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Family treatment court participation and permanency in a rural setting: Outcomes from a rigorous quasi-experiment

Margaret H. Lloyd Sieger[1] | Jessica Becker[1] | Jody Brook[2]

[1]School of Social Work, University of Connecticut, Hartford, Connecticut, USA

[2]School of Social Welfare, University of Kansas, Lawrence, Kansas, USA

Correspondence
Margaret H. Lloyd Sieger, PhD, MS, Assistant Professor, School of Social Work, University of Connecticut, 38 Prospect Street, Room 310, Hartford, CT 06105, USA.
Email: margaret.lloyd@uconn.edu

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Abstract

Substance-affected families are frequently cited as the most challenging families to serve within the child welfare context, particularly in rural settings where treatment services may be few and far between. Growing evidence suggests that family treatment courts (FTCs) may be more effective than their traditional counterpart at achieving key child welfare goals; however, prior studies have been limited in their methodological rigour. This study used treatment and matched comparison data to test foster care exit patterns of families with children in foster care due to parental substance use. Treatment group data were collected on a sample of 91 children with open dependency cases in an integrated FTC in a rural Midwestern town. Propensity score nearest neighbour one-to-two matching was used to identify a comparison group of 146 children. Findings suggest that FTC participation significantly influenced foster care exits. Survival analyses revealed that FTC children were 170% more likely to reunify, and 58% more likely to achieve permanency, than comparison cases. The effect of FTC participation on likelihood of reunification and likelihood of permanency was stronger when models estimated outcomes from FTC start date, rather than child removal date. Implications for social work practice, research, and education are discussed.

KEYWORDS
child welfare system, family treatment court, parental substance use disorder, permanency, survival analysis

1 | INTRODUCTION

Families in the foster care system due to parental substance use disorder (SUD) are frequently cited as the most challenging families to serve within the child welfare system (CWS). These families often struggle with multiple co-occurring issues such as domestic violence, poverty, homelessness and mental illness (Child Welfare Information Gateway, 2014; Testa & Smith, 2009). The National Survey on Drug Use and Health (NSDUH) reveals that almost half (48%) of adults who reported a past year SUD also reported a co-occurring mental illness in the past year (Substance Abuse and Mental Health Services Administration [SAMHSA], 2019).

Compared with other children in child welfare, children affected by substance use face worse child welfare-related outcomes compared with children in the CWS for other reasons (Barth et al., 2006). These children have longer stays in foster care (Vanderploeg et al., 2007), are less likely to reunify (Lloyd & Akin, 2014) and are more likely to face termination of parental rights (TPR) (Connell et al., 2007) compared with children without substance-related removals. This is unfortunate given that removals due to parental drug use have increased nearly 150% between 2000 and 2017, while entries for other removal reasons mostly declined (Meinhofer & Angleró-Díaz, 2019). In 2018, nearly a quarter of a million children were in foster care due to parent drug use (Children's Bureau, 2019).

Other characteristics of this population further complicate experiences and outcomes. For example, children with drug removals are more common among non-metropolitan and rural counties than their metropolitan counterparts. While 30% of children in large cities were in foster care due to parent drug use, close to half of children in non-metropolitan and rural counties were in foster care due to parent drug use (based on 2018 Adoption and Foster Care Analysis and Reporting System [AFCARS] data calculated by the author). Many of the challenges faced by children in child welfare affected by parental SUD may be exacerbated in rural settings, where treatment services can be scarce (Hancock et al., 2019).

Historically, these cases have been adjudