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Assessing an Adapted Approach to Communities That Care for Child Maltreatment Prevention

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Abstract

Objective: Communities That Care (CTC) is an evidence-based community mobilization model designed to prevent problematic adolescent behaviors such as delinquency and substance use by organizing community coalitions that choose and implement evidence-based practices to address community-specific risk and protective factors. This paper presents findings from the evaluation of Keeping Families Together (KFT), an adapted CTC approach that uses the community mobilization model to target community-wide prevention of child maltreatment in families with children aged 0 to 10, 3.5 years into implementation. ***Method:*** The findings from the 2 communities implementing the adapted KFT approach are compared with those from 12 communities that implemented the traditional CTC model as part of a site-randomized controlled trial. Data collected approximately 3.5 years into each approach's implementation are analyzed to determine whether this adapted approach has resulted in similar implementation quality as well as satisfactory board functioning and community transformation (key indicators of successful CTC implementation and predictors of outcome achievement that have been identified in previous CTC studies) as original CTC. In addition, we assess whether perceived program sustainability is similar between adapted and traditional CTC sites at similar time points. ***Results:*** Statistical testing revealed that, at 3.5 years into implementation, board functioning, communities' adoption of a science-based approach to prevention, and sustainability in the adapted KFT approach were equal or superior to traditional CTC sites. ***Conclusions:*** As an adaptation of the evidence-based CTC community mobilization approach, KFT offers the potential of a promising extension of CTC to the prevention of child maltreatment.

Keywords: child maltreatment; intervention adaptation; prevention; community mobilization; child welfare

Assessing an Adapted Approach to Communities That Care for Child Maltreatment Prevention

Child maltreatment as defined by federal and state governments is a challenge that communities across the United States struggle to address. Nationwide, approximately four million referrals alleging child maltreatment were made to child protection services in 2015; of these, 683,000 children (almost 1 in 100) were found to be victims of maltreatment (U.S. Department of Health and Human Services, 2017). Many more cases go unreported. The negative impacts of child maltreatment are well documented, far-reaching, and often endure throughout the lifespan in a number of outcome areas including physical health (e.g., impaired brain development, diabetes, cardiovascular disease), mental health (e.g., depression, anxiety, attachment challenges), and behavioral health (e.g., alcohol and substance use disorders, early pregnancy, criminality, poor work performance; (Child Welfare Information Gateway, 2013; Felitti et al., 1998). The high societal costs that result from these individual challenges, such as child welfare and criminal justice system costs, physical and mental health treatment costs, and lost taxable income are staggering; one study by the Centers for Disease Control found the "total lifetime economic burden resulting from new cases of fatal and nonfatal child maltreatment in the United States" in just 1 year to be estimated at $124 billion (Fang, Brown, Florence, & Mercy, 2012).

There is a strong and growing body of scientific evidence showing that behavioral health interventions can effectively impact the prevalence of child maltreatment (Pecora et al., 2014). These include both prevention (e.g., Healthy Families America: Harding, Galano, Martin, Huntington, & Schellenbach, 2007; Nurse-Family Partnership: Olds et al., 2014; Triple P Positive Parenting Program: Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009) and

intervention (e.g., foster care, trauma-focused cognitive behavioral therapy) approaches. However, identifying evidence-based programs is not enough to ensure strong and robust implementation. The National Implementation Resource Network provides a formula for successful implementation of evidence-based programs, as can be seen in Figure 1. Even when communities carefully select tested, effective programs that are well-matched to their community-identified needs, they also need to focus on eliciting the support of public systems to create *enabling contexts* for those programs. This includes creating the supporting context for high-quality implementation of evidence-based programs and examining funding streams to ensue sustainability of the programs in the community.

<Insert Figure 1 here>

Community approaches can act a force for enabling context and helping ensure strong implementation methods (L. D. Brown, Feinberg, & Greenberg, 2010). Such approaches are consistent with the Community-Based Child Abuse Prevention (CBCAP) programs that were established by Title II of the Child Abuse Prevention and Treatment Act Amendments of 1996. This act provides support for community-based efforts to create the enabling context through collaboration and coordination of resources for strong and robust uptake of evidence-based prevention programs. Based on the power of these evidence-based approaches, the American Academy of Social Work and Social Welfare (AASWSW) has adopted Stopping Family Violence as one of the 12 Grand Challenges for Social Work. This challenges the social work field to apply what we have learned from research to realize a 50% reduction in child maltreatment and gender-based violence within the next decade through promoting healthy, violence-free relationships between partners and among families (Kulkarni, Barth, & Messing, 2016). If we are to meet this grand challenge to stop family violence, we need not only evidence-

based programs to prevent child abuse and neglect, but also frameworks that ensure effective implementation and community support to enable the implementation of such programs. While numerous community initiatives and frameworks have been developed and/or implemented to reduce family violence and promote child well-being [see, for example, the CDC's (2014) Essentials for Childhood framework and the federal Promise Neighborhoods Initiative (US Department of Education, 2018)], none of these have been experimentally tested. One evidence-based approach that may provide a feasible option for this, though originally designed to target problematic adolescent outcomes, is the Communities That Care community mobilization model. Communities That Care focuses on building local capacity to build enabling context for evidence-based programs with a strong focus on promoting implementation fidelity methodology.

Communities That Care

Communities That Care (CTC) is an evidence-based community mobilization model guided by the social development model (Hawkins, Catalano, et al., 2008). CTC is designed to prevent problematic adolescent behaviors such as delinquency and substance use by organizing community coalitions that choose and implement evidence-based practices to address community-specific risk and protective factors (Hawkins, Catalano, & Arthur, 2002; Hawkins, Catalano, & and Associates, 1992). A five-phase process guides community coalitions through this work; these phases include (1) preparing to introduce the CTC process in the community; (2) forming a community board/coalition and getting organized; (3) developing a community profile that includes an assessment of the community's key risk factors, protective factors, and available resources; (4) creating a community action plan to address these risk and protective factors; and (5) implementing and evaluating evidence-based prevention efforts. The major difference

between CTC and many other community approaches is this explicit use of a science-based approach to prevention that involves matching evidence-based prevention programs to the community's specific needs (Haggerty & Shapiro, 2013). The CTC process is guided by a community board or coalition of stakeholders who hold leadership positions in community programs and services that may be complementary to or competitive with the CTC approach (e.g. schools, nonprofit organizations, faith community, law enforcement). A series of workshops provides capacity building opportunities and a framework for teaching coalitions to assess community needs and develop a community action plan that incorporates the best match of evidence-based programs to community needs. The coalition also plans for rigorous implementation of selected programs and develops sustainability plans. Moving though the five CTC phases takes approximately 18 months to 2 years; however, communities often revisit multiple phases as their community needs change over time. More information on CTC can be found at www.communitiesthatcare.net.

A 24-community site-randomized controlled trial of CTC found positive results on community-wide adoption of science-based approaches to prevention; high-fidelity implementation of evidence-based prevention programs; and reduced levels of youth risk factors, lower prevalence of youth violence and delinquency, and delayed onset of drug use (E. C. Brown, Hawkins, Arthur, Briney, & Fagan, 2011; Fagan, Hanson, Briney, & Hawkins, 2012; Fagan, Hanson, Hawkins, & Arthur, 2008; Hawkins, Brown, et al., 2008; Hawkins et al., 2009; Hawkins et al., 2012; Oesterle et al., 2015; Quinby et al., 2008). Moreover, independent cost-benefit analyses have calculated that for every dollar invested in CTC, the community yields a net benefit of $5.31 by preventing adolescent problem behaviors (Washington State Institute for Public Policy, 2017). CTC is classified as a promising program

in the Blueprints for Healthy Youth Development registry of evidence-based positive youth development programs (http://www.blueprintsprograms.com/).

Through analyses of CTC trial data, a variety of factors that serve as key indicators of successful CTC implementation and predictors of outcome achievement have been identified. Key implementation indicators include the achievement of CTC implementation milestones and benchmarks for each phase of the CTC process, along with the level of challenge encountered while achieving these milestones (Jonkman et al., 2008; Quinby et al., 2008). A community-level outcome, the degree of a community's adoption of a science-based approach to prevention, is a key system transformation variable that has been found to fully mediate the effects of CTC on youth problem behaviors (E. C. Brown et al., 2014). In particular, adoption of a science-based approach to prevention accounted for "96% of the variation between the CTC intervention and student problem behaviors" (E. C. Brown et al., 2014, p. 629). Relatedly, two coalition capacities, involvement of diverse community sectors in the CTC process and board members' acquisition of new skills, have been found to predict communities' adoption of a science-based approach to prevention (Shapiro, Oesterle, & Hawkins, 2015b), while four dimensions of coalition functioning (goal directedness, efficiency, opportunities for participation, and cohesion) have strong relationships with these two key coalition capacities (Shapiro, Hawkins, & Oesterle, 2015a). These key indicators can provide a means for assessing whether CTC approaches adapted for purposes other than prevention of adolescent risk behavior are achieving the same implementation and system transformation success as those found in communities implementing the original CTC approach.

