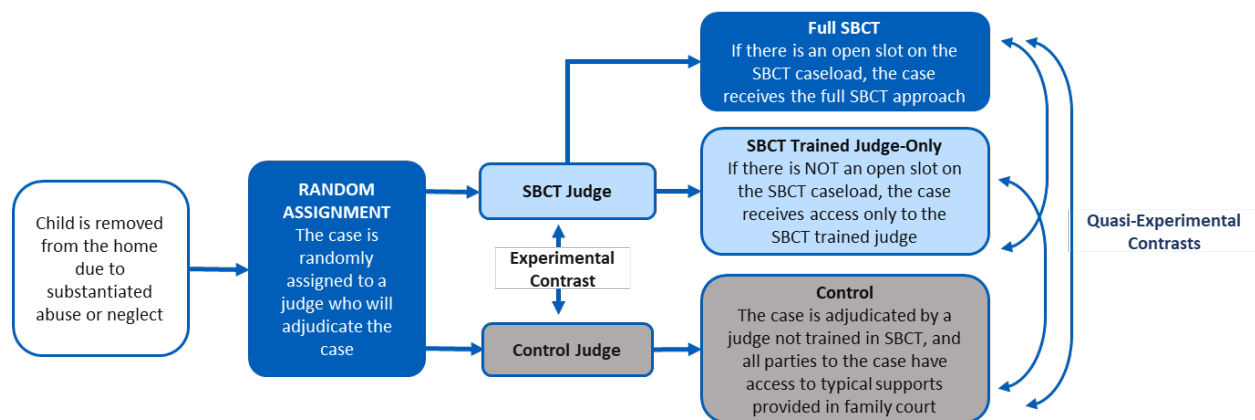
The Current Study: A Mixed-Methods Experimental Evaluation of the SBCT Approach

The American Institutes for Research (AIR) partnered with ZTT to evaluate this innovative approach to supporting infants, toddlers, and families in the child welfare system. The evaluation was a natural experiment, meaning that cases were randomly assigned by the court system to judges who use or do not use SBCT through naturally occurring processes. The evaluation took place in Little Rock, Arkansas; Tulsa, Oklahoma; and Des Moines, Iowa with an analytic sample that included:

- **Full SBCT cases:** 123 SBCT cases that were randomly assigned to an SBCT judge and had access to the full SBCT approach—including an SBCT-trained judge, a community coordinator, and a court team;
- **SBCT judge-only cases:** 598 SBCT judge-only cases that were randomly assigned to an SBCT judge but did not have access to the full SBCT court team;
- **Control cases:** 1,120 control cases that were randomly assigned to judges who did not use the SBCT approach. Families in control cases had access to all services typically available in child dependency courts, such as family visitation sessions and court hearings, but not the SBCT approach or an SBCT-trained judge.

Figure 3 below describes the random assignment process as well as which contrasts in this study are the primary/experimental contrasts and which are exploratory/quasi-experimental contrasts (see Appendix B for more information on random assignment processes in each site). For more details on the analytic samples, see Appendix B, Figure B1.

Figure 3. Random Assignment and Treatment Contrasts in the SBCT Evaluation



The study examined two primary outcomes: the time children spend in foster care until legal case closure and the rates of recurrence of abuse or neglect. The evaluation tested the impact of the SBCT approach by comparing outcomes between the combined treatment group (123 full SBCT and 598 SBCT judge-only cases) and the 1,120 control cases. These analyses are strong causal estimates given the random assignment of cases to judges in all three sites (see Appendix B for more detail on the random assignment process). The evaluation also included exploratory, quasi-experimental comparisons between the 123 full SBCT cases (a subsample of all the randomly assigned treatment cases), the SBCT judge-only

cases, and the 1,120 control cases. In addition, the study answered one exploratory research question about the long-term well-being of SBCT families, and documented implementation in the three SBCT sites in the evaluation. The study relied on three types of data to answer the five research questions. See Box 1 for more information on the research questions and data sources.

Box 1. Research Questions and Data Sources

Impact Research Questions

- Do infants and toddlers with cases assigned to an SBCT judge spend less time in foster care than their control group peers?
- Do infants and toddlers with cases assigned to an SBCT judge have lower recurrence rates of abuse or neglect than their control group peers?

Exploratory Research Questions

- Do infants and toddlers who receive the full SBCT treatment spend less time in foster care than their SBCT judge-only or control group peers?
- Do infants and toddlers who receive the full SBCT treatment have lower recurrence rates of abuse or neglect than their judge-only or control group peers?
- Is long-term child and family well-being better for families who receive the full SBCT approach compared with national averages?

Implementation Research Questions

- To what extent was each of the SBCT core components implemented in each site?
- To what extent do the courtroom practices of SBCT-trained judges and control judges differ?

Data Sources

Child Welfare Data for Time to Permanency and Recurrence of Abuse and Neglect. To answer the impact research questions (RQs 1 and 2), the study measured time to permanency and recurrence of abuse or neglect using child welfare data from the departments of human services (DHSs) for 1,841 cases in Little Rock, Arkansas; Tulsa, Oklahoma; and Des Moines, Iowa. The DHS data included child and case background characteristics, removal date, case closure dates, and any subsequent removal dates. Historical data were used that aligned with the dates of random assignment and SBCT adoption/implementation in each site (Des Moines: July 1, 2015–April 15, 2019; Little Rock: June 9, 2009–June 30, 2019; Tulsa: June 1, 2015–April 30, 2019, but only included cases randomly assigned by September 15, 2018 due to judicial turnover, see Appendix A for more information). These data measured the two primary outcomes: time to permanency and recurrence of abuse or neglect.

- **Time to permanency** was defined as the time between first removal and the date of first permanent placement, including reunification, adoption, or legal guardianship. The removal date was the date on which the child was removed from the care of his or her parents or caregivers by child protective services. The date of the first permanent placement was the date on which the child was discharged from foster care and the agency was no longer supervising or responsible for placement or care. Children may exit foster care because they were reunified with family, adopted, or placed with a permanent guardian.
- **Recurrence of abuse and neglect** was defined as a subsequent removal of the child that occurred after an initial case closure (1 = recurrence, 0 = no recurrence).

Primary Caregiver Surveys of Child and Family Well-Being. To answer the exploratory research question (RQ3) about long-term child and family well-being, we collected interview data from a subsample of 74 primary caregivers up to 2 years after case closure. Our operationalization of well-being was consistent with definitions from the literature on child welfare (e.g., State Policy and Advocacy Reform Center, 2013) and included:

- Child cognitive functioning, measured from communication and personal-social scores on the Ages and Stages Questionnaire
- Child physical health and development, measured using items from the National Survey of Child Health
- Child attachment to a caring and reliable adult, measured using attachment scores from the Devereux Early Childhood Assessment
- Healthy family relationships, defined as total family well-being scores on the Healthy Families Parenting Inventory, which includes scale scores in the domains of family social support, connection to resources, problem solving, personal care, parent-child interactions, parental efficacy, and the home environment

For more information on these measures, see Appendix B.

Qualitative and Quantitative Implementation Data. To answer the implementation research questions, the study used qualitative data from interviews with five SBCT judges, three control judges, and five current and former SBCT community coordinators, as well as extant data from the SBCT database, which included child and case characteristics for children who received the full SBCT approach. For more information on the methods, data sources, and sample for the implementation data, see Appendix B.

What the Study Found

SBCT cases exited foster care faster than control cases.

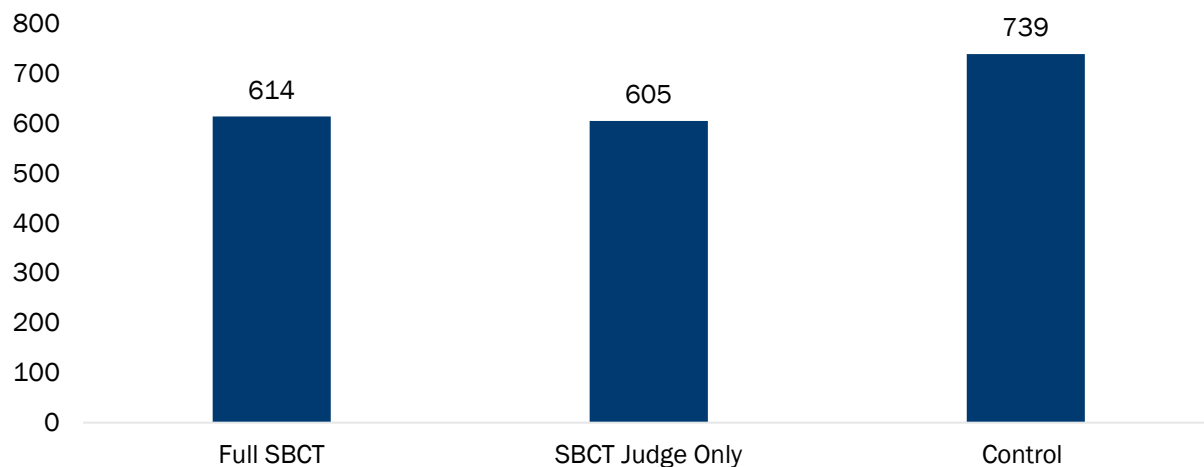
To understand whether SBCT helped families achieve a safe and permanent home for maltreated infants and toddlers, we first compared the time to legal case closure between SBCT and control cases using statistical models that adjusted for background characteristics (see Appendix C for more details on the analytic methods). We found that children in cases assigned to SBCT judges spent less time in foster care than children in cases assigned to control judges. The median number of days for SBCT cases to exit foster care was 614 days. For control cases, the median number of days in foster care was higher (739 days; see Figure 3). It took about 4 months longer for half of the control cases to exit foster care, a statically significant difference¹ (HR = 1.48, $p < .05$; see Figure 4 and Table D2).

We also conducted exploratory quasi-experimental comparisons between full SBCT and SBCT judge-only cases on time to legal case closure. Because SBCT community coordinators only take on a maximum of 20 cases at a time, some cases were assigned to an SBCT-trained judge but did not have access to any other SBCT core components (see Figure 3). For example, in Des Moines, there were 33 cases assigned

¹ For this study we used a Cox proportional hazards model, which is a type of survival regression model used to analyze time to an event—to estimate the time to achieving a permanent placement through legal case closure for SBCT and control cases. We report the hazard ratios in the main body and in Appendix D. We used the sample hazard function to estimate the sample survivor function in those years when censoring makes it impossible to compute it directly (e.g., for cases that are still open). When the sample survival function equals .50, half of the children in the sample have left foster care and achieved permanency; the other half have not. See Appendixes C and D for more detail on the statistical models used in this evaluation.

to the SBCT approach, and another 309 that were assigned to the SBCT-trained judge but had no access to any other component of the approach (SBCT judge-only). The time to permanency for the full SBCT and SBCT judge-only cases was not different from each other (HR = 89, $p = .36$), and both groups exited foster care faster than the control group (full SBCT compared with control: HR = 1.54, $p < .001$; SBCT judge-only compared with control: HR = 1.49, $p < .001$; see Figure 4). This suggests that the SBCT approach not only affected the 20 or so open cases on the SBCT docket but also influenced the outcomes for all cases adjudicated by the SBCT judge.

Figure 4. Median Time to Permanency in Days for all Three Groups: Full SBCT, SBCT Judge-Only, and Control



Source. Authors' analyses of extant department of human services data using Cox proportional hazards regression models. Note. Sample includes 1,749 cases (122 full SBCT, 565 SBCT judge-only, and 1,062 control). Full SBCT and SBCT judge-only estimates are not statistically different from each other but are both statistically significantly lower than control cases.

Recurrence of abuse and neglect was lowest for the full SBCT group.

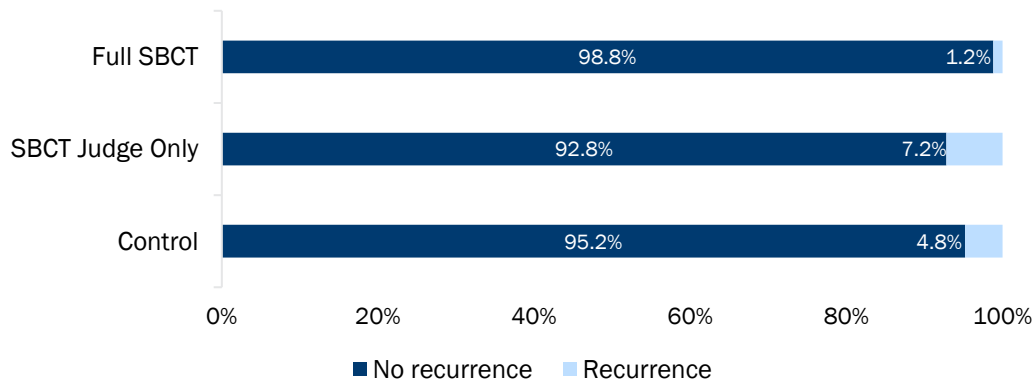
The rates of recurrence of abuse or neglect for children who had exited foster care were low across all groups. Of all closed cases ($N = 1,173$), 5% experienced recurrence of abuse and/or neglect resulting in a second removal (or more). There was no statistically significant difference² between SBCT and control cases in the probability of recurrence of abuse and/or neglect (5% in SBCT vs. 4% in control, odds ratio = 1.33, $p = .29$; see Table D10 for more detail).

Descriptive analyses revealed that children in full SBCT cases had very low rates of recurrence. In fact, only one full SBCT case (1.2%) experienced a recurrence of abuse and neglect (see Figure 5). Exploratory quasi-experimental analyses that compared the rate of recurrence of abuse or neglect between full SBCT cases, SBCT judge-only cases, and control cases found no statistically significant differences between the three groups (see Tables D11–D13). Although not statistically significant, full SBCT cases were nearly five times less likely to reenter foster care than control cases in the current study (odds ratio = 0.21, $p =$

² To test if the rate of recurrence was different between SBCT and control cases, we used logistic regression with recurrence as a binary yes/no outcome for all cases that had already closed (1= yes, the child reentered foster care, 0 = no, the child did not reenter foster care; see Appendixes C and D for more detail).

0.15), and over seven times less likely to reenter foster care compared with full SBCT judge-only cases—a difference that approached statistical significance (odds ratio = 0.13, $p = 0.053$; see Tables D11–D13).

Figure 5. Recurrence Rates of Abuse or Neglect Were Lowest for the Full SBCT Group Compared With the SBCT Judge-Only and Control Groups



Source. Authors' analyses of extant department of human services data.

Note. Sample includes 1,173 cases (88 full SBCT, 435 SBCT judge-only, and 650 control).

According to caregiver self-report data, families in the SBCT group were doing well after case closure.

Researchers followed a multistep consent process to interview primary caregivers after case closure. Primary caregivers included biological parents who reunited with their child as well as adoptive parents. In total, the interview sample included the 47 full SBCT cases who consented to participate in the interviews. The 47 families were evenly distributed across the three sites: 18 were from Des Moines, 12 from Little Rock, and 17 from Tulsa. Caregivers included a mix of biological parents (28%) and adoptive parents (53%), while the remaining caregivers did not report their relationship to the child. Most caregivers were female (77%). The children included in the follow-up sample were 55% female and, on average, 3.5 years old at the time of the follow-up interview (*Mean age = 42.21 months, standard deviation [SD] = 16.03*).

The sample of primary caregivers who consented to participate in these interviews may be different from the population of caregivers who participated in the SBCT approach at these study sites. The interview sample does not represent primary caregivers who were hard to reach via phone, either because there was no working contact information for them or because they did not answer phone calls or texts. Primary caregivers experiencing adverse stress, such as a lack of social support, ongoing challenges with sobriety, or issues with homelessness, may have been less likely to respond to outreach from researchers. Because researchers only interviewed primary caregivers who volunteered to participate, data on child and family well-being may be positively skewed. In addition, primary caregivers who reunited with their children may have reported answers that were socially desirable because of the stigma attached to prior

involvement with the child welfare system. Given the limitations of the interview sample, these findings should be interpreted with caution.

Overall, the caregivers whose children were assigned to the SBCT group displayed high levels of well-being after case closure relative to normative and nationally representative population samples.

Physical Health

Primary caregivers whose children had access to the SBCT approach reported that their children were in good physical health relative to the general population based on items from the National Survey of Children's Health (NSCH 2017–18). All caregivers whose children had access to the SBCT approach reported having health insurance coverage, whereas only 95% of children ages 0–5 are covered by health insurance in the general population, and only 94% of children with two or more adverse childhood experiences (ACEs) have health insurance (Child and Adolescent Health Measurement Initiative, 2018). A higher percentage of children who received the SBCT approach had a personal doctor or nurse (89%) relative to children 0–5 years nationwide (72%) and relative to a national sample of children 0–17 years with two or more ACEs (68%; Child and Adolescent Health Measurement Initiative, 2018). The percentage of caregivers reporting very good or excellent child general health also was higher among caregivers whose child had received SBCT (83%) relative to the national sample with two or more ACEs (81%), as was the percentage of caregivers reporting very good or excellent oral health (83% for SBCT families, 66% for the national sample with two or more ACEs; Child and Adolescent Health Measurement Initiative, 2018).

Cognitive Development: Communication and Social Skills

Primary caregivers whose children were assigned to the SBCT approach also reported that their children were developmentally on track in both communication (79%) and social skills (80%) according to the ASQ-3 (Squires & Bricker, 2009). In both domains, most children scored above the cut-point for being at risk of developmental delay for their age group (see Appendix D). This indicates overall typical development among families receiving SBCT in these domains.

Healthy Attachment With a Caring Adult

In addition, according to caregiver self-report, the majority of children in the SBCT group had typical or strong attachment with their primary caregivers (86%) as measured by the DECA Infant and Toddler Caregiver Form (LeBuffe & Naglieri, 1999), and children in the SBCT group displayed strong caregiver attachment overall relative to the general population. Average attachment scores among children assigned to SBCT were higher than those obtained from three independent samples, including a community sample, an identified sample with known behavioral problems, and a large-scale Head Start sample (see Table D16, Appendix D).

Healthy Family Relationships

Primary caregivers whose children were assigned to the SBCT approach also reported high family well-being and healthy family relationships on the HFPI (Krysiak & LeCroy, 2012; LeCroy & Milligan, 2018) relative to the general population. Mean scores among families receiving SBCT were higher than those from a normative sample on seven of eight domains examined, with the exception being Parental Efficacy, where scores were equivalent (see Table D17, Appendix D).

Implementation Findings

To contextualize the impact findings, we collected data about the implementation of the SBCT approach and the treatment service contrast across study sites to answer two implementation research questions:

- To what extent was each of the SBCT core components implemented in each site?
- To what extent do the courtroom practices of SBCT-trained judges and control judges differ?

The implementation data included qualitative data from interviews with SBCT judges, comparison judges, and SBCT community coordinators, as well as case-level quantitative data collected by the court teams at each site. Each of the three sites included in this evaluation was well established, with an implementation history of no fewer than 5 years. Overall, the three sites in this study received national support, had active local staff, and implemented the majority of the SBCT core components. Also, according to judicial interviews, SBCT and control judges all used best practices, but SBCT courtrooms differed from business as usual in two key ways: (1) SBCT judges had ongoing support from the SBCT community coordinator that was not available to the control judges, and (2) SBCT judges held more frequent court hearings than control judges.

Each SBCT site received national support from ZTT and had active local staff and teams.

Each of the three sites that participated in the study had strong judicial leadership and community coordinators, as well as active stakeholder and family teams. However, two of the three sites experienced turnover in judges or community coordinators during the implementation window.





Judicial leadership was present at each of the three sites. Based on interviews with judges and community coordinators, the SBCT judges at all three sites demonstrated **judicial leadership**. For example, the judges were reported as being engaged, collaborative, informed, and empathetic leaders. In practice, the judges at each site held the child welfare agency accountable, worked to raise awareness of the SBCT approach in their community, valued the fundamental role of the community coordinator, and engaged in efforts to coordinate funding and resource collaboration, as well as planning training for individuals on the family team. However, one site experienced judicial turnover during the evaluation, which can disrupt SBCT implementation. For example, judicial turnover during this evaluation required training and time for the new judge to learn and enact the SBCT approach in their courtrooms and paused some of the SBCT initiatives and committees established by the previous judge.



Each SBCT site employed its own **community coordinator**. At the time of the evaluation, all community coordinators were full-time employees and managed 20 SBCT cases. One site had a consistent community coordinator for the full implementation window, while two sites experienced substantial turnover in the community coordinator role. For example, one site had four coordinators in the past 10 years, while another had four coordinators in the past 15 years. Interviews with judges highlighted the importance of the community coordinator role. Given the importance of the community coordinator, turnover in this role can have negative consequences for SBCT implementation. Interviews with community coordinators found that although the approach can continue through periods of

coordinator turnover, turnover caused implementation challenges across other core components, such as lower membership on the stakeholder team, because the coordinator is responsible both for recruiting members and maintaining relationships. Turnover in the coordinator position also disrupts family team meetings because new coordinators must commit time to learn about each case as opposed to focusing on actions required to move the case toward a resolution.

 Each site had an active **SBCT stakeholder team** to support systems-level change. All three sites had diverse community stakeholders who regularly participated in the stakeholder team meetings. Stakeholders included early education providers, early intervention providers, representatives from departments of human services, the SBCT judge, foster parents, attorneys, mental health providers, subject matter experts, health care providers, Medicaid support providers, shelter providers, and religious community leaders. One site had monthly team meetings, while two other sites held bimonthly meetings. At one site, a “leadership” team met in the off months to discuss in-depth concrete steps for practice change. It was reported, however, that coordinator turnover impacted stakeholder membership in one site and that numbers of attendees often fell during periods of coordinator instability.

 Each site had active **family teams**, which met every month or every other month. All members of the family team participated in these meetings, including the foster parents, parents, and parents’ support persons (who were invited to attend these meetings). Community coordinators reported that meeting practices were parent-centered. On average, full SBCT cases had six family team meetings per case, but the number ranged from 1 to 22.

All but one of the SBCT core components were present at each site.

As described above, each of the three sites had a trained SBCT judge, a community coordinator, an active court team, and monthly team meetings, though some sites experienced turnover in key staff roles during the study. These actors and teams implemented nearly all SBCT core components. The core components that were present at all three sites included valuing birth parents, concurrent planning, increasing frequent family time, and providing a continuum of mental health services to families and infants/toddlers. The core components that were challenging in at least one of the study sites were preremoval conferences, limiting placements, the foster parent intervention, and using data to understand the impact of the work. We first describe the core components that were implemented successfully across the three sites, and then discuss the core components that were more challenging to implement (see Table 1).

Table 1. SBCT Implementation at Each Site

Safe Babies Court Team Key Actors and Core Components	Little Rock, Arkansas	Des Moines, Iowa	Tulsa, Oklahoma
Key Actors and Teams			
Judicial leadership	Present	Present, but experienced turnover	Present
Local community coordinator	Present, but experienced turnover	Present, but experienced turnover	Present

Safe Babies Court Team Key Actors and Core Components	Little Rock, Arkansas	Des Moines, Iowa	Tulsa, Oklahoma
Active court team focused on the big picture	Present	Present	Present
Monthly family team meetings	Present	Present	Present
Core Components			
Valuing birth parents	Present	Present	Present
Practicing concurrent planning	Present	Present	Present
Limiting placements	Present	Present, but experienced challenges	Present
Partnering with foster parents	Present	Present, but experienced challenges	Present
Facilitating preremoval conferences	Not present	Not present	Not present
Increasing frequent family time	Present	Present	Present
Providing a continuum of mental health services to families and infants/toddlers	Present	Present	Present
Using data to understand the impact of the work	Present, but experienced challenges	Present, but experienced challenges	Present, but experienced challenges

Note. Analyses conducted by authors based on qualitative interviews with five community coordinators and extant data from the SBCT database.

Sites were successful at valuing birth parents, concurrent planning, increasing frequent family time, and providing a continuum of mental health services to families and infants/toddlers.

Valuing birth parents was a common practice at each of the three sites. According to interviews with community coordinators, each site recognized the intergenerational trauma that SBCT families may experience and acknowledged and worked to address parents' own histories of trauma. One site described meetings with parents, such as family team meetings, as "no-judgment zones" where an atmosphere of safety was carefully maintained. Other sites reported substantial training for caseworkers and attorneys that led to value changes at their site. Two sites reported that trainings and addressing unsupportive behavior in reluctant professionals were the most effective solutions for helping staff truly value birth parents.

All sites achieved **frequent family time**. According to interviews, SBCT cases typically have family visits at least three times a week for multiple hours. One site reported starting with four visits per week, and ideally every day, but the frequency of visits varied based on the child's needs. Data from the SBCT database also suggested frequent family time, with three visits per week noted as the most common visitation schedule recommended for the 190 full SBCT cases with data. About a quarter of children had daily visitation recommended by the court at some point in the case, and the majority of full SBCT cases received the recommended visitation (71%). On average, the family time that full SBCT cases received is much higher than the typical 1 to 2 hours a week provided in child welfare cases. Frequent visits were supported by encouraging families to attend medical appointments and by working collaboratively with service providers to think creatively about new opportunities for parents to visit their children. Common barriers to frequent visitation included transportation, lack of housing, parental incarceration, in-patient

treatment, child welfare caseworker turnover, parent no-shows, or an uncollaborative visitation worker. Visit coaches were commonly used to overcome these barriers.

Each site also was committed to providing a continuum of **mental health services** to families and infants/toddlers. Community coordinators from all three sites reported that all cases are assessed for the appropriate mental health intervention. Child-parent psychotherapy was the most common mental health service, and a review of the ZTT database found that 88% of full SBCT cases received child-parent psychotherapy and 50% also had a parent-child relationship evaluation.

The three study sites reported challenges with conducting preremoval conferences, partnering with foster parents, limiting placements, and using data.

Preremoval conferences were a challenge in two sites. Community coordinators were unable to facilitate preremoval conferences because of logistical challenges in meeting before a child is removed from the home. Other sites mentioned that attorneys were wary of preremoval conferences because birth families may not yet have representation. Each site is working to overcome these challenges; one site implements preremoval conferences using a model developed by the Annie E. Casey Foundation.

The level at which sites **partnered with foster parents** varied across sites. Two sites reported high levels of engagement with foster parents. This included inviting foster parents to family team meetings and court, including them in trainings, and supporting coparenting strategies with birth parents. However, partnering with foster parents was noted as a challenge in one site. At this site, foster parents often attended family team meetings and court but were not provided with additional training. The coordinator reported that she provided individual guidance for foster parents when possible but that no other concrete process for engagement was currently in place. According to the coordinator, this site had a handful of foster parents that were supportive of birth parents but also had many foster parents whose values had yet to change.

All sites reported the goal of **limited placements**, and two of the sites work closely with foster parents and families to support consistency. SBCT placements refer to placements that occur after a removal. A new placement is recorded if a child has a new care setting, including moving from one foster care home to another, moving to or from a group home or institutional setting, trial home placements, and temporary placements. The majority of SBCT cases experienced one or two placements (35% and 38%, respectively), but more than a quarter of cases experienced three or more placements (27%). One site noted that limiting placements was sometimes difficult because of collaboration challenges with the state agency.

Finally, all three sites reported **challenges with using data** to continuously evaluate the SBCT approach. This is likely due to data entry challenges at each site. Community coordinators shared that given the many demands on their time, they were often unable to keep up with data collection and to enter and review SBCT data in a timely manner. Coordinators also reported reviewing, analyzing, and presenting outcome data less often than what ZTT recommends.

According to judicial interviews, SBCT and control judges all used best practices, but SBCT courtrooms differed in two meaningful ways from business as usual.

To document the treatment contrast between SBCT and control judges, we conducted interviews with both SBCT and control judges. Both types of judges were similar in their background characteristics, but

SBCT judges had slightly more judicial experience. For example, the average tenure on the bench in years was 14.9 years for SBCT judges and 11.3 years for control judges. Likewise, SBCT judges had been in their current position longer: The average tenure in the current court was 12.9 years for SBCT judges and 10 years for control judges. SBCT judges had implemented the approach for an average of 4.1 years, but some SBCT judges had been presiding over SBCT cases for more than a decade. Also, SBCT judges reported that half or more of their cases involved infants and toddlers under the age of 3, while control judges reported that only some of their cases (less than half) included infants and toddlers.

According to judicial interviews, SBCT and control judges all use best practices to support families with infants and toddlers ages 0–3. Judicial best practices in child dependency cases closely aligned with the core values that drive the SBCT approach. These included a commitment to reduce time spent in care, frontloading services to support child well-being, engaging families in the judicial process, and breaking down barriers by building collaborations across stakeholders. These best practices were used by both SBCT and control judges at all three sites (see Table 2 for more details).

However, there were some key differences between SBCT and control judges. Most obviously, SBCT judges benefit from the support of the community coordinator, while control judges do not. In addition, SBCT judges are able to see their cases more frequently compared with control judges. The reduced spacing between hearings is an important explanation for why children assigned to SBCT may exit foster care faster. SBCT judges also held and participated in monthly family team meetings for their SBCT cases; this was not a standard practice for control judges.

In addition, according to the judge interviews, SBCT judges who hear both SBCT and non-SBCT cases also often use SBCT practices in non-SBCT cases. Judges reported that they used SBCT practices in all or most of their non-SBCT cases. This may suggest that SBCT best practices spill over into non-SBCT cases that are adjudicated by SBCT judges, as seen in the impact findings on time to permanency for the SBCT judge-only cases.

Table 2. Judicial Practices in Full SBCT, SBCT Judge-Only, and Control Cases

SBCT Practices	Full SBCT	SBCT Judge Only	Control Judges
Frequency of hearings	Monthly or bimonthly	Quarterly	Quarterly, sometimes biannual
Monthly team meetings among case stakeholders	Present	Not present	Not present
SBCT Coordinator working with families to address needs in between court hearings	Present	Not present	Not present
Judge recommended developmental screenings	Present	Present	Present
Judge goal of services received within 30 days	Present	Present	Present
Judge goal of parent-child psychotherapy	Present	Present	Not present
Other Judicial Best Practices			
Prioritize family placements when a child is removed	Present	Present	Present

SBCT Practices	Full SBCT	SBCT Judge Only	Control Judges
Maintain frequent visitation with biological parents and siblings	Present	Present	Present
Model court participation	Present	Present	Present
Model court trauma assessment	Present	Present	Present
Participation in National Council of Juvenile and Family Court Judges annual trainings	Present	Present	Present
Trauma-informed practices in the courtroom to avoid triggers for families	Present	Present	Present
Understanding the benefits of having parents, Children, and other family members in the courtroom	Present	Present	Present

Source. Author’s analysis of judicial interviews.

Limitations

This study used a natural experiment to determine the impact of the SBCT approach on time to permanency and recurrence of abuse and neglect. Natural experiments are beneficial because they use random assignment but do not disrupt what is already occurring in study sites. One limitation of the natural experiment is that there is less control over random assignment because it is not done by a researcher. However, given that the treatment and control groups in this study were equivalent at entry to foster care, we are confident in the random assignment process, and can make causal inferences about the SBCT approach’s impact on time to permanency and recurrence of abuse and neglect.

A second limitation of this study relates to the types of extant data available from the DHSs and the courts, and the quality of these data. For example, many cases were missing data on removal date or child age, which made it difficult to determine if those cases were eligible for inclusion in the current study. Therefore, many cases were excluded from the study that may otherwise have been eligible. This attrition from the sample could compromise the random assignment, although, as stated above, we did establish baseline equivalence on observed baseline characteristics.

There also were challenges in using court-provided data to document treatment contrast. In two of the sites, court data were simply not available and could not be included in the evaluation. This limited the detail with which the study documented the treatment-control service contrast. For example, we could not include data at the case level on the timing of court proceedings or the types of court orders made. Instead, we relied on the judge interviews to learn about the contrast between judicial practice in SBCT and non-SBCT cases. These interview data were retrospective and self-reported, both traits that could introduce bias into our findings. The inability to document the service contrast fully makes it difficult to understand how to replicate the intervention to produce the impact documented by this study.

Finally, a third limitation to this study is that the sample of caregivers who participated in follow-up interviews after case closure was not representative of the population of interest. Caregivers who

consented to participate in the interviews were likely different from those who did not in ways that were unobservable in our data. For example, contact information was only available for families who had stable phone numbers over time, so the sampled families may be less likely to be transient or homeless. In addition, because the data on child and family well-being were all self-reported, it is possible that the data were subject to social desirability bias, whereby respondents respond more favorably to questions in an attempt to make themselves appear better off to interviewers. The implication of these limitations is that this study may overestimate well-being for both the SBCT and control conditions, which reduces the external validity of findings from our sample. Follow-up studies should consider innovative ways to engage hard-to-reach families because this bias will consistently overestimate well-being after case closure.

Conclusions

This study provides evidence that the SBCT approach has a positive impact on maltreated infants and toddlers and their families. Cases assigned to judges trained in SBCT exited foster care sooner than cases assigned to a control judge. The impact on time to permanency is statistically significant and substantively meaningful. For infants and toddlers especially, having a permanent home is key in forming healthy attachments and fostering healthy child development. Spending less time in foster care also results in cost savings for the state.

The similar impact on time to permanency for both the full SBCT and judge-only cases may suggest that there is spillover to non-SBCT cases. Future research is needed to determine how being a part of the SBCT approach changed the behaviors of the judge and court teams (e.g., caseworkers and attorneys) who are working on both SBCT cases and non-SBCT cases. For example, judges may be able to schedule court hearings with more frequency, or caseworkers may advocate for more frequent review of cases. Because the SBCT approach recommends capping the number of cases per community coordinator at 20 and setting more frequent adjudications, it may not be possible to implement the approach for all cases in a jurisdiction without hiring additional court team members. However, this evidence of an impact for children whose cases were overseen by an SBCT-trained judge, regardless of whether their cases received the support of the whole court team or a community coordinator, indicates that there may be benefits to training judges and implementing the approach for a limited number of cases that spill over to all cases seen by that judge.

This study did not find any statistically significant differences in the rates of recurrence of abuse and neglect between SBCT and control cases. However, the exploratory analyses for recurrence of abuse and neglect suggest a protective factor for cases assigned to the full SBCT approach. Full SBCT cases had very low rates of recurrence of abuse and neglect; only one out of 88 cases experienced retraumatization through maltreatment (1.3%). This rate is consistent with prior research on SBCT that documents very low recurrence rates between 0.5% within the first 6 months after case closure and 1.2% during a 12-month period (Casanueva et al., 2017; Hafford & DeSantis, 2009). Full SBCT cases were nearly five times less likely to reenter foster care compared with control cases, and over seven times less likely to enter foster care compared with SBCT judge-only cases. Although these differences are not statistically significant, the differences are meaningful in the lives of children in families. Although the benefits of the SBCT approach may spill over to non-SBCT cases adjudicated by SBCT judges for time to permanency, this spillover does not occur for recurrence of abuse or neglect.

This study also documented the long-term well-being of children assigned to the SBCT approach. This is the first attempt to follow up with SBCT families, and the primary caregivers who participated in data collection reported that their children were generally in good health, developmentally on track, and had healthy attachments with caring adults. The primary caregivers also reported high levels of well-being. However, the sample of primary caregivers who consented to participate in these interviews may be different from the overall population of caregivers. For example, the interview sample excludes primary caregivers who were hard to reach via phone, either because there was no working contact information for them or because they did not answer phone calls or texts. Primary caregivers experiencing adverse stress, such as a lack of social support, ongoing challenges with sobriety, or issues with homelessness, may have been less likely to respond to outreach from researchers. Because researchers only interviewed primary caregivers who volunteered to participate, data on child and family well-being should be interpreted with caution, given this potential bias. With this limitation in mind, the interview data on child and family well-being suggest that children from families in the SBCT condition were thriving developmentally after exiting foster care. Because data are self-reported and do not represent the population of interest, more research is needed on this topic.

In summary, this study provides experimental evidence that the SBCT approach reduces the time to permanency for infants and toddlers in foster care. Future research is needed to understand the mechanisms by which SBCT has an impact, but the study supports the use of the full SBCT approach as an evidence-based method in child welfare that improves outcomes for maltreated infants and toddlers.

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Appendix A. Details About the Safe Babies Court Team Study Sites

Appendix A includes information about the participating study sites.

Participating sites: Little Rock, Des Moines, and Tulsa

Little Rock, Arkansas

The Safe Babies Court Team (SBCT) approach began in Little Rock in 2009. Since then, there have been four different community coordinators and one SBCT judge trained. Court team membership in Little Rock includes 119 individuals representing various government, health care, social service, and faith-based organizations. These organizations include Arkansas Department of Human Services (DHS), University of Arkansas for Medical Sciences, Chenal Family Therapy, Kids First Developmental Center, Grace Church, Curricula Concepts, Centers for Youth and Families, Our House Family Shelter, and Partners for Inclusive Communities. For more information about the Little Rock population, see Table A1.

Tulsa, Oklahoma

ZERO TO THREE'S (ZTT's) community coordinator first introduced the SBCT approach to Tulsa's chief judge in 2014, but the approach's implementation did not begin until February 2015. The judge was initially opposed to the idea of SBCT implementation in Tulsa, but after persistent communications became a strong advocate of the program. The first SBCT judge retired in December 2018. At first, the site considered training the control judge to become the new SBCT judge and the control judge did attend one SBCT training in September 2018. However, the site moved forward with the new chief judge adjudicating all SBCT cases in early 2019. The judicial turnover in late 2018 to early 2019 caused some challenges to SBCT implementation in the site, but the SBCT community coordinator was stable during this time and addressed any implementation challenges while on-boarding the new SBCT judge. The SBCT approach has grown to include more than 30 stakeholders who meet monthly to decide the best ways to support families. Tulsa's SBCT includes defense and state attorneys, court appointed special advocates assigned to the families, individuals from the Tulsa Child Welfare Department (Part C), Early Head Start/Head Start, substance abuse treatment services, adult mental health treatment services, children's mental health treatment services, domestic violence intervention services, the Tulsa Health Department, Fostering Hope Clinic, and the Oklahoma Department of Mental Health and Substance Abuse Services. Foster parents also are involved in the SBCT monthly meetings and collaborate with the rest of the team on supporting SBCT families and their children. For more information about the Tulsa population, see Table A1.

Des Moines, Iowa

The SBCT approach began in Iowa in 2006. The first judge to implement SBCT was the presiding judge from 2006 to 2014. The second judge took over in 2014, retired in 2019, and trained his replacement. Several community coordinators have worked in Des Moines. Although the first community coordinator served for 10 years (2005–14), the coordinators who succeeded her spent an average of 2 years in the position (Coordinator 2: 2008–10, Coordinator 3: 3 months, Coordinator 4: 2015–17, and Coordinator 5: in place for approximately 3 years). Key stakeholders in the Des Moines site include Parent Partners and

Children and Families of Iowa. The Parent Partners program invites parents who have been through the child welfare system to mentor families who are currently navigating the child welfare system. Parent Partners works directly with DHS, child welfare staff, and child welfare agencies to advocate for families, collaborate with social workers, assist in policy and program development, and facilitate training and learning opportunities. Children and Families of Iowa is a nonprofit organization that works to improve the lives of children and families in Iowa. It offers many programs to support children and families, including domestic violence services, early childhood development, mental health services, and family support programs. For more information about the Des Moines population, see Table A1.

Table A1. County-Level Characteristics of Each Safe Babies Court Team Evaluation Site

Safe Babies Court Team Sites			
	Little Rock, Arkansas (Pulaski County) ^a	Des Moines, Iowa (Polk County) ^b	Tulsa, Oklahoma (Tulsa County) ^c
County Population	392,680	487,204	648,360
Percentage White	52	77	62
Percentage African American	38	7	11
Percentage Asian	2	5	3
Percentage Hispanic/Latino	6	9	13
Percentage multiple races	2	2	6
Percentage living in poverty	17	10	14

Notes:

^a Information from the U.S. Census Bureau for Pulaski County:

<https://www.census.gov/quickfacts/fact/table/pulaskicountyarkansas/PST045217>

^b Information from the U.S. Census Bureau for Polk County:

<https://www.census.gov/quickfacts/fact/table/polkcounyiowa/PST045217>

^c Information from the U.S. Census Bureau for Tulsa County:

<https://www.census.gov/quickfacts/fact/table/tulsacountyoklahoma/PST045217>,

Appendix B. Methods, Measurement, and Sampling

Appendix B includes a detailed description of the methods, measures, and samples included in the evaluation. Specifically, Appendix B provides details on the following:

- Random assignment of cases to judges
- Description of treatment contrasts
- Data sources
- Caregiver interviews
- Analytic samples
- Exploratory follow-up subsample
- Missing data and attrition
- Statistical power
- Baseline equivalence for full SBCT, judge-only, and control cases
- Baseline equivalence for the exploratory subsample

Random assignment of cases to judges

All participating sites randomly assigned cases to judges. We only used data from the time period when random assignment was in use. The following paragraphs describe the process for random assignment and the number of judges at each site:

- **Tulsa, Oklahoma:** In Tulsa, there was one judge with SBCT training and one control judge. Starting on June 1, 2015, families in Tulsa were randomly assigned to caseworkers due to a class action lawsuit against the state³ that claimed that caseworker caseloads were too high and were causing child maltreatment. Because there was a one-to-one correspondence between caseworkers and judges, there was de facto random assignment of families to judges as well. The number of cases randomly assigned during our study window—from June 1, 2015, through September 15, 2018—include 342 cases assigned to the SBCT judge and 435 cases assigned to the control judge. All cases are still randomly assigned as of 2019.
- **Little Rock, Arkansas:** In Little Rock, the court clerk randomly assigned the cases to either the judge with SBCT training or one of two judges who were not trained on the SBCT approach, using a round-robin process. The number of cases randomly assigned during our study window—from June 9, 2009, through June 30, 2019—include 222 cases assigned to the SBCT judge and 244 cases assigned to the control judge. All cases are still randomly assigned as of 2019.
- **Des Moines, Iowa:** From 2006 to 2009, cases were randomly assigned by the case coordinator to a judge with SBCT training or one of the five other judges who were not trained in the SBCT approach,

³ For more information, read *D.G. v. Yarbrough*: <https://www.childrensrights.org/wp-content/uploads/2012/05/Signed-Settlement-Agreement-1-4-2011.pdf>.

using a round-robin process. Between 2009 and 2014, the court moved away from random assignment and referred all cases with children under the age of 3 to receive the SBCT approach. Random assignment resumed in 2015, when the original SBCT judge retired, and a new SBCT Judge assumed responsibility for the SBCT docket. The new judge began presiding over SBCT cases starting on June 1, 2015. The number of cases randomly assigned during our study window—from July 1, 2015, through April 15, 2019—include 123 cases assigned to the SBCT judge and 383 cases assigned to the control judge. All cases are still randomly assigned as of 2019.

Description of treatment contrasts

Primary Impact Analyses: Combined SBCT Versus Control Cases

Because cases were randomly assigned to judges in all three sites, we were able to make an experimental comparison of the outcomes for cases. The primary impact analyses compared outcomes for children and families with cases assigned to a judge trained in SBCT (combined treatment group) and those randomly assigned to a control judge (control group).

The **control group** included cases that were randomly assigned to a judge who was not trained in the SBCT approach. Control families had access to all services typically available in child dependency courts, such as family visitation sessions and court hearings. However, control cases did not have access to a judge trained in the SBCT approach nor the innovative case management or court team.

The **combined treatment group** included cases that were randomly assigned to a judge who was trained in the SBCT approach. Importantly, not all cases within the combined treatment group received the full SBCT approach. Therefore, the primary impact analyses allowed for inferences about the effectiveness of being assigned to a judge who has received training in the SBCT approach versus one who has not.

Exploratory Analyses: Alternate Contrasts

We performed other exploratory contrasts with the child welfare data to better understand the effectiveness of components of the SBCT approach. The alternate contrasts include the comparison among different levels of treatment and the control group as follows:

- **Contrast 2:** Full SBCT versus control. This contrast provided evidence about whether receiving the “Full SBCT approach” is more effective than “business as usual.”
- **Contrast 3:** SBCT judge-only versus control. This contrast provided evidence about whether receiving an SBCT-trained judge but not the full SBCT approach is more effective than “business as usual.”
- **Contrast 4:** Full SBCT versus SBCT judge training. This contrast provided evidence about whether the full SBCT is more effective than only receiving an SBCT-trained judge without the community coordinator or court team.

By estimating the average outcomes between these different conditions and examining how the estimates are different from each other, we can identify the unique effect of the SBCT judge and single out the impact of the community coordinator and court team supports from the impact of having a willing, trained judge. Together, these contrasts answer important policy questions about whether offering SBCT to judges in a voluntary scale-up model could improve outcomes for infants and toddlers in foster care.

Data sources

The evaluation included seven total research questions: two impact research questions, three exploratory research questions, and two implementation research questions (see Box 1). The evaluation focused on determining the impact of the SBCT approach on two primary outcomes prioritized by the SBCT program: permanency (timely and successful permanent placements) and safety of the child (recurrence of abuse or neglect). Outcome data relied on **child welfare records** to document time to permanency and safety for both treatment and control families. To answer the exploratory research question, the study compared family and child well-being outcomes measured from interviews conducted through a **primary caregiver phone interview** with national samples and a sample of treatment and control families that exited the foster care system after 2016. To answer the research questions about implementation, we used three data sources: (1) **interviews with judges**, with a sample of treatment and control judges who preside over cases in each of the three sites (Little Rock, Tulsa, and Des Moines); (2) **interviews with SBCT community coordinators**; and (3) detailed SBCT data collected by the SBCT court teams and entered into the **SBCT database** at all three sites. Table B1 provides detail about each data element, including the definition, timing, and source.

Table B1. Data Elements

Data Element	Definition	Data Source
Child Welfare Records		
Child Race	The race of the child: White, African American, American Indian, or Asian/Pacific Islander	Extant data provided by the departments of human services in Little Rock, Tulsa and Des Moines.
Child Gender	The gender of the child: male or female	
Child Date of Birth	Date of birth for the child	
Reasons for Removal	Listed reasons that children were removed from the home, including abuse, neglect, parental drug abuse, parental incarceration, abandonment, relinquishment, and inadequate housing	
Removal Date	Date that a child was removed from the home	
Case Closure Date	Date of the first permanent placement is the date on which the child was discharged from foster care and the agency is no longer supervising or responsible for placement or care	
Primary Caregiver Phone Interview		
Child Well-Being	Child development scores on the Communication and Personal-Social scales from the Ages and Stages Questionnaire	Primary data collection from 2019
	Child scores on the Attachment/Relationships scale from the Devereux Early Childhood Assessment (DECA) Infant and Toddler Caregiver Form	
	Children’s health measures: Health Care Use, Insurance Coverage, Place of Care, and Overall Health from the National Survey of Children’s Health	
Family Well-Being	Social Support, Connecting to Resources, Problem Solving, Personal Care, and Parent-Child Interaction from the Healthy Families Parenting Inventory	
Judge Interview		
Experience and History	The length of time they have been working as a dependency court judge	Primary data collection from 2019
Random Assignment	The way that cases are assigned to their docket	
Approach to Cases	Their approach to cases with families that have young children	
Family Visitation	The factors that influence child placements and family visitation	
Services	Their approach to recommending developmental screenings and early intervention services	
Family Engagement	Their approach to engaging families	

Data Element	Definition	Data Source
Training	The types of training they have received	
System Relationships	How they create good working relationships with the child welfare agency	
Judicial Leadership	Their involvement in leadership work outside of the court	
Interview With Safe Babies Court Team Community Coordinator		
Core Components	Information on implementing and maintaining each of the core components	Primary data collection from 2019
ZERO TO THREE (ZTT) Database		
Developmental Screenings	The number and percentage of children who received developmental screenings	Extant data provided by ZTT
Early Intervention Services	The number and percentage of children who received early intervention services	
Placements	The number of placements for each child	
Family Team Meetings	The number of family team meetings for each family	
Family Visitation	The number of family visits that children received	

Child Welfare Records. Child welfare records included data for the two primary outcomes, time to permanency and recurrence of abuse and neglect, see Box 1 for more detail. The department of human services (DHS) data also provided important background characteristics on the child, family, and case. To increase the precision of our impact estimates, we included covariates in the impact models. Statistical models accounted for baseline characteristics related to child and parental demographic traits, and the specifics of the case. Child-level background characteristics include race, gender, and age at removal. Case-level background characteristics include removal due to abuse, neglect, parental drug or alcohol use, parental incarceration, abandonment, inadequate housing, and relinquishment.

Primary Caregiver Phone Interview. In addition to the data provided by DHS, data sources for the exploratory research questions consist of family and child well-being interviews completed by primary caregivers during a 60-minute phone interview conducted by trained research assistants. During the structured interview, caregivers reported on child and family well-being by providing verbal responses to questions from a number of validated assessment instruments and items from national surveys. Child well-being was measured using three instruments:

- Attachment scores on the Devereux Early Childhood Assessment (DECA) Infant and Toddler assessment forms (LeBuffe & Naglieri, 1999)
- Communication skills and personal-social skills on the Ages and Stages Questionnaire (ASQ; Bricker et al., 1999)
- Health items from the National Survey of Children’s Health (NSCH 2011–12)

Family well-being was measured using seven domains of the Healthy Families Parenting Inventory (Krysik & LeCroy, 2012).

Each item on the interview had a fixed set of possible response categories. We created scores for each scale according to the instructions for each instrument and used these derived, continuous and categorical measures as outcome variables in our models. We also created binary health indicators using the NSCH items to represent whether the child (a) has health insurance, (b) has a personal doctor, and (c) has attended the recommended number of well-child visits for his or her age.

Judge Interview. To document the treatment contrasts, at least one treatment judge and one control judge were interviewed in each SBCT location⁴ to identify their practices in the courtroom with 0–3 (infant and toddler) cases, as well as their practices with stakeholders, such as parents, agencies, and the broader community. Semistructured interviews that lasted between 30 and 45 minutes were conducted in late 2018 through summer 2019 over the telephone with nine judges across the three SBCT locations. The judicial interview was created specifically for this study and measured eight aspects of courtroom practices, including:

- Random Assignment: The way that cases are assigned to their docket
- Approach to Cases: Their approach to cases with families that have young children
- Family Visitation: The factors that influence child placements and family visitation
- Services: Their approach to recommending developmental screenings and early intervention services
- Family Engagement: Their approach to engaging families
- Training: The types of training they have received
- System Relationships: How they create good working relationships with the child welfare agency
- Judicial Leadership: Their involvement in leadership work outside of the court

All interviews were recorded and transcribed for use in qualitative analyses.

Community Coordinator Interview. Community coordinators also were interviewed to document SBCT implementation in the three study sites. The 60-minute, semistructured interview protocols were developed specifically for this study and measured each of the core components of the SBCT approach. The protocols first measured the extent to which each site received national support from ZTT and if the key local staff were present (the judge, community coordinator, stakeholder team, and family team). The protocols then asked about how the local actors implemented the remaining core components, including:

- Facilitating preremoval conferences
- Practicing concurrent planning for multiple permanency goals
- Limiting placements
- Increasing family visitation time
- Partnering with foster parents
- Providing mental health services to families and infants/toddlers

⁴ The control judge in Oklahoma had just recently taken on an SBCT caseload but had yet to hear any cases at the time of the interview, so a modified protocol was used to ask him questions related to practice as usual versus SBCT case practice.

- Valuing birth parents
- Using data to understand the impact of the work

ZTT Database. To measure implementation fidelity for SBCT cases, the study also relied on data entered into the ZTT database for each of the three sites. The ZTT database records detailed information about each full SBCT case. The database includes information on frequency of visitation, the extent to which visitation occurred or was cancelled or missed by families, the frequency and type of court hearings, the types of services that each child and caregiver receive, when those services were requested, the time to service receipt, the number and type of placements as well as date of any placement changes, and much more detailed information. These data were only available for the full SBCT cases and were used to quantitatively summarize implementation of the core components for the full SBCT cases.

Recruitment and methods for the caregiver interviews

The caregiver interview sample was constructed using a two-stage recruitment and consent process. In the first stage, SBCT project staff obtained consent from families to release their contact information to the American Institutes for Research (AIR) to be invited to participate in the interview. For cases that closed during the study period, caregivers were invited to participate by their attorney at the end of their case, and interested caregivers provided written consent to their attorney to share their contact information with AIR. For cases that closed prior to the study period, caregivers were informed about the study through existing relationships with community stakeholders (e.g., attorneys, SBCT members).

In the second stage, the AIR study team contacted interested parties to share information about the study, determine eligibility, and schedule the interview. Caregivers were eligible to participate if they were the permanent primary caregiver of a child (a) who was randomly assigned to an SBCT judge or case worker in one of the three study sites at the time they entered foster care, (b) whose case closed within the last 2 years, and (c) who was under the age of 36 months when removed from the home and no older than 7 years at the time of recruitment.

To recruit SBCT families for the caregiver interview, the community coordinators called families with available contact information and asked if they would agree to share their contact information with AIR for the purpose of the interview. AIR only contacted families that agreed and then asked again for the families' consent at the start of the interview. All participants were informed of the purpose of the interview, the procedures and duration, and the potential risks and benefits, and were provided verbal consent to participate at the time of the phone interview.

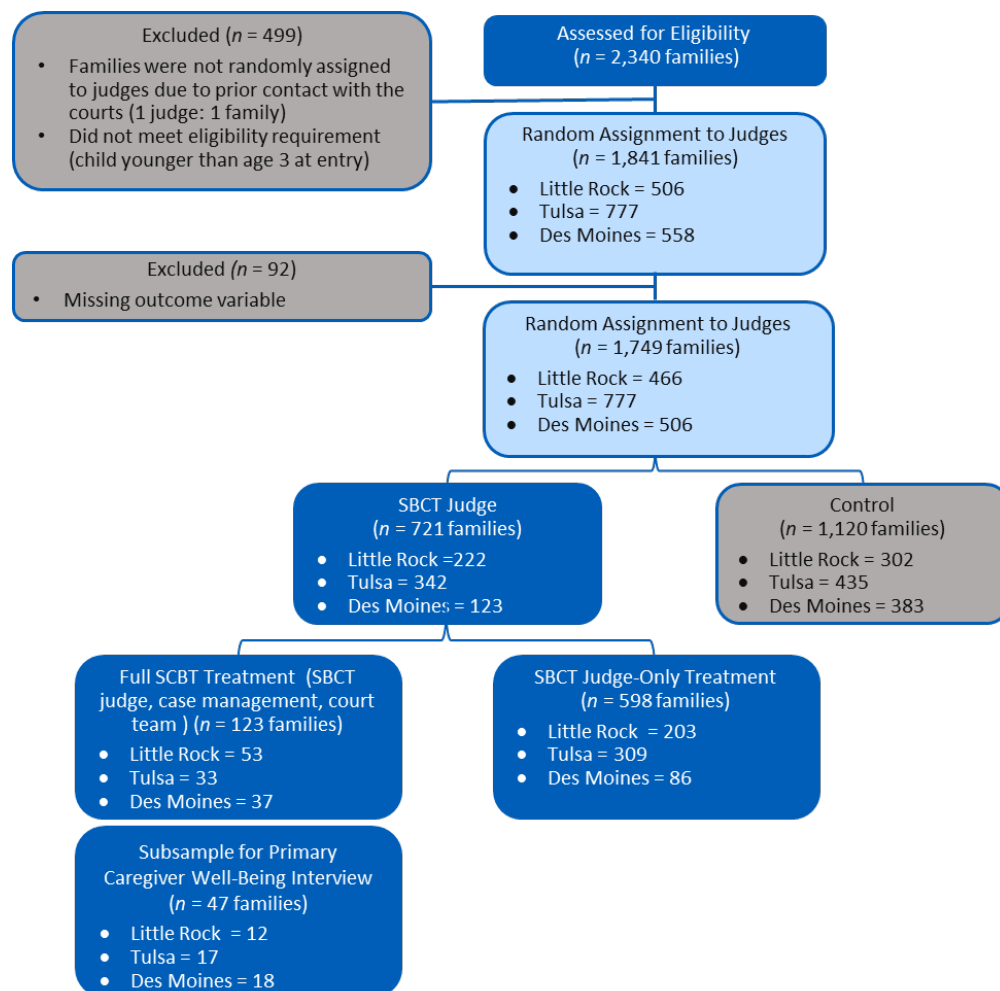
Analytic samples

To be eligible for inclusion in the evaluation, families needed to enter the child welfare system due to a substantiated claim of abuse or neglect that led to a child being removed from the home. At least one child in the family needed to be under the age of 3 (36 months) at removal. The family needed to reside in a county that implemented random assignment (Tulsa County, Oklahoma; Pulaski County, Arkansas; or Polk County, Iowa), and the case needed to open during a time when random assignment was confirmed in that site. Analyses occurred at the case level, and the sample included only one child per family. For all

cases (in both treatment and control) with more than one child under the age of 3 at the time of removal, we randomly selected one child to participate in the evaluation.⁵

Once we applied these eligibility criteria to the data provided by each state’s DHS, the full eligible sample included 1,841 cases. These included 123 full SBCT treatment cases (53 in Little Rock, 33 in Tulsa, and 37 in Des Moines). These 123 cases had access to the full SBCT approach, including an SBCT-trained judge, the community coordinator, and the court team. The sample also included 598 SBCT judge-only cases (203 in Little Rock, 309 in Tulsa, and 86 in Des Moines). These cases had access only to an SBCT judge to adjudicate their case and did not have access to the community coordinator or court team. The sample also included 1,120 control cases (302 in Little Rock, 435 in Tulsa, and 383 in Des Moines) that were assigned to judges who were not trained in the SBCT approach and did not have access to the community coordinator or court team (see Figure B1).

Figure B1. Consort Table for Analytic Sample in the Safe Babies Court Team Natural Experiment



⁵ We selected one child per family because, typically, all children in the same case follow the same trajectory and will have the same time to permanency. Multilevel modeling was not appropriate, despite the nested structure of the data, because there were many cases with only one child.

Primary Impact Contrast

Of the 1,841 cases in the eligible sample, 92 (4.9%) did not have any placement information in the data. Without placement information, we could not determine whether and when the children exited from foster care, as the foster care exit date was a key indicator for case closure by definition. Therefore, we removed the 92 cases from the analytic sample. As a result, the analytic sample included 1,749 cases. These included 122 full SBCT treatment cases (52 in Little Rock, 33 in Tulsa, and 37 in Des Moines), 565 SBCT judge-only cases (170 in Little Rock, 309 in Tulsa, and 86 in Des Moines), and 1,062 control cases (244 in Little Rock, 435 in Tulsa, and 383 in Des Moines).

Exploratory Analyses: Alternate Contrasts

Contrast 2: Full SBCT versus control

The full eligible sample for Contrast 2 included 1,243 cases. These included 123 full SBCT treatment cases (53 in Little Rock, 33 in Tulsa, and 37 in Des Moines) and 1,120 control cases (302 in Little Rock, 435 in Tulsa, and 383 in Des Moines). Of the 1,243 cases in the eligible sample, 59 did not have any placement information in the data. After removing these 59 cases, the analytic sample included 1,184 cases. These included 122 full SBCT treatment cases (52 in Little Rock, 33 in Tulsa, and 37 in Des Moines) and 1,062 control cases (244 in Little Rock, 435 in Tulsa, and 383 in Des Moines).

Contrast 3: SBCT judge-only versus control

The full eligible sample for Contrast 3 included 1,718 cases. These included 598 SBCT judge-only cases (203 in Little Rock, 309 in Tulsa, and 86 in Des Moines) and 1,120 control cases (302 in Little Rock, 435 in Tulsa, and 383 in Des Moines). Of the 1,718 cases in the eligible sample, 91 did not have any placement information in the data. After removing these 91 cases, the analytic sample included 1,627 cases. These included 565 SBCT judge-only cases (170 in Little Rock, 309 in Tulsa, and 86 in Des Moines) and 1,062 control cases (244 in Little Rock, 435 in Tulsa, and 383 in Des Moines).

Contrast 4: Full SBCT versus SBCT judge-only

The full eligible sample included 721 cases, and the analytic sample included 687 cases. Detailed case assignment by group can be found in descriptions of Contrasts 2 and 3.

Exploratory subsample of primary caregiver interviews

The exploratory subsample of 74 families that participated in the primary caregiver interview included 47 full SBCT families and 27 control families whose cases closed within the past 2 years. Response rates were different for the SBCT and control families. The response rate was 78% for SBCT families and 10% for control families. Due to the low response rates from control families, we did not include their data in the analyses on long-term follow-up on child and family well-being. Instead, we compared responses from the SBCT families with national averages from published research that used the same measures. The SBCT sample represents families from across all three sites and includes 65% adoptive parents, 28% reunified parents, and 7% legal guardians. However, this subsample is not representative of the broader sample of individuals with DHS data. Families with better long-term well-being were presumably more likely to participate relative to caregivers of children who were struggling, leading to selection bias among participants with caregiver interview data. For these reasons, findings from the caregiver interviews are considered exploratory and cannot support strong conclusions.