CTC Adaptation for Community Maltreatment Prevention

Keeping Families Together (KFT) is an adaptation of the CTC approach to address community prevention of child maltreatment in families with children aged 0 to 10. This age range was chosen to align with the target age range of Oregon early learning systems. This approach has now been implemented in two communities in Oregon. The adaptation for this new purpose involved adapting CTC intervention content as well as evaluation materials. One intervention content adaptation involved updating the sources of approved evidence-based practices that communities may choose from to address their key risk and protective factors to be more applicable to child maltreatment prevention efforts rather than youth risk behavior prevention. Along with the Blueprints for Healthy Youth Development registry of evidence-based positive youth development programs, these new sources included the California Evidence-Based Clearinghouse for Child Welfare, the Institute of Education Sciences (IES) What Works Clearinghouse, and a review of evidence-based child maltreatment interventions by Pecora et al. (2014). Another content adaptation involved the scope of and data sources for assessing community risk and protective factors to include early learning/Head Start eligibility data and child welfare system assessments of family stressors and reasons for child removal from the home. Other examples of content adaptation involved adapting the CTC community stakeholder training materials to focus on child maltreatment prevention and child well-being, as well as having sites engage in early, high-level collaboration with the child welfare system to help ensure the program's success given the child welfare system's pivotal role in child maltreatment response.

There were two primary adaptations to the program evaluation process. The first involved updating the CTC evaluation measures to address the new program focus, such as assessing factors related to "child well-being and child-related problems such as abuse and neglect" rather

than "youth problem behaviors." The second involved updating the positional community leaders who participate in the Community Key Informant Survey (an instrument used to assess community transformation) to include child welfare and early learning representatives. A more thorough description of our adaptation process, additional adaptations that were made, and initial evaluation findings can be found in Salazar et al. (2016).

Importance of Implementation

For decades, scientists have recognized that simply developing effective interventions is not enough to improve individuals' and communities' well-being; ensuring these interventions can be and are implemented well in communities is an additional crucial step (Durlak & DuPre, 2008). The field of implementation science was developed for this very purpose, and much work has been done to better understand how and to what extent implementation quality influences program outcomes. Durlak and DuPre (2008) reviewed over 500 studies and found several aspects of implementation, including fidelity, dosage, and quality delivery, among others, to be associated with improved program outcomes. An important step in the assessment of an adaptation of an evidence-based practice is thus to assess whether implementation of the adapted approach continues to be as feasible for communities as it was in the original design. This study attempts to accomplish this for the KFT adaptation of CTC.

Current Study

In our previous paper (Salazar et al., 2016), we presented preliminary findings from the evaluation of the Keeping Families Together adapted approach approximately 1 year into implementation, which suggested that implementation was manageable for sites (as evidenced by sites reporting high implementation fidelity and low implementation challenge ratings), and that community board functioning and community adoption of a science-based approach to

prevention were comparable to that of the 12 traditional CTC trial sites at a similar point in the implementation process. The current paper aims to provide an update on site progress 3.5 years into the implementation process. The 1-year and 3.5-year time points were chosen because at 1 year both sites had completed implementation of the first four phases of the CTC process, and at 3.5 years both sites had completed all five phases (Phase 5 is a more time-intensive phase than the first four phases). This study provides a comparison of findings with the 12 traditional CTC sites from the randomized controlled trial described earlier to determine whether this adapted approach has continued to result in similar implementation quality as well as satisfactory board functioning and community transformation. In addition, we assess whether perceived program sustainability is similar between the adapted and traditional CTC sites at similar time points.

Method

The Keeping Families Together (KFT) adapted approach to CTC was implemented in two communities in Oregon: one primarily urban and other primarily rural. Only two sites were included due to resource availability. Both communities were chosen based on community readiness for implementing the KFT process. One of the communities was additionally chosen due to data indicating high rates on community factors such as out-of-home placement rates, financial insecurity, TANF clients, and food stamp usage. The selection criteria for the original 12 CTC sites included (1) being part of an earlier naturalistic study of the diffusion of science-based prevention strategies; (2) had not yet selected or started using evidence-based preventive interventions to address prioritized community risks; and (3) having local agreement from the mayor, police chief, and school superintendent to participate in the study (Hawkins et al., 2009). Twenty-four matched communities were identified using these criteria, and half were randomly assigned to receive CTC. The communities were located in 7 states across the country, had

populations ranging from 15,000 to 50,000, and were primarily rural. KFT Communities were of similar size and character to the traditional CTC sites. The purpose of this paper is to examine implementation processes and to determine whether or not the same level of adoption of a science-based approach to prevention that was found in traditional CTC communities can be sustained in communities using an adapted CTC framework. To that end, the 12 CTC comparison sites are from the only major study of CTC, so they provide the best available comparison for the current study.

The data collection procedures, participants, and measures for each evaluation instrument are discussed below in sections dedicated to each instrument. Additional information on the CTC evaluation instruments used in this study, as well as a description of the adaptation process for these instruments for this adapted CTC approach can be found in Salazar et al. (2016), as well as the publications referenced in each section. This study was determined exempt from review by the University of Washington IRB.