Judicial and community coordinator interview samples

To document the treatment contrasts, at least one treatment judge and one control judge were interviewed in each SBCT location.⁶ Recommendations for interview subjects were provided by ZTT staff, who also helped facilitate outreach and scheduling with each judge. Semistructured interviews that lasted between 30 and 45 minutes were conducted in late 2018 through summer 2019 over the telephone with nine judges across the three SBCT locations. All judges, except for one treatment judge, also hear cases of older children (i.e., 4 years and older), and some preside over juvenile delinquency cases. In Des Moines we interviewed 3 SBCT and 2 control judges. In Little Rock, we interviewed 1 SBCT and 1 control judge. In Tulsa we interviewed 1 SBCT and 1 control judge.

We also conducted semistructured 45- to 60-minute telephone interviews with a total of five community coordinators. This included two former coordinators who were present at the initial implementation of their site and now provide training and technical support, and the current coordinator at each of the three sites. Interviews were audio-recorded. A professional transcription service was used to transcribe the interview audio files.

Missing data

The rate of missing data was low—4.9% overall. In addition, the rate of missing data for SBCT cases was 4.7%, and 5.2% for control cases. The differential missing data rate (difference in missing data between the intervention and comparison groups) was 0.5%. The low rates of missing data and nondifferential rates of missing data allowed us to use listwise deletion in models without introducing substantial bias into the statistical models.

The rates of missing data also were low for the exploratory analyses. For alternate Contrast 2, the overall missing data rate was 4.7%, and the differential missing data rate was 4.4%; for alternate Contrast 3, the overall missing data rate was 5.3%, and the differential missing data rate was 0.3%; and for alternate Contrast 4, the overall missing data rate was 4.7% and the differential missing data rate was 4.7%.

For the exploratory follow-up interview subsample, participants with missing data on individual measures were included when possible, and item-level missing data were addressed according to the scoring instructions for each instrument. Sample sizes for individual models ranged from 58 to 74 participants (0–22% missing). These data should be interpreted with caution given the low sample size, higher rates of missing data, and differential response rates described above.

Power

The study had adequate statistical power to detect statistically significant differences between treatment and control cases on time to permanency and recurrence of abuse or neglect. Power analyses suggest a minimum detectable effect size (MDES) of 0.17 of a standard deviation given our study design and a sample size of 1,749 (687 full SBCT and SBCT judge-only families, and 1,062 control cases).

⁶ The control judge in Oklahoma had just recently taken on an SBCT caseload but had yet to hear any cases at the time of the interview, so a modified protocol was used to ask him questions related to practice as usual versus SBCT case practice.

Of the 1,749 cases, only 1,173 had a case closure for the initial removal of the child during the window when data were collected (523 full SBCT and SBCT judge-only families, and 650 control cases).⁷ For the recurrence of abuse or neglect outcome, we focused on a subsample of those 1,173 cases that had an initial case closure for which we have an MDES of 0.15 of a standard deviation. For both of the outcomes, we assumed that children would be nested in three sites and that the blocking variable (site) and individual-level covariates would explain 15% of the total sample variance in the outcomes. We also assumed an alpha level of 0.05 and a statistical power of 0.80 with a two-tailed test. Within the fiscal and logistical constraints of the study, this provides us with sufficient statistical power to detect meaningful program effects on permanency and safety.

Baseline equivalence for full SBCT, judge-only, and control cases

The goal of this natural experiment was to leverage random assignment to create two groups that were equivalent on all observed and unobserved characteristics at entry to foster care. To test for baseline equivalence, we calculated the standardized mean differences in observable characteristics of children and cases across the treatment and control groups (see Tables B2 and B3). We also tested for baseline equivalence on characteristics for the other contrasts of interest: the full SBCT group contrasted with the control group, the SBCT judge-only group contrasted with the control group, and the full SBCT group contrasted with the SBCT judge-only group. Results from these analyses indicated small differences on the following background characteristics with standardized mean differences (Hedges's *g*) larger than 0.05 but smaller than 0.25:

- Gender: Female
- Race: White, American Indian, African American, and other racial group
- Removal Reasons: Abuse, Neglect, Parental Drug/Alcohol Use, Parent Incarceration, Inadequate Housing, and Relinquishment

To account for these baseline differences, these covariates were included in all impact analyses as covariates.

To examine the impact of the SBCT approach on recurrence of abuse or neglect, we used a subsample of the data—that is, we narrowed the sample to the children who had a case closure in the initial removal. We tested for baseline equivalence on observable child and case characteristics across the four contrasts of interest. The background characteristics with standardized mean differences (Hedges's *g*) larger than 0.05 but smaller than 0.25 were included in all impact analyses as covariates (see Tables B2 and B3). These included:

- Gender: Female
- Race: White, American Indian, African American, and other racial group
- Removal Reasons: Abuse, Neglect, Parental Drug/Alcohol Use, Parent Incarceration, and Inadequate Housing
- Child Outcome: Time to permanency also was included in all impact analyses to increase the accuracy of the models, given that SBCT cases exited foster care sooner than control cases.

⁷ Recurrence only applies to those who had a case closure for the initial case. Because more SBCT children reached permanency than control children, we are losing more control children to this outcome variable.

Table B2. Baseline Characteristics of Children and Removal Reasons for All Contrasts in the Analysis of Time to Permanency

Characteristic	Full SBCT			SBCT Judge-Only			Control			Treatment (Full SBCT and SBCT Judge-Only) vs. Control Standardized Mean Difference (Contrast 1)		Full SBCT vs. Control Standardized Mean Difference (Contrast 2)		SBCT Judge-Only vs. Control Standardized Mean Difference (Contrast 3)		Full SBCT vs. SBCT Judge-Only Standardized Mean Difference (Contrast 4)	
	Child N	Mean	Standard deviation	Child N	Mean	Standard deviation	Child N	Mean	Standard deviation	Hedges's g	p-value	Hedges's g	p-value	Hedges's g	p-value	Hedges's g	p-value
Child Characteristics																	
Female	122	0.53	0.50	565	0.52	0.50	1,062	0.47	0.50	-0.09	0.06	-0.12	0.25	-0.03	0.78	-0.09	0.06
White	122	0.50	0.50	565	0.50	0.50	1,062	0.53	0.50	0.06	0.69	0.05	0.92	-0.01	0.98	0.06	0.69
American Indian	122	0.07	0.25	565	0.12	0.33	1,062	0.09	0.29	-0.06	1.00	0.10	0.96	0.18	0.84	-0.06	1.00
African American	122	0.30	0.46	565	0.30	0.46	1,062	0.27	0.44	-0.08	0.83	-0.08	0.69	-0.01	0.95	-0.08	0.83
Other Racial Group	122	0.13	0.34	565	0.08	0.27	1,062	0.11	0.32	0.08	0.29	-0.06	0.49	-0.18	0.98	0.08	0.29
Age at Removal	122	0.85	0.91	565	0.87	0.93	1,062	0.86	0.92	0.00	0.83	0.01	0.77	0.02	0.84	0.00	0.83
Removal Reasons																	
Abuse	118	0.12	0.32	562	0.15	0.36	1,045	0.13	0.33	-0.05	0.95	0.03	0.42	0.09	0.77	-0.05	0.95
Neglect	118	0.44	0.50	562	0.53	0.50	1,045	0.45	0.50	-0.12	0.64	0.03	0.55	0.18	0.78	-0.12	0.64
Parental Drug/Alcohol Use	118	0.55	0.50	562	0.56	0.50	1,045	0.59	0.49	0.06	0.45	0.08	0.76	0.02	0.40	0.06	0.45
Parent Incarceration	118	0.08	0.27	562	0.08	0.27	1,045	0.05	0.22	-0.12	0.09	-0.12	0.55	0.01	0.75	-0.12	0.09
Abandonment	118	0.01	0.09	562	0.03	0.17	1,045	0.02	0.15	-0.02	0.79	0.10	0.06	0.14	0.18	-0.02	0.79
Inadequate Housing	118	0.06	0.24	562	0.11	0.31	1,045	0.07	0.26	-0.09	0.51	0.06	0.50	0.16	0.17	-0.09	0.51
Relinquishment	118	0.01	0.09	562	0.00	0.04	1,045	0.00	0.03	-0.04	0.27	-0.18	0.38	-0.12	0.50	-0.05	0.27

Note. The *p* values are derived from likelihood ratio tests of global equivalence with a model that predicts the characteristics using contrast assignment. The model also accounts for the clustering of children within sites as well as removal year by using fixed effects for sites and year of removal.

Table B3. Baseline Characteristics of Children and Removal Reasons for All Contrasts in the Analysis of Recurrence of Abuse or Neglect

Characteristic	Full SBCT			SBCT Judge-Only			Control			Treatment (Full SBCT and SBCT Judge-Only) vs. Control Standardized Mean Difference (Contrast 1)		Full SBCT vs. Control Standardized Mean Difference (Contrast 2)		SBCT Judge-Only vs. Control Standardized Mean Difference (Contrast 3)		Full SBCT vs. SBCT Judge-Only Standardized Mean Difference (Contrast 4)	
	Child N	Mean	Standard deviation	Child N	Mean	Standard deviation	Child N	Mean	Standard deviation	Hedges's g	p-value	Hedges's g	p-value	Hedges's g	p-value	Hedges's g	p-value
Child Characteristics																	
Female	88	0.47	0.50	435	0.51	0.50	650	0.46	0.50	0.08	0.06	0.00	0.25	0.10	0.12	-0.10	0.78
White	88	0.49	0.50	435	0.50	0.50	650	0.51	0.50	-0.03	0.69	-0.05	0.92	-0.02	0.67	-0.02	0.98
American Indian	88	0.08	0.27	435	0.12	0.32	650	0.10	0.29	0.05	0.99	-0.05	0.96	0.07	0.99	-0.12	0.84
African American	88	0.35	0.48	435	0.32	0.47	650	0.30	0.46	0.04	0.83	0.10	0.69	0.03	0.97	0.07	0.95
Other Racial Group	88	0.08	0.27	435	0.06	0.25	650	0.09	0.28	-0.08	0.29	-0.03	0.49	-0.09	0.38	0.06	0.98
Age at Removal	88	0.87	0.93	435	0.88	0.93	650	0.83	0.90	0.06	0.83	0.04	0.77	0.06	0.92	-0.02	0.84
Removal Reasons																	
Abuse	87	0.15	0.36	434	0.17	0.38	646	0.15	0.35	0.06	0.95	0.01	0.42	0.07	0.87	-0.06	0.77
Neglect	87	0.51	0.50	434	0.57	0.50	646	0.48	0.50	0.15	0.64	0.05	0.55	0.17	0.81	-0.13	0.78
Parental Drug/Alcohol Use	87	0.51	0.50	434	0.51	0.50	646	0.56	0.50	-0.09	0.45	-0.10	0.76	-0.09	0.38	-0.01	0.40
Parent Incarceration	87	0.06	0.23	434	0.08	0.27	646	0.05	0.23	0.08	0.09	0.01	0.55	0.10	0.11	-0.08	0.75
Abandonment	87	0.01	0.11	434	0.03	0.18	646	0.03	0.17	0.00	0.79	-0.11	0.06	0.02	0.94	-0.12	0.18
Inadequate Housing	87	0.07	0.25	434	0.11	0.31	646	0.09	0.29	0.04	0.51	-0.08	0.50	0.06	0.33	-0.13	0.17
Relinquishment	87	0.01	0.11	434	0.00	0.05	646	0.00	0.04	0.05	0.27	0.19	0.38	0.02	0.43	0.15	0.50

Appendix C. Analytic Approach

Appendix C includes a detailed description of the analytic approach used in the evaluation. Specifically, Appendix C provides a summary of the:

- Primary impact model for analyses of time to permanency
- Primary impact model for analyses of the recurrence of abuse and neglect
- Sensitivity analyses
- Exploratory child and family well-being analyses
- Implementation analyses

To answer the research question, *Do infants and toddlers who receive the full SBCT treatment or judge-only spend less time in foster care than their control group peers?* We used the Cox proportional hazards model and survival model to examine the estimated median time spent (in days) in foster care in both treatment and control groups.

To answer the research question, *Do infants and toddlers who receive the full SBCT treatment or judge-only have lower recurrence rates of abuse or neglect than their control group peers?* We used a logistic regression model to examine whether there is a significant difference between treatment and control groups in the chance of recurrence of removal.

To answer the research question, *Is long-term child and family well-being better for families who receive the full SBCT approach compared with national averages?* We examined descriptive statistics from the caregiver interviews and compared the findings with other nationally representative or community samples that use the same data sources or instruments.

Primary impact model: Time to permanency

We used the Cox proportional hazards model for the censored and time-dependent outcome of permanency. The model is appropriate for use when outcomes data include time to an event—in this case, exiting foster care. The model can adequately address the nonnormal distribution of time to an event, specifically right-censored data. Our data included right-censored data for children from families whose cases are still open; therefore, there was no known foster care exit date at the point of analysis.

The hazard function for this model is as follows:

$$h(t) = \lambda(t|Y_i) = \lambda_0(t) \exp(\beta_1 TRT_i + \beta_2 SITE_i + \beta_3 X_i) + \varepsilon_i$$

In this model, Y_i represents an outcome Y for child i (e.g., time to permanency) at a given time t . TRT_i is the treatment indicator (0 for control children and 1 for children assigned to an SBCT judge), and X_i is a vector of prerandom-assignment background characteristics included to increase the precision of the estimate of the impact of SBCT. The covariates include child age of entry into foster care, calendar year of entry into foster care, race, and removal reasons. $SITE_i$ also includes two site dummy variables (fixed effects) identifying each site in which the cases are adjudicated. These fixed effects accounted for the

unobserved similarities between families who live in the same city and are served by the same district courts (Tulsa, Little Rock, or Des Moines).

Two diagnostic checks were conducted to confirm that the fitted Cox model adequately describes the data. First, we tested the assumption of proportional hazards, or that the hazard curves for the two groups are proportional and do not cross. This was assessed by testing the relationship between Schoenfeld residuals for the treatment indicator and time. A nonsignificant relationship would constitute support for the proportionality assumption. Second, we assessed the presence of influential observations or outliers by plotting deviance residuals, examining their symmetry around 0, and estimating the changes in regression coefficients upon deleting individual observations in turn.

The proportionality assumption held, and after adjusting for any influential observations, we proceeded with our focal tests. The Cox proportional hazards model estimates the hazard function at time t for child i . The hazards function estimates the instantaneous probability of occurrence of the event (i.e., permanency, operationalized as exiting foster care) at time t . If the coefficient on treatment is statistically significant and positive, that would suggest that children assigned to SBCT judges generally had a higher probability of reaching permanency than their control group peers at a given time. Last, ϵ_i is a random error term that captures the variance between children in the sample.

The hazard function, $h(t)$, provides us with the instantaneous rate at which events occur, given no previous events. However, to answer research question RQ1, we needed to estimate the time a child would stay in foster care based on a likelihood function of staying in foster care by duration t . To achieve the goal, first, we estimated the cumulative hazard function based on the proportional hazard function by adding the accumulated risk up to time t :

$$H(t) = \int_0^t h(u) du$$

We then used the cumulative hazard function to estimate the sample survival function that entails the probability that a child will remain in foster care past time t :

$$S(t) = \exp(-H(t)) = \exp\left[-\int_0^t \lambda_0(u) \exp(\beta_1 TRT_i + \beta_2 SITE_i + \beta_3 X_i) du\right]$$

Based on the survival function, we computed a summary statistic of the median time spent in foster care. When the sample survival function equals 0.50, half of the children in the sample exited foster care and half had not. To address the initial question of whether cases assigned to an SBCT judge spend less time in foster care than their control group peers, we evaluated the direction and magnitude of the coefficient on the treatment indicator, TRT_i , using the Wald test. A positive and statistically significant coefficient would mean that the rate of permanent placement is higher for children in the SBCT condition relative to controls. The exponentiated coefficient, or hazard ratio, was used to understand the effect size of this coefficient. We also examined and reported the median time to permanency in each condition as a more interpretable metric for examining SBCT effects.

Primary impact model: Recurrence of abuse and neglect

Because we were not able to calculate the time to recurrence of abuse or neglect due to data availability, we used logistic regression models with fixed effects for sites. Baseline child- and case-level background

characteristics were included to improve the precision of the treatment estimate. The equation for the binary outcomes is specified in the following formula:

$$\eta = \beta_0 + \beta_1(\text{SBCT}) + \beta_2\sum(\text{site ID dummy variables}) + \beta_3\sum(\text{child and case background characteristics}) + \beta_4\text{Time}$$

where $\eta = \log(\varphi / 1 - \varphi)$ is the log of the odds of the binary outcome of interest.

SBCT is an indicator variable set to 1 for cases assigned to an SBCT judge (full SBCT and SBCT judge-only), and 0 for cases assigned to a control judge; β_0 represents the log odds of the binary outcome of interest (for example, exiting foster care within 6 months) when all covariates are 0; β_1 captures the impact of SBCT (or the difference in log odds of the binary outcome of interest between cases assigned to an SBCT judge and a control judge, controlling for all child- and case-level background characteristics); β_2 represents the vector of coefficients for the site-level dummy indicators; β_3 represents the vector of coefficients for child- and case-level background characteristics (including age at removal, gender, racial/ethnic minority group, and removal reason); and β_4 controls for the time to permanency (in days).

If β_1 is statistically significant and negative, it would suggest that cases assigned to an SBCT judge have a lower probability of recurrence than their control group peers. Standardized differences for binary outcomes are measured using the Cox index effect size. Cox index effect sizes are standardized differences in the probability of the occurrence of an event. They yield effect-size values similar to the values of Hedges's g that one would obtain if group means, standard deviations, and sample sizes were available, assuming that the dichotomous outcome measure is based on an underlying normal distribution. If the standardized difference for the binary outcomes is larger than 0.20, this would suggest a policy-relevant difference in recurrence of abuse or neglect between cases assigned to SBCT judges and cases assigned to control judges.

Sensitivity analyses

We conducted a series of sensitivity analyses to determine if the impact of SBCT was robust to different model specifications and operationalization of the binary outcome variables. We describe these sensitivity analyses here and show the results in Appendix D.

First, we tested the impact of including cases with ambiguous judge assignment from the primary impact analyses. In Des Moines, 45 cases had two judges listed in the department of human services (DHS) data. Similarly, 89 cases from Tulsa were labeled as having both control and treatment judges. Although we were able to determine that these cases were not full SBCT cases by cross-referencing them with the ZERO TO THREE (ZTT) data, we could not determine if these cases were SBCT judge-only or control cases. These cases were excluded from the primary impact analyses because they may not have been randomly assigned to judges. Exceptions to random assignment might occur because of the one-family/one-judge policy, where judges are assigned to adjudicate cases if they have previously worked with a family member involved with the new case.

To examine how the cases with missing or contradictory judge assignment information may change the primary impact findings, we conducted sensitivity analyses to test the impact of excluding cases with ambiguous judge assignment from the primary impact analyses. Two sensitivity analyses tested whether

excluding these cases change the statistical significance, direction, or magnitude of the impact estimate. These sensitivity analyses include three models:

- Model 1a assigned all ambiguous judge assignment cases to SBCT judges (the SBCT Judge-only group).
- Model 1b assigned all ambiguous judge assignment cases to control judges.
- Model 1c used a random sampling procedure to randomly assign each case with ambiguous judge assignment to either an SBCT judge or a control judge.

In addition to testing the impact of including cases with ambiguous judge assignment, we tested the impact of SBCT on time to permanency and recurrence of abuse and neglect using the same model(s) specified above in the primary impact analysis section, but excluded all child- and case-level covariates. These models retained the dummy variables for site.

Exploratory child and family well-being analyses

To understand the child and family well-being of families who participated in the SBCT approach after case closure, we examined descriptive statistics from the caregiver interviews. These descriptive statistics present outcomes for families who participated in the SBCT approach up to 2 years post-case closure. We contextualized these findings with other nationally representative or community samples that use the same data sources or instruments.

To contextualize child well-being among SBCT families in our study, we compared outcomes from the treatment group with those from the general population using data from normative and nationally representative samples. The extant data sources used for comparisons included:

- 2017–18 National Survey of Children’s Health, which provides national norms on child health
- Two studies that reported Devereux Early Childhood Assessment (DECA) scores for samples with similar risk to the SBCT sample:
 - The identified sample was reported in LeBuffe and Shapiro (2004).
 - The Head Start sample was reported in Lien and Carlson (2009).
 - The community sample was reported in both studies.
- The 2,088 participants included in the validation study for the Healthy Families Parenting Inventory (HFPI) instrument (Krysiak & LeCroy, 2012).

Implementation analyses

The implementation analyses answered two research questions:

- To what extent was each of the SBCT core components implemented in each site?
- To what extent do trained judges and control judges differ?

Documenting Fidelity of SBCT Implementation

To answer the first implementation research question, we qualitatively analyzed data from the community coordinator and judicial interviews, and conducted descriptive statistics using quantitative data collected

in the ZTT database. First, transcribed interview data were analyzed using the qualitative coding software NVivo 12 for both community coordinator and judicial interviews to identify site-level implementation patterns. Data were analyzed based on a hierarchical coding strategy that was organized according to the SBCT core components. These codes provided a narrative for the presence and evolution of each core component by site and were contrasted across sites to provide a broader story of implementation. We also analyzed detailed case-level implementation data collected at each site through ZTT's SBCT database. These data included information such as the number of family team meetings, frequency of family visitation, and number of placements for each case.

Documenting the Treatment Contrasts: How did SBCT and control judges differ in their practices?

Judicial interview data were qualitatively analyzed to identify the presence or absence of key judicial practices in SBCT and control courtrooms. Two independent members of the research team reviewed interview transcripts and notes, and developed a coding protocol to analyze and summarize answers within and across sites and conditions.

Appendix D. Detailed Information on the Findings

Appendix D includes the detailed findings of the study. Specifically, Appendix D provides a summary of:

- Primary impact findings for the time to permanency outcome
- Exploratory impact findings for the time to permanency outcome
- Primary impact findings for recurrence of abuse or neglect
- Exploratory impact findings for recurrence of abuse or neglect
- Sensitivity analyses
- Exploratory analyses
- Detailed implementation findings

Primary impact findings: Time to permanency

Descriptive Statistics for Time to Permanency

Overall, 67% of the sample exited foster care within the time the study was conducted (see Table D1). Of the total sample, 76% of children in the combined treatment group had a permanent placement, while 61% of children in the control group had a permanent placement. Among the children who had a permanent placement, it took them an average of 454 days to reach permanency from the time of initial removal. Children in the combined treatment group took an average of 418 days, while children in the control group took an average of 482 days. These descriptive statistics do not necessarily align with the model-based estimates because they exclude all cases that are still open at the time of analysis, while the Cox proportional hazards regression models included these cases and adjusted for the censored data.

Table D1. Descriptive Analysis of Time to Permanency

Outcome	Overall			Combined Treatment			Control		
	Child N	Mean	Standard Deviation	Child N	Mean	Standard Deviation	Child N	Mean	Standard Deviation
Case Closed, Achieved Permanency (binary)	1,749	67%	0.47	687	76%	0.43	1,062	61%	0.49
Time to Permanency (days, continuous)	1,173	453.71	271.32	523	418.33	259.00	650	482.18	277.77

Cox Proportional Hazards Model Analysis for Time to Permanency

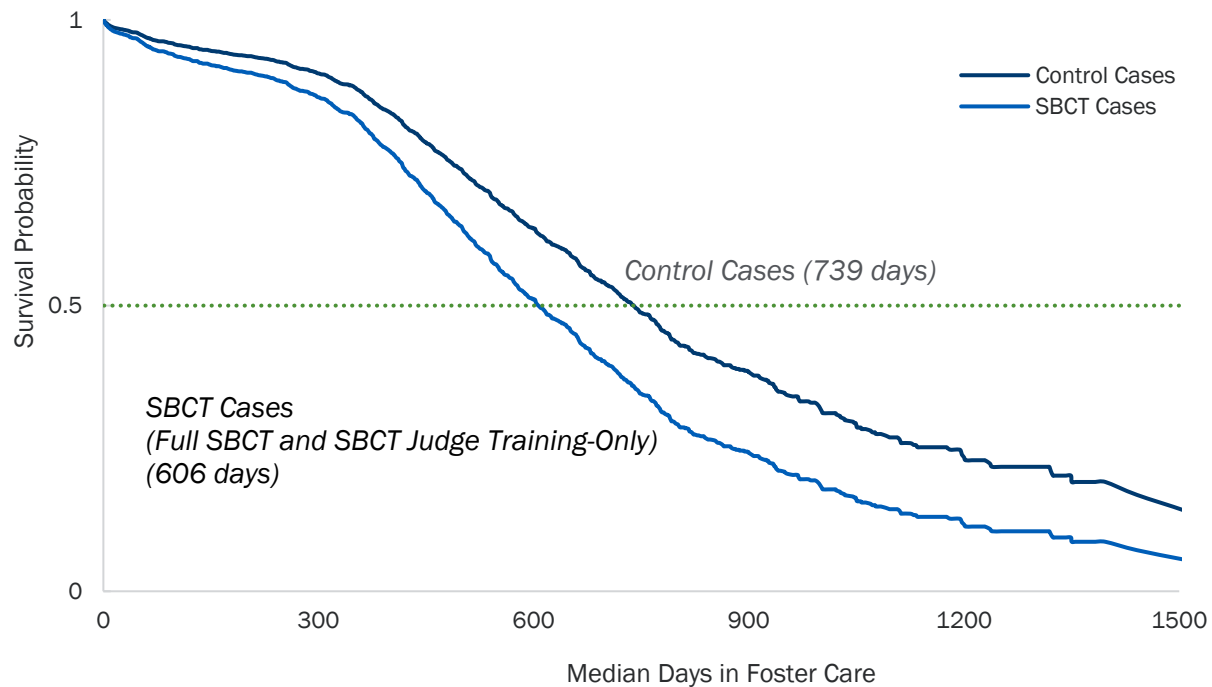
Cox proportional hazards regression models suggest that children in the combined treatment condition were 48% more likely to reach permanency than their control peers during the study period: HR = 1.48, $p < 0.05$ (see Table D2). Based on the survival function, we computed a summary statistic of the median

time spent in foster care. When the sample survival function equals 0.50, half of the children in the sample have exited foster care and achieved permanency. The estimated median time spent in foster care for children in the combined treatment condition was 606 days, while the median time spent for children in the control condition was 739 days (see Figure D1).

Table D2. Cox Proportional Hazards Model Coefficients (Hazard Ratios, Standard Errors, P-Values, and 95% Confidence Intervals) of the Combined Treatment Versus Control and Covariates

	Hazard Ratio	Standard Error	P-Value	95% Confidence Interval	
Condition (ref. Control)					
Combined Treatment	1.48	0.09	0.00	1.31	1.67
Race (ref. White)					
American Indian	0.85	0.09	0.12	0.69	1.04
African American	0.87	0.06	0.05	0.76	1.00
Other Race	0.88	0.11	0.28	0.69	1.11
Gender (ref. Male)					
Female	1.01	0.06	0.86	0.90	1.14
Site (ref. Des Moines)					
Tulsa	2.19	0.22	0.00	1.81	2.66
Little Rock	2.78	0.32	0.00	2.22	3.49
Removal Reasons					
Abuse	1.33	0.11	0.00	1.12	1.57
Neglect	1.05	0.07	0.51	0.92	1.19
Parent Drug Use	0.98	0.07	0.80	0.86	1.12
Parent Incarcerated	1.00	0.12	0.98	0.78	1.27
Inadequate Housing	0.86	0.09	0.16	0.71	1.06
Relinquishment	2.73	1.60	0.09	0.87	8.61

Figure D1. Survival Function of Time to Permanent Placement for SBCT Versus Control Cases



Exploratory impact findings: Time to permanency

Exploratory Analyses: Full SBCT Versus the Control Group

Descriptive analysis for the full SBCT versus the control group

Of the sample, 72% of children in the full SBCT group had a permanent placement, while 61% of children in the control group had a permanent placement (see Table D3). For closed cases, children in the full SBCT group took an average of 440 days to reach a permanent placement, while children in the control group took an average of 482 days.

Table D3. Descriptive Analysis of the Outcome Variables for the Full SBCT Versus the Control Group

Outcome	Full SBCT			Control		
	Child N	Mean	Standard Deviation	Child N	Mean	Standard Deviation
Permanent Placement (binary)	122	72%	0.45	1,062	61%	0.49
Time to Permanency (days, continuous)	88	439.86	210.33	650	482.18	277.77

Cox proportional hazards model analysis for the full SBCT versus the control group

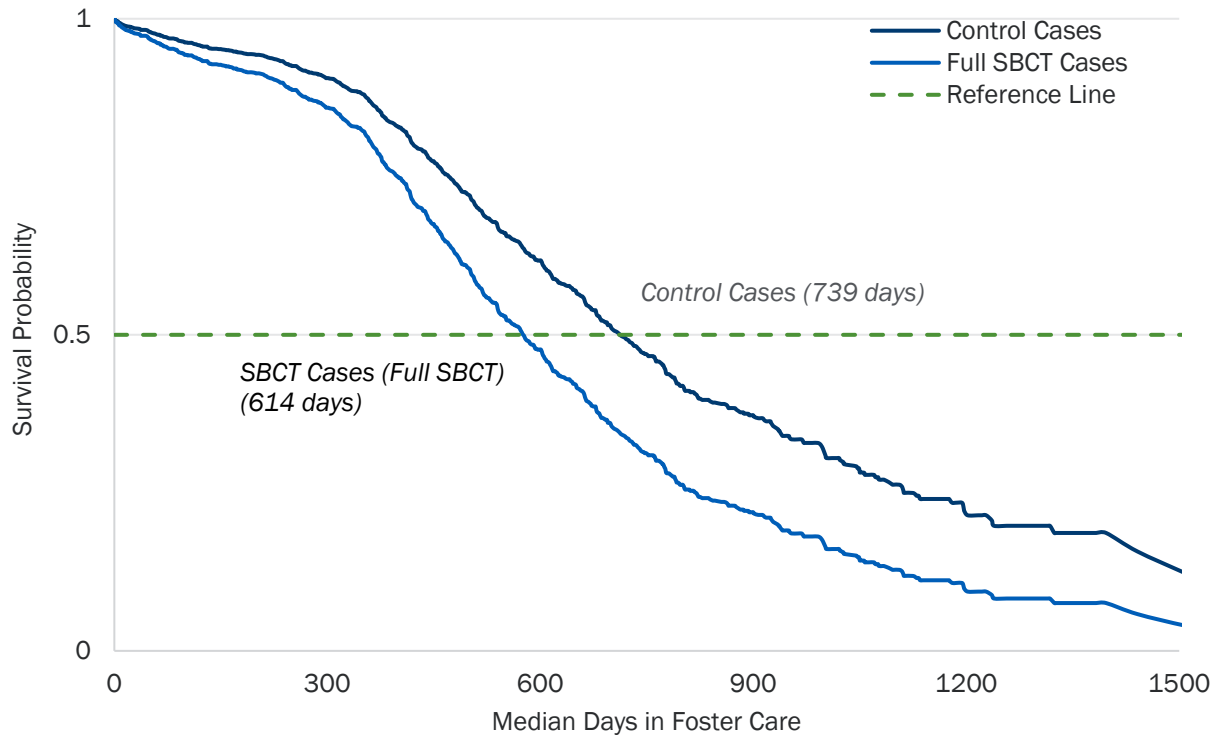
Results suggested that children in the full SBCT condition were 54% more likely to reach permanency than their control peers during the study period: HR = 1.54, $p < 0.01$ (see Table D4). Based on the

survival function, we computed a summary statistic of the median time spent in foster care. When the sample survival function equals 0.50, half of the children in the sample have left foster care. Results indicated that the median time spent in foster care for children in the full SBCT condition was 614 days, while the median time spent for children in the control condition was 739 days (see Figure D2).