The following instruments are those developed for and used in traditional CTC. As mentioned earlier, they were adapted for the purposes of this study, but adaptations were relatively minimal and most frequently involved adapting language to reflect the new purpose of the study and the new key stakeholders in the study rather than substantive item additions or deletions. Thus they remain highly comparable to the traditional CTC measures. Figure 2 shows how each measure maps onto the CTC/ KFT theory of change.

<Insert Figure 2 here>

Milestones and Benchmarks

The Milestones and Benchmarks instrument (Quinby et al., 2008) is an implementation fidelity tool used to guide community coalitions through the five phases of the CTC

implementation process (Leaders Get Started; Coalitions Get Organized; Coalitions Develop a Community Profile; Coalitions Create a Community Action Plan; and Coalitions Implement and Evaluate the Community Action Plan). Each phase is composed of 4 to 12 milestones, which are in turn composed of two to eight benchmarks. Together these milestones and benchmarks provide a detailed blueprint of the CTC process. The Milestones and Benchmarks instrument is filled out every 6 months by the project director and site coordinator to assess the site's progress in implementing the CTC process, as well as how challenging each step of the process has been for that site. The current study uses data from the Milestones and Benchmarks collected 1 year and 3.5 years into the adapted CTC implementation, and compares these with Milestones and Benchmarks collected at similar time points in the 12-site traditional CTC implementation. For this study, we report the mean implementation progress and challenge scores, by phase. It should be noted that during the course of the Keeping Families Together project, the Communities That Care Phase 5 implementation strategy was updated to include several additional milestones and benchmarks, which were updated in the adapted KFT process but had not been used in the original CTC traditional implementation. These included developing an implementation plan, an evaluation plan, and a strategic funding plan; taking actions to inform the community about CTC and the prevention programs being implemented; and ensuring the CTC board remained active. Thus, comparing Phase 5 for each of the two approaches is not completely equivalent; however, all other phases involved the same steps for both approaches.

Community Board Interview (CBI)

The CBI (Arthur, Glaser, & Hawkins, 2005; Arthur, Hawkins, Pollard, Catalano, & Baglioni, 2002; Shapiro, Oesterle, Abbott, Arthur, & Hawkins, 2013; Shapiro et al., 2015b) is a measure of community board functioning and implementation fidelity that incorporates validated

measures from other instruments measuring CTC coalition functioning (Feinberg, Greenberg, & Osgood, 2004). In this adapted CTC study, CBIs were administered to board members twice: once in spring 2014 (approximately 1 year into CTC implementation), and once in fall 2016 (approximately 3.5 years into implementation). At first administration, CBIs were administered to a random sample of 10 board members per site. At the second administration, at the request of the site coordinators, they were administered to all board members willing to participate in order to give all board members a voice in the process. The CBI is administered either by web or by phone with a trained interviewer depending on the participant's preference, and takes approximately 45 minutes to complete. Response rates were 83% at Wave 1 and 87% at Wave 2.

Table 1 lists the three types of CBI measures included in the current study: board functioning measures, measures that predict a community's adoption of a science-based approach to prevention, and sustainability. All scales were scored using established scoring procedures and had acceptable to good internal consistency; reliabilities are also reported in Table 1.

<Insert Table 1 here>

Community Key Informant Survey (CKI)

The CKI (Arthur et al., 2002; E. C. Brown et al., 2014) is a survey of key positional and referred community leaders that assesses the degree of transformation of community prevention service systems (in this case, child maltreatment prevention) and incorporates other validated scales from measures used with key leaders to assess CTC implementation (Feinberg, Greenberg, Osgood, Anderson, & Babinski, 2002). For this adaptation, CKIs were collected from 11 positional leaders (e.g., child welfare director, Head Start leader, mayor, lead law enforcement) and six referred leaders (two each from child welfare, early learning, and prevention) in each

community every other year (the full list of positional leader types recruited for this study can be found in Salazar et al. (2016). This paper includes findings from two waves of CKI data: one collected from both sites in spring 2014 (approximately 1 year into CTC implementation) and the second collected approximately 2.5 to 3 years later, in winter/early spring of 2017 (approximately 3.5-4 years into implementation). The CKI is administered by phone with a trained interviewer and takes approximately 45 minutes to complete. The response rate for Wave 1 was 97%, and 94% at Wave 2. In particular, this study assesses the CKI's Adoption of a Science-Based Approach to Prevention scale, which was found by E. C. Brown et al. (2014) to fully mediate the effects of the CTC intervention on youth problem behavior in the 24-site traditional CTC randomized controlled trial. A brief description of this scale can be found in Table 1.