Table D4. Cox Proportional Hazards Model Coefficients (Hazard Ratios, Standard Errors, *P*-Values, and 95% Confidence Intervals) of the Experimental Condition (Full SBCT Versus Control) and Covariates

	Hazard Ratio	Standard Error	<i>P</i> -Value	95% Confidence Interval	
Condition (ref. Control)					
Full SBCT	1.54	0.18	0.00	1.21	1.95
Race (ref. White)					
American Indian	0.81	0.12	0.14	0.61	1.07
African American	0.89	0.08	0.22	0.75	1.07
Other Race	1.00	0.14	0.98	0.75	1.32
Gender (ref. Male)					
Female	1.01	0.08	0.85	0.87	1.18
Site (ref. Des Moines)					
Tulsa	2.39	0.28	0.00	1.90	3.01
Little Rock	2.44	0.34	0.00	1.85	3.21
Removal Reasons					
Abuse	1.26	0.14	0.04	1.01	1.58
Neglect	1.03	0.09	0.71	0.87	1.23
Parent Drug Use	1.01	0.09	0.90	0.85	1.21
Parent Incarcerated	0.99	0.17	0.93	0.70	1.38
Inadequate Housing	0.98	0.13	0.86	0.75	1.28
Relinquishment	1.66	1.21	0.49	0.40	6.90

Figure D2. Survival Function of Time to Permanent Placement for Full SBCT Versus Control Cases



Exploratory Analyses: SBCT Judge-Only Versus the Control Group

Descriptive analyses of time to permanency for the SBCT judge-only versus the control group

Of the sample, 77% of children in the SBCT judge-only group had a permanent placement, while 61% of children in the control group had a permanent placement (see Table D5). Children in the SBCT judge-only group took an average of 414 days to reach a permanent placement, while children in the control group took an average of 482 days.

Table D5. Descriptive Analysis of the Outcome Variables

Outcome	SBCT Judge-Only			Control		
	Child N	Mean	Standard Deviation	Child N	Mean	Standard Deviation
Permanent Placement (binary)	565	77%	0.42	1,062	0.61	0.49
Time to Permanency (days, continuous)	435	413.97	267.78	650	482.18	277.77

Cox proportional hazards model analysis for SBCT judge-only versus the control group

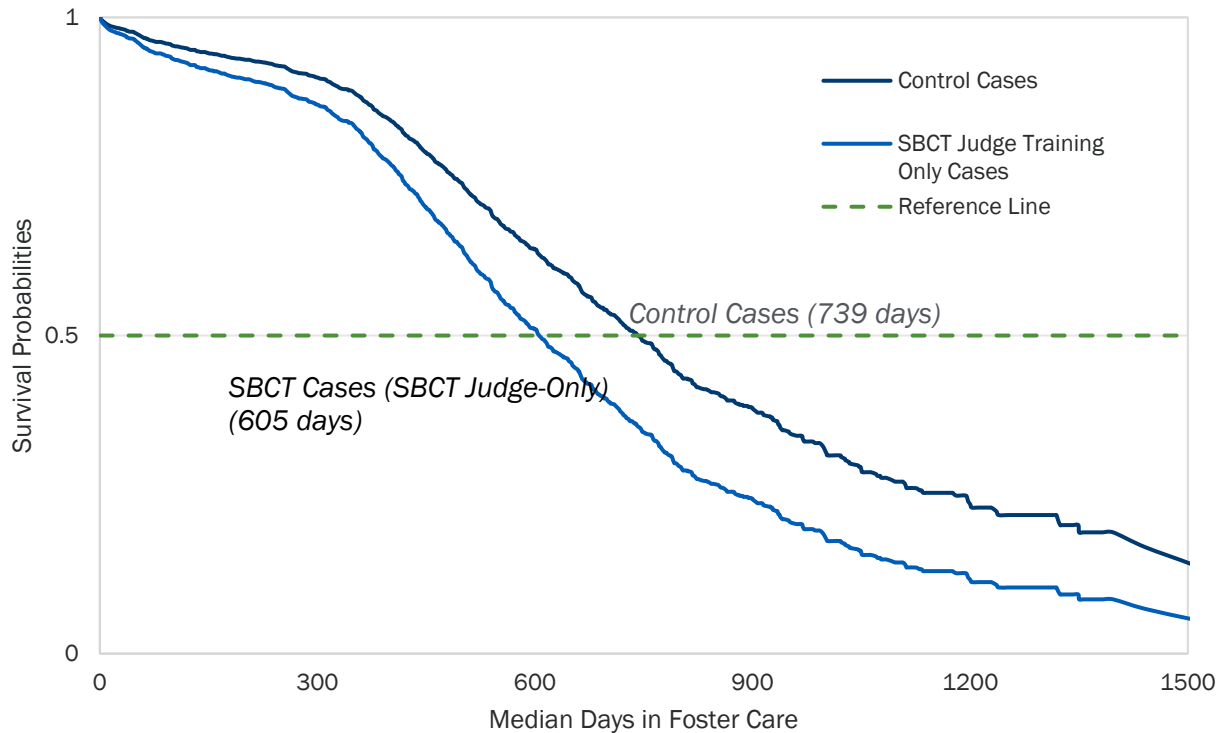
Results suggested that children in the SBCT judge-only condition were 49% more likely to reach permanency than their control peers: HR = 1.49, $p < 0.01$ (see Table D6). Based on the survival function, we computed a summary statistic of the median time spent in foster care. When the sample survival

function equals 0.50, half of the children in the sample have left foster care. Results indicated that the median time spent in foster care for children in the SBCT judge-only condition was 605 days, while the median time spent for children in the control condition was 739 days (see Figure D3).

Table D6. Cox Proportional Hazards Model Coefficients (Hazard Ratios, Standard Errors, *P*-Values, and 95% Confidence Intervals) of the Experimental Condition (SBCT Judge-Only Versus Control) and Covariates

	Hazard Ratio	Standard Error	<i>P</i> -Value	95% Confidence Interval	
Condition (ref. Control)					
SBCT Judge-Only	1.49	0.10	0.00	1.31	1.69
Race (ref. White)					
American Indian	0.85	0.09	0.14	0.68	1.06
African American	0.87	0.07	0.07	0.75	1.01
Other Race	0.85	0.11	0.19	0.66	1.08
Gender (ref. Male)					
Female	1.02	0.06	0.75	0.90	1.15
Site (ref. Des Moines)					
Tulsa	2.19	0.22	0.00	1.79	2.68
Little Rock	2.85	0.35	0.00	2.24	3.62
Removal Reasons					
Abuse	1.31	0.12	0.00	1.09	1.56
Neglect	1.01	0.07	0.88	0.88	1.16
Parent Drug Use	0.96	0.07	0.54	0.83	1.10
Parent Incarcerated	1.05	0.14	0.70	0.82	1.36
Inadequate Housing	0.84	0.09	0.11	0.69	1.04
Relinquishment	14.62	10.63	0.00	3.51	60.79

Figure D3. Survival Function of Time to Permanent Placement for SBCT Judge-Only Cases Versus Control Cases



Exploratory Analyses: Full SBCT Versus SBCT Judge-Only

Descriptive analyses of time to permanency for full SBCT versus SBCT judge-only

Of the sample, 72% of children in the full SBCT group had a permanent placement, while 77% of children in the SBCT judge-only group had a permanent placement (see Table D7). Children in the full SBCT group took an average of 440 days to reach a permanent placement, while children in the SBCT judge-only group took an average of 414 days.

Table D7. Descriptive Analysis of the Outcome Variables

Outcome	Full SBCT			SBCT Judge-Only		
	Child N	Mean	Standard Deviation	Child N	Mean	Standard Deviation
Permanent Placement (binary)	122	72%	0.45	565	77%	0.42
Time to Permanency (days, continuous)	88	439.86	210.33	435	413.97	267.78

Cox proportional hazards model analysis for full SBCT versus SBCT judge-only

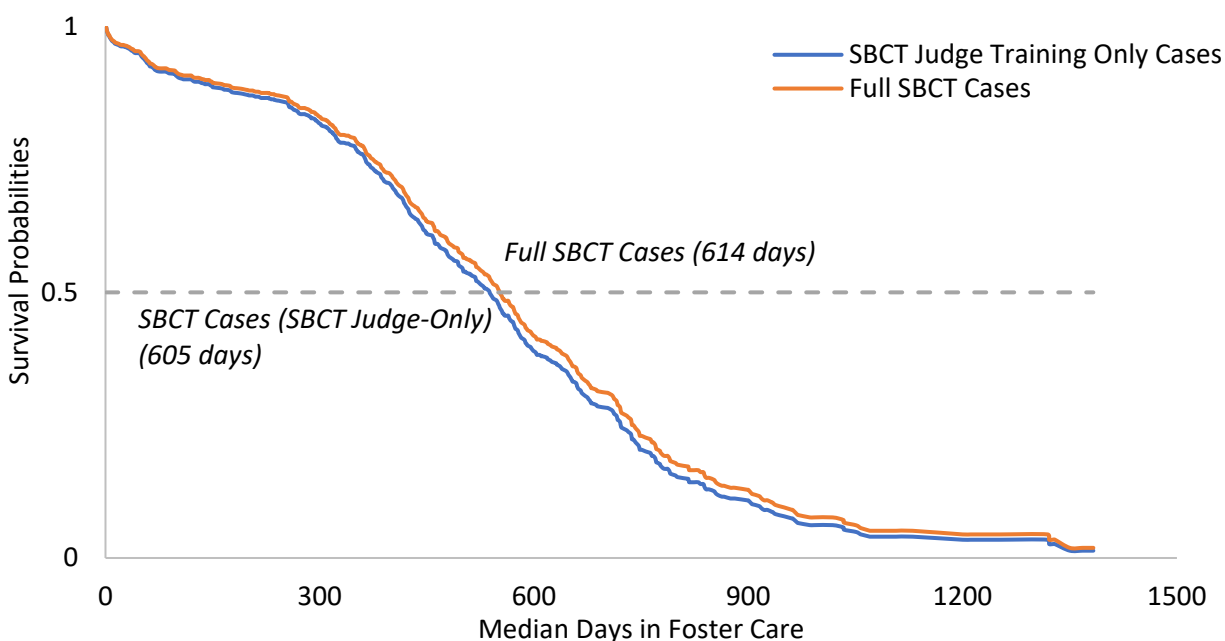
Results suggested that at any given time, *t*, the chances of reaching permanency for children in the SBCT judge-only condition and children in the full SBCT condition were not statistically significant: HR = 0.89, *p* > 0.05 (see Table D8). Based on the survival function, we computed a summary statistic of the median

time spent in foster care. When the sample survival function equals 0.50, half of the children in the sample have left foster care. Results indicated that the median time spent in foster care for children in the SBCT judge-only condition was 605 days, while the median time spent for children in the full SBCT condition was 614 days (see Figure D4).

Table D8. Cox Proportional Hazards Model Coefficients (Hazard Ratios, Standard Errors, *P*-Values, and 95% Confidence Intervals) of the Experimental Condition (Full SBCT Versus Control) and Covariates

	Hazard Ratio	Standard Error	<i>P</i> -Value	95% Confidence Interval	
Condition (ref. SBCT Judge Only)					
Full SBCT	0.89	0.11	0.36	0.70	1.14
Race (ref. White)					
American Indian	0.86	0.13	0.34	0.64	1.17
African American	0.82	0.09	0.07	0.67	1.01
Other Race	0.75	0.15	0.15	0.52	1.10
Gender (ref. Male)					
Female	1.01	0.09	0.95	0.84	1.20
Site (ref. Des Moines)					
Tulsa	2.07	0.35	0.00	1.48	2.90
Little Rock	4.05	0.68	0.00	2.92	5.62
Removal Reasons					
Abuse	1.45	0.18	0.00	1.14	1.83
Neglect	1.14	0.11	0.18	0.94	1.39
Parent Drug Use	0.97	0.09	0.78	0.80	1.18
Parent Incarcerated	0.93	0.16	0.69	0.66	1.31
Inadequate Housing	0.75	0.11	0.06	0.55	1.01
Relinquishment	2.21	1.60	0.28	0.53	9.13

Figure D4. Survival Function of Time to Permanent Placement for Full SBCT Versus SBCT Judge-Only Cases



Primary impact findings: Recurrence of abuse or neglect

Descriptive Statistics for Recurrence of Abuse or Neglect

As described above, 67% of the sample exited foster care within the time the study was conducted. Of the total sample, 76% of children in the combined treatment group had a permanent placement, while 61% of children in the control group had a permanent placement. Of the children who had a permanent placement ($N = 1,173$), 5% experienced recurrence of abuse and/or neglect, resulting in a second (or more) removal. Seven percent of children in the combined treatment group ($n = 523$) and 4% of children in the control group ($n = 650$) had a recurrence of abuse or neglect (see Table D9).

Table D9. Descriptive Analysis of Recurrence

Outcome	Overall			Combined Treatment			Control		
	Child N	Mean	Standard Deviation	Child N	Mean	Standard Deviation	Child N	Mean	Standard Deviation
Recurrence ever occurred (binary)	1,173	5%	0.23	523	7%	0.25	650	4%	0.21

We used logistic regression with fixed effects for sites to estimate the impact of SBCT on recurrence of abuse or neglect. Baseline child- and case-level characteristics were included to improve the precision of the treatment estimate. Results suggested that recurrence of abuse and neglect was not statistically different between the treatment and control groups, odds ratio = 1.33, $p = 0.29$ (see Table D10). In addition, none of the background covariates were significant predictors of recurrence of abuse or neglect.