Analysis

We use an approach similar to non-inferiority testing (D'Agostino, Massaro, & Sullivan, 2003; Piaggio, Elbourne, Pocock, Evans, & Altman, 2012) to statistically compare coalition functioning, prevention system transformation, and sustainability of the adapted and traditional CTC sites. The purpose of using equivalence/non-inferiority testing is to determine whether the outcome of one condition is equivalent or inferior to that of another. Tests of non-inferiority are typically based on rejecting the directional null hypothesis that a new treatment or approach is inferior to a control or standard condition. This is achieved by specifying a non-inferiority margin and then testing whether any differences between the two groups are in excess of this margin. Due to the small sample sizes in the current study, we simplified this approach and performed one-sided t-tests to assess whether levels of coalition functioning, prevention system transformation, and sustainability achieved with the adapted CTC approach are significantly ($p <$

.025) lower than (i.e., inferior to) levels achieved in the traditional sites. This test provides evidence that failure to achieve child outcomes is not due to implementation failure.

Results

Implementation

Mean implementation progress and challenge ratings by implementation phase for the adapted and traditional CTC approaches 1 year and 3.5 years into implementation can be found in Table 2. At 3.5 years into implementation, both the adapted and traditional CTC sites had made their way through all five phases of the CTC process. One year into implementation, the adapted sites reported notably lower challenge ratings than the traditional CTC sites (mean phase challenge rating 1.4 for adapted sites compared to 2.6 for traditional sites, on a scale from 1=Not at All Challenging to 4=Very Challenging), meaning that adapted sites found the process easier to implement than traditional sites. By 3.5 years into implementation, challenge ratings had decreased for the traditional sites but remained slightly higher than those of the adapted sites (mean phase challenge rating 1.4 for adapted sites compared to 1.7 for traditional sites). Challenge ratings increased slightly in Phases 4 and 5 for adapted sites, as they completed implementation of those phases.

<Insert Table 2 here>

Board Functioning

Table 3 contains mean scale ratings and one-sided t-tests for the 10 dimensions of board functioning for the adapted and traditional CTC approaches 1 year and 3.5 years into implementation. There is little variation in scores for all board functioning dimensions. T-tests revealed that, 1 year into implementation, Community Readiness/Support, Efficacy, and Opportunities for Participation were slightly but statistically significantly inferior in adapted sites

compared to those in traditional CTC sites; however, at 3.5 years into implementation, there were no longer any board functions on which adapted sites were found to be inferior.

<Insert Table 3 here>

Adoption of Science-based Approach to Prevention and Predictors of Adoption

Communities' adoption of a science-based approach to prevention scores can be found in Table 4. At 1 year into implementation, adapted sites' adoption of a science-based approach to prevention were slightly behind those of traditional sites; however, this difference was not statistically significant. At 3.5 years into implementation, mean adoption scores were nearly identical for traditional and adapted sites. Mean scale scores for the two community capacity predictors (new member skills and diverse sector participation) can also be found in Table 4. T-testing found board member new skills in adapted sites to be slightly inferior to those achieved in traditional sites 1 year into implementation, but 3.5 years into implementation this difference had disappeared. No differences were found in diverse sector participation.

<Insert Table 4 here>

Sustainability

Comparisons of site stability 3.5 years into implementation can be found in Table 5. The adapted CTC approach was not inferior to the traditional approach on any sustainability indicators.

<Insert Table 5 here>

Discussion

The findings of this study suggest that Keeping Families Together (KFT) may be a promising adaptation of CTC. Implementation progress in KFT sites was not inferior to that of traditional CTC sites other than progress through Phase 5 at 1 year into implementation, but this

difference was no longer present 3.5 years into implementation. Similarly, while some indicators of board functioning were found to be inferior for KFT sites at Year 1, these differences disappeared by 3.5 years into implementation. The reason for this early inferiority is unclear, but it could have been due to a variety of factors, such as the high level of attention received by TA providers in the original trial, the greater diversity of board members represented on the KFT boards, coalition members' understanding of the application of the CTC approach to child welfare prevention, or other challenges that may understandably arise when implementing an adapted approach for the first time. Furthermore, there were no statistically significant differences in communities' adoption of a science-based approach to prevention at either time point.

Some differences in implementation challenge were noted at 1 year into implementation; more specifically, that adapted sites reported lower implementation challenge ratings than traditional sites, meaning that KFT sites found the approach easier to implement. This could be attributable to several factors. One likely explanation for this was that more of the traditional CTC sites chose to implement new evidence-based programs that were not already being implemented in the communities, while KFT sites bolstered, expanded, and improved implementation quality of many programs already being implemented in the community. The KFT study also included only two sites compared to 12 implementation sites in the traditional study, so it is possible that the two KFT sites just happened to be particularly strong sites. Adaptations to the content of the CTC approach could have contributed to this as well. Finally, the fact that the traditional study was a rigorous randomized controlled trial with many research-related demands could have also contributed to this.