Table D10. Logistic Regression Coefficients of Experimental Condition and Covariates Predicting Recurrence of Abuse or Neglect

	Odds Ratio	Standard Error	P-Value	95% Confidence Interval	
Condition (ref. Control)					
Combined Treatment	1.33	0.36	0.29	0.79	2.25
Race (ref. White)					
American Indian	0.93	0.46	0.89	0.36	2.45
African American	0.72	0.23	0.30	0.38	1.35
Other Race	1.67	0.76	0.26	0.69	4.06
Gender (ref. Male)					
Female	1.25	0.34	0.40	0.74	2.12
Site (ref. Des Moines)					
Tulsa	1.72	0.90	0.30	0.62	4.79
Little Rock	0.97	0.56	0.96	0.31	3.02
Removal Reasons					
Abuse	0.75	0.31	0.48	0.33	1.68
Neglect	1.53	0.47	0.17	0.84	2.81
Parent Drug Use	1.15	0.34	0.64	0.64	2.07
Parent Incarcerated	1.30	0.63	0.59	0.50	3.38
Inadequate Housing	3.70	2.03	0.02	1.26	10.84
Time Covariate					
Time From First Case Closure	1.00	0.00	0.00	1.00	1.00

Exploratory impact findings: Recurrence of abuse or neglect

Exploratory Analyses Full SBCT Versus the Control Group

Descriptive analysis for full SBCT versus the control group

Of the sample, 72% of children in the full SBCT group had a permanent placement, while 61% of children in the control group had a permanent placement. Of those closed cases, 1% of children in the full SBCT group ($N = 88$) and 4% of children in the control group ($N = 650$) had a recurrence of abuse or neglect.

Logistic regression model analysis for full SBCT versus the control group

Results suggested that recurrence of abuse neglect was not statistically different between the full SBCT and control groups: odds ratio = 0.21, $p = 0.15$. In addition, none of the covariates were significant predictors of recurrence of abuse or neglect, see Table D11.

Table D11. Logistic Regression Coefficients for Models Comparing the Full SBCT Cases to Control Cases on Recurrence of Abuse or Neglect

	Odds Ratio	Standard Error	P-Value	95% Confidence Interval	
Condition (ref. Control)					
Full SBCT	0.21	0.23	0.15	0.03	1.73
Race (ref. White)					
American Indian	0.74	0.62	0.72	0.14	3.80
African American	1.06	0.49	0.91	0.42	2.64
Other Race	1.88	1.22	0.33	0.53	6.70
Gender (ref. Male)					
Female	1.29	0.52	0.52	0.59	2.84
Site (ref. Des Moines)					
Tulsa	1.92	1.24	0.32	0.54	6.82
Little Rock	0.32	0.27	0.17	0.06	1.64
Removal Reasons					
Abuse	0.28	0.22	0.10	0.06	1.27
Neglect	0.58	0.30	0.30	0.21	1.62
Parent Drug Use	0.57	0.29	0.26	0.21	1.52
Parent Incarcerated	1.30	0.95	0.72	0.31	5.45
Inadequate Housing	3.85	2.88	0.07	0.89	16.70
Time Covariate					
Time From First Case Closure	1.00	0.00	0.00	1.00	1.00

Exploratory Analysis: SBCT Judge-Only Versus the Control Group

Descriptive analyses of recurrence for the SBCT judge-only versus the control group

Of the sample, 77% of children in the SBCT judge-only group had a permanent placement, while 61% of children in the control group had a permanent placement. Of those closed cases, 8% of children in the SBCT judge-only group ($N = 435$, standard deviation [SD] = 0.27) and 4% of children in the control group ($N = 650$, SD = 0.21) had a recurrence of abuse or neglect.

Logistic regression model analysis for the SBCT judge-only versus the control group

Results suggested that recurrence of abuse or neglect was not statistically different between SBCT judge-only and control cases: odds ratio = 1.58, $p > 0.05$ (see Table D12). In addition, none of the covariates were significant predictors of recurrence of abuse or neglect.

Table D12. Logistic Regression Coefficients Comparing the SBCT Judge-Only Cases to Control Cases on Recurrence of Abuse or Neglect

	Odds Ratio	Standard Error	P-Value	95% Confidence Interval	
Condition (ref. Control)					
SBCT Judge-Only	1.58	0.43	0.09	0.93	2.69
Race (ref. White)					
American Indian	0.94	0.47	0.90	0.36	2.48
African American	0.74	0.24	0.35	0.39	1.40
Other Race	1.90	0.87	0.16	0.77	4.68
Gender (ref. Male)					
Female	1.31	0.35	0.33	0.77	2.22
Site (ref. Des Moines)					
Tulsa	1.69	0.89	0.32	0.60	4.74
Little Rock	1.08	0.63	0.89	0.35	3.40
Removal Reasons					
Abuse	0.71	0.30	0.41	0.31	1.61
Neglect	1.41	0.45	0.27	0.76	2.63
Parent Drug Use	1.15	0.35	0.66	0.63	2.08
Parent Incarcerated	0.94	0.50	0.90	0.33	2.64
Inadequate Housing	3.34	1.84	0.03	1.13	9.86
Time Covariate					
Time From First Case Closure	1.00	0.00	0.00	1.00	1.00

Exploratory Analysis: Full SBCT Versus SBCT Judge-Only

Descriptive analyses of time to permanency for full SBCT versus SBCT judge-only

Of the sample, 72% of children in the full SBCT group had a permanent placement, while 77% of children in the SBCT judge-only group had a permanent placement (see Table D7). One percent of children in the full SBCT group ($N = 88$, $SD = 0.11$) and 8% of children in the control group ($N = 435$, $SD = 0.27$) had a recurrence of abuse or neglect.

Logistic regression model analysis for full SBCT versus SBCT judge-only

Results suggested that recurrence of abuse or neglect was approaching a statistically significant difference between the full SBCT and SBCT judge-only groups: odds ratio = 0.13, $p = .053$ (see Table D13). In addition, only one of the demographic covariates were significant predictors of recurrence of abuse or neglect, where neglect cases were more likely to experience a recurrence case than cases without neglect at foster care entry.

Table D13. Logistic Regression Coefficients of Models Comparing the Full SBCT Cases to SBCT Judge-Only Cases on Recurrence of Abuse or Neglect

	Coefficient	Standard Error	P-Value	95% Confidence Interval	
Condition (ref. Control)					
Full SBCT	0.13	0.14	0.05	0.02	1.03
Race (ref. White)					
American Indian	1.04	0.65	0.94	0.31	3.55
African American	0.45	0.21	0.09	0.18	1.14
Other Race	1.45	0.96	0.57	0.40	5.28
Gender (ref. Male)					
Female	1.14	0.42	0.72	0.56	2.34
Site (ref. Des Moines)					
Tulsa	2.39	2.64	0.43	0.27	20.91
Little Rock	3.55	4.03	0.27	0.38	32.84
Removal Reasons					
Abuse	0.88	0.47	0.81	0.31	2.49
Neglect	2.62	1.14	0.03	1.12	6.13
Parent Drug Use	1.38	0.54	0.41	0.64	2.99
Parent Incarcerated	1.38	0.86	0.61	0.41	4.68
Inadequate Housing	2.80	2.36	0.22	0.53	14.66
Time Covariate					
Time From First Case Closure	1.00	0.00	0.22	1.00	1.00

Sensitivity analyses

We also conducted sensitivity analyses to understand if the impact estimates were robust to model specifications. These included models that addressed ambiguous experimental condition and covariate specification.

Data With Ambiguous Experimental Condition

In total, there were 134 cases that had ambiguous judge assignments in the DHS data (see Appendix C for more detail). To examine how these cases with missing judge assignment information may change the primary findings, we conducted sensitivity analyses to test the impact of excluding cases with ambiguous judge assignment from the primary impact analyses. First, we were able to confirm that none of these cases were full SBCT cases, through cross-verification with the ZERO TO THREE (ZTT) database.

Therefore, we reassigned the ambiguous cases in three ways: (1) we assigned all ambiguous cases to the SBCT judge-only group, (2) we assigned all ambiguous cases to the control group, and (3) we randomly assigned these 134 cases to either the SBCT judge-only or control group. The models were robust to ambiguous judge assignment, meaning that the results remained the same for all models (see Table D14). For time to permanency, results suggested that children in the combined treatment condition were more likely to have reached permanency than their control peers at a given time. This is the same trend that was found for the primary model, where all ambiguous judge cases were excluded from the sample. For recurrence of abuse and neglect, results suggested that there was no difference in recurrence for the combined treatment group and the control group. This was the same trend found for the primary model.

Table D14. Sensitivity Analyses: Including Cases With Ambiguous Judge Assignments

	Primary Impact Model				Judge in SBCT Judge-Only Group				Judge in Control Group				Judge Randomly Assigned to Either Treatment or Control			
Time to Permanency	N	Coeff.	Std. Error	Sig.	N	Coeff.	Std. Error	Sig.	N	Coeff.	Std. Error	Sig.	N	Coeff.	Std. Error	Sig.
Combined Treatment Versus Control	1,725	1.48	0.09	0.00	1,850	1.5	0.09	0.00	1,850	1.46	0.09	0.00	1,850	1.48	0.09	0.00
	Recurrence (Primary)				Judge in SBCT Judge Group				Judge in Control Group				Judge Randomly Assigned			
Recurrence of Abuse or Neglect	N	Coeff.	Std. Error	Sig.	N	Coeff.	Std. Error	Sig.	N	Coeff.	Std. Error	Sig.	N	Coeff.	Std. Error	Sig.
Combined Treatment Versus Control	1,164	0.29	0.27	0.29	1,236	0.25	0.27	0.36	1,236	0.40	0.27	0.13	1,164	0.34	0.27	0.21

Sensitivity Models Excluding Covariates

We also examined how covariates influenced the primary impact models. We ran models that mirrored the primary impact models but excluded all child- and case-level covariates. These models retained the dummy variables for each site. The results suggested that for time to permanency, children in the combined treatment condition were more likely to have reached permanency than their control peers at a given time: HR = 1.44, $p > .05$. This is the same trend as in the primary model. For recurrence of abuse and neglect, results suggested that recurrence of abuse and neglect was not statistically different between the combined treatment and control groups: $\beta = .36$, $p = .17$. This is the same trend as in the primary model.

Exploratory analyses: Primary caregiver interviews

Analyses on the well-being of children and families relied on responses from 47 SBCT families collected via phone interview. The 47 families were evenly distributed across the three sites: 18 were from Des Moines, 12 from Little Rock, and 17 from Tulsa. Caregivers included a mix of biological parents (28%) and adoptive parents (53%), while the remaining caregivers did not report their relationship to the child. Most caregivers were female (77%). The children included in the follow-up sample were 55% female and, on average, 3.5 years old at the time of the follow-up interview (*Mean age* = 42.21 months, *SD* = 16.03).

Child Well-Being: SBCT Families Versus the General Population

Child health

We compared SBCT families in our study with a nationally representative sample from the 2017–18 National Survey of Children’s Health (see Table D15). We focused on children who matched our sample in terms of age (0–5 years old) and risk factors (two or more adverse childhood experiences [ACEs]). Overall, children from SBCT families were in better or equivalent health compared with their same-aged peers in the general population. Moreover, SBCT children in our sample tended to be in better health relative to the national sample of children with ACEs.

Table D15. SBCT Child Health Percentages Compared With Children Nationwide

	SBCT Families	Children 0–5 Years	Children With Two+ ACEs
Has health insurance coverage	100%	95%	94%
Has a personal doctor or nurse	89%	72%	68%
In excellent or very good general health	83%	93%	81%
In excellent or very good oral health	83%	87%	66%

Note. ACEs = adverse childhood experiences. Percentages in the nationwide sample are weighted to represent child population. Children with two+ ACEs include those 0–17 years of age.

Cognitive development: Communication and social skills

We compared means from SBCT children in the present study with the sample of 15,138 children used to determine cut-off scores for the Ages and Stages Questionnaire (ASQ) instrument. The normative sample included both risk and nonrisk subgroups, though proportions of each subgroup were not reported (Squires & Bricker, 2009). Subjects in the risk sample met one or more of the following criteria: (1) extreme poverty as defined by federal guidelines, (2) maternal age at birth less than or equal to 19 years of age, (3) maternal education < 12th grade, (4) parents who experienced involvement with child protective services, (5) medical risk, and (6) low birthweight. Although average scores tended to be lower among SBCT families relative to the general population at each age interval, scores fell within two standard deviations of the normative mean, on average. Some anomalies were observed (e.g., low communication scores for the 30-month interval), likely due to the small number of SBCT participants at many of the age intervals.

Mean scores on the ASQ were examined by age bands, because the items varied on both the Communication and Person-Social domains based on the child’s age.

- Mean scores on the Communication domain in our sample fell within one standard deviation of the mean for the normed sample, suggesting on-schedule development, for six out of 11 age groups ($n = 14$ participants). Two age groups representing 13 participants fell in the “monitoring” zone, indicating the recommendation to provide learning activities and monitoring. The remaining three age groups ($n = 16$ participants) scored more than two standard deviations below the mean, suggesting possible delay and the need for further assessment with a professional.
- For the Personal-Social domain on the ASQ, seven age groups scored within the typical range and appear to be on track developmentally ($n = 19$ participants). Three of the 11 age groups scored within the monitoring zone in our sample, representing the largest proportion of participants ($n = 23$). Mean scores from the two participants who received the 30-month form were below the cutoff and indicated the need for further assessment.

Healthy attachment with a caring adult

The majority of SBCT children (86%) had a healthy attachment with their primary caregiver, according to self-report on the DECA. We compared average t -scores on the DECA Attachment instrument in our sample against three independent samples in the literature: a community sample, an “identified” sample with known social and behavioral problems, and a Head Start sample (see Table D16). Average scores among SBCT children in our sample were higher than all three comparison groups, suggesting that SBCT families in the present study were doing well relative to other samples with known problems and/or risk factors and relative to the general population.

Table D16. Mean DECA Attachment T -Scores and Standard Deviations Across Samples

	SBCT Families	Community Sample	Identified Sample	Head Start Sample
Mean	55.70	47.00	41.90	47.14
SD	10.02	11.30	10.50	11.21
N	43	86	95	1208

Note. DECA = Devereux Early Childhood Assessment; SD = standard deviation The identified sample was reported in LeBuffe and Shapiro (2004). The Head Start sample was reported in Lien and Carlson (2009). The community sample was reported in both studies.

Healthy family relationships

SBCT families in our study reported high family well-being overall relative to the general population. The population statistics in Table D17 consist of the 2,088 participants included in the validation study for the HFPI instrument (Krysiak & LeCroy, 2012). Scores were higher among SBCT families relative to the normative sample in all domains, except Parental Efficacy, where scores were equivalent. This includes the Total Family Well-Being composite score, where SBCT families reported a mean score of 4.42 (standard error [SE] = 0.08) compared with the mean of 4.19 (SE = 0.62) in the general population.

Table D17. Mean Healthy Families Parenting Inventory Scores Across Samples

Domain	SBCT Families (n = 62)		Normed Sample (n = 2,088)	
	Mean	Standard Error	Mean	Standard Error
Social Support	4.62	0.08	4.28	0.08
Connecting to Resources	4.37	0.09	3.9	0.11
Problem Solving	4.33	0.08	3.95	0.09
Personal Care	4.29	0.07	3.84	0.08
Parent–Child Interaction	4.35	0.06	4.47	0.12
Parental Efficacy	4.32	0.06	4.32	0.08
Home Environment	4.67	0.05	4.06	0.14
Total Family Well-Being	4.42	0.05	4.19	0.62

Note. Normed sample means and standard deviations obtained from Kelly (2018).

To learn more about AIR's research on the Safe Babies Court Team approach and early childhood development in general, contact Dr. Ann-Marie Faria at afaria@air.org.



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