An essential part of KFT's work has been the engagement of diverse community leaders and service providers to assess their community's data, select evidence-based prevention programs, and develop creative approaches to deliver services. One community newspaper in a KFT site recently published the headline, "Keeping Families Together has provided a constant thread" and reported that its efforts have been catalytic in weaving the system of more than 30 service providers and community partners together in a neutral setting, which led to transforming how communities support vulnerable families.

The preliminary implementation success of the KFT adaptation is especially encouraging given the fact that it involves such a broad collaboration of multiple public service systems: child welfare, early learning, law enforcement, mental health services, school districts, etc. Bringing multiple public service systems together for long-term community prevention efforts is a daunting task for any community. While traditional CTC also involved public service system collaboration, child welfare and early learning are newcomers to the community mobilization landscape for this KFT adaptation. Given the formidable responsibilities of the child welfare system, the ongoing budget and staffing challenges it navigates, and the high level of public scrutiny that it is subject to, finding ways to effectively partner with this system for community-wide prevention goals can understandably be challenging. However, the communities implementing KFT have been successful in doing just that. For example, in one community, the KFT coalition has a child welfare system self-sufficiency manager as one if its board members; in addition, the coalition is working with the child welfare system on adding evidence-based prevention approaches such as home visiting to the system’s official menu of supports. In the second KFT community, the KFT coalition worked closely with the local child welfare system to develop and support the community’s child welfare-differential response approach, as well as to

coordinate a wide variety of early learning, education, health, and income-related community services to address the needs of families who were assigned to this new differential response program. This successful navigation of multiple public service systems may be interpreted as one of the biggest successes of the adapted KFT approach.

Limitations

One limitation of this study is that the adapted Keeping Families Together approach was conducted in only two sites. A larger number of piloting sites would provide a better comparison to the 12 CTC sites, as well as more conclusive evidence regarding whether the adapted approach can be implemented and achieve similar results to the traditional CTC approach. Second, there were no non-implementing control sites included in this study with which to compare system transformation or communities' adoption of a science-based approach to prevention. A valuable next step would be a randomized controlled trial of the adapted approach that includes an increased number of implementing sites as well as non-implementing control sites. Finally, as was mentioned, because the Phase 5 Milestones and Benchmarks were updated for the CTC process between the traditional CTC study and the adapted KFT study, comparing Phase 5 for each of the two approaches is not completely equivalent. However, this may account for why, at 1 year into implementation, the adapted sites were behind the traditional sites in relation to Phase 5 implementation completion.

Conclusion

While additional evidence for the effectiveness of this adapted approach is still needed, including evidence that the interventions chosen fit the risk and protective factors present in each community and that they are successful in reducing community maltreatment rates, Keeping Families Together may be a promising approach to community maltreatment prevention in

families with children aged 0 to 10. The US Children's Bureau has prioritized a focus on child well-being using community collaborations to support families, as evidenced by recent funding opportunities. The recent passing of the federal Family First Prevention Services Act of 2017 provides important resources in upstream prevention for families helping us achieve the grand challenge of reducing abuse by 50% in 10 years. This adaptation of the evidence-based CTC community mobilization approach, KFT offers the potential of a promising extension of CTC to the prevention of child maltreatment.

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Figure 1. Formula for successful implementation of evidence-based programs. Copied from National Implementation Research Network website (NIRN, n.d.)

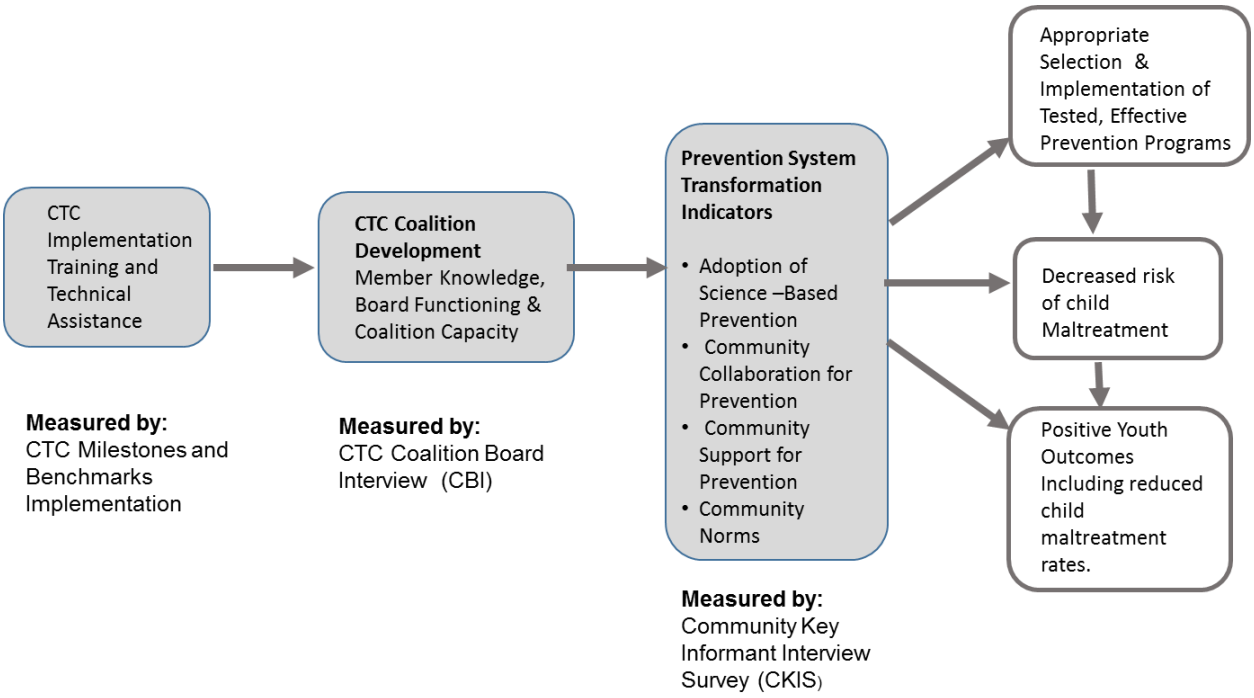

Figure 2: Communities That Care Logic Model and Corresponding Measures

Table 1
Measures from the Community Board Interview and Community Key Informant Survey

Measure	Description/ Example items	Scoring	# Items	Alpha	
				Adapted	Traditional
Board Functioning					
Prevention research knowledge	Quiz of basic prevention research knowledge	Sum of correct answers, ranging from 0 (all incorrect) to 5 (all correct)	5	N/A Index	
Community readiness/ support	How well agencies work together, how willing community organizations are to dedicate resources to CTC, how aware/ supportive community is of CTC process	1 = low community readiness/support to 4 = high community readiness/support	3	.76	.67
CTC efficacy	Board member opinions on the impact of CTC in the community	1 = low perceived community impact to 4 = high perceived community impact	6	.79	.68
Board directedness[a]	Board's ability to set procedures and develop goals	1 = unfocused board to 4 = highly focused board	5	.75	.67
Board cohesion[a]	How well the board uses its members' skills and abilities to further its goals	1 = low cohesion to 4 = high cohesion	3	.63	.66
Board efficiency[a]	Board's ability to initiate actions, work hard, and achieve goals	1 = low efficiency to 4 = high efficiency	6	.89	.69
Opportunities for participation[a]	How well the board leadership provides opportunity for participation by all board members	1 = little opportunity to 4 = lots of opportunity	4	.65	.67
Board conflict resolution	Board tension and how well board deals with conflict	1 = high conflict, does not handle well, to 4 = low conflict, able to handle well	3	.66	.67
Impact of CTC	How has the well-being of people in your community changed? How has the quality of local services and programs changed?	1 = a lot worse to 5 = much better	4	.65	.70
Barriers to implementation	How much of a problem was…Community divisions among racial, ethnic, or other groups? In-fighting among CTC members?	1 = not a problem to 5 = a huge problem	12	.91	.76
Adoption of Science-Based Approach to Prevention and Key Community Capacities That Predict Adoption					
New skills developed by board members	How much benefit have you gained from your involvement with CTC in these areas? Learning new skills, such as organizational, communication skills.	1 = a great deal to 4 = not at all	3	.85	.78
Diverse community sector participation	How involved are the following people in the CTC process? Elected community leaders? School administrators?	1 = not at all involved to 4 = very involved	15/14	.94	.79
Adoption of a science-based approach to prevention	Scale representing awareness and use of prevention science concepts (e.g., risk and protective factors), collection of epidemiologic data, prevention programming targeting elevated risk and depressed protective factors, and ongoing system monitoring	0 = Stage 0 (little/no awareness of prevention science concepts and their relevance to prevention programming), to 5 = Stage 5 (using tested, effective preventive interventions and ongoing assessment to monitor implementation and intervention effects)	21	N/A	

Measure	Description/ Example items	Scoring	# Items	Alpha	
				Adapted	Traditional
Sustainability					
Clear board responsibilities	The responsibilities of the CTC Board members at this stage are clear.	1 = Strongly Disagree to 4 = Strongly Agree	1	N/A	
Active board members	The CTC Board members are active and involved in the CTC effort.	1 = Strongly Disagree to 4 = Strongly Agree	1	N/A	
Coordinator does most work	Most of the CTC work is done by the Community Coordinator.	1 = Strongly Disagree to 4 = Strongly Agree	1	N/A	
Little for board to do	Now that the CTC Community Action Plan is completed, there is little left for the Board to do.	1 = Strongly Disagree to 4 = Strongly Agree	1	N/A	
Board turnover	Has the CTC Board membership been stable or have you had a high rate of membership turnover?	1 = Very unstable membership to 4 = Very stable membership	1	N/A	
New member integration	Integration of new board members has proceeded smoothly.	1 = Strongly Disagree to 4 = Strongly Agree	1	N/A	
Remaining on board	How likely is it that you will remain on your community CTC Board through the next year?	1 = Highly unlikely to 4 = Highly likely	1	N/A	
CTC process will continue	How likely do you think it is that the CTC process will continue beyond the Keeping Families Together funding period?	1 = Highly unlikely to 4 = Highly likely	1	N/A	
CTC programs will continue	How likely do you think it is that the CTC-adopted programs in your community will continue beyond the next year?	1 = Highly unlikely to 4 = Highly likely	1	N/A	

Notes. CTC = Communities That Care.

[a] A board functioning dimension that has been found to have strong relationships with these two key coalition capacities (new board member skills and diverse community sector participation).

Table 2

Milestones and Benchmarks Average Implementation Progress and Challenge Scores, by Phase, for Adapted and Traditional CTC Sites

	Implementation Progress[a]				Implementation Challenge[b]			
	1 Year into implementation		3.5 Years into implementation		1 Year into implementation		3.5 Years into implementation	
Approach	Adapted	Traditional	Adapted	Traditional	Adapted	Traditional	Adapted	Traditional
Phase								
One	3.9	3.3	4.0	3.7	1.3	2.5	1.3	1.8
Two	3.9	3.5	4.0	3.8	1.3	2.6	1.3	1.7
Three	3.9	3.9	4.0	3.9	1.5	2.6	1.4	1.3
Four	3.5	3.8	4.0	3.9	1.3	2.6	1.5	1.8
Five	1.4	3.5	3.7	3.6	1.4	2.5	1.7	2.1

Notes. [a]Implementation scores range from 0 (Have Not Begun Work) to 4 (Completely Achieved).
[b]Challenge scores range from 1 (Not at all Challenging) to 4 (Very Challenging).

Table 3
Community Board Functioning

	1 Year into implementation			3.5 Years into implementation		
	Adapted	Traditional	NI	Adapted	Traditional	NI
Prevention research knowledge	4.0	4.0	ns	3.7	4.0	ns
Community readiness/support	3.2	3.5	**	3.6	3.6	ns
CTC efficacy	3.2	3.5	**	3.6	3.6	ns
Board directedness[a]	3.5	3.7	ns	3.7	3.8	ns
Board cohesion[a]	3.1	3.3	ns	3.5	3.4	ns
Board efficiency[a]	3.2	3.4	ns	3.5	3.4	ns
Opportunities for participation[a]	3.3	3.5	*	3.6	3.5	ns
Board conflict resolution	3.6	3.3	ns	3.6	3.5	ns
Impact of CTC	3.6	3.7	ns	4.1	4.0	ns
Barriers to Implementation	1.7	1.7	ns	1.5	1.8	ns

Notes. [a] A board functioning dimension that has been found to have strong relationships with two key coalition capacities (new board member skills and diverse community sector participation).
NI = test of non-inferiority; *p < .025; **p < .01; ***p < .001, all in direction of adapted sites performing less well than traditional sites. ns = adapted sites not significantly inferior compared to traditional sites.

Table 4

Adoption of a Science-Based Approach to Prevention and Key Predictors of Adoption

	1 Year into implementation			3.5 Years into implementation		
	Adapted	Traditional	NI	Adapted	Traditional	NI
Adoption score	2.3	2.8	ns	3.1	3.0	ns
Key predictors of adoption						
Board member new skills	2.1	2.5	*	2.6	2.6	ns
Diverse community sector participation	2.7	2.9	ns	2.9	2.9	ns

Notes. NI = test of non-inferiority; *p < .025; **p < .01; ***p < .001, all in direction of adapted sites performing less well than traditional sites. ns = adapted sites not significantly inferior compared to traditional sites.

Table 5
Indicators of Site Sustainability, 3.5 Years into Implementation

	Adapted	Traditional	NI
Clear board responsibilities	74.0%	81.0%	ns
Active board members	95.0%	91.0%	ns
Coordinator does most work	45.0%	74.0%	ns
Little for board to do	11.0%	7.0%	ns
Board turnover	95.0%	87.0%	ns
New member integration	100.0%	95.0%	ns
Remaining on board	86.0%	n/a	n/a
CTC process will continue	95.0%	89.0%	ns
CTC programs will continue	100.0%	n/a	n/a

Notes. Percentages indicate those who responded with a 3 or 4 (e.g., Strongly Agree or Somewhat Agree) out of a possible 1-4 response range. I = test of non-inferiority; *p < .025; **p < .01; ***p < .001, all in direction of adapted sites performing less well than traditional sites. ns = adapted sites not significantly inferior compared to traditional sites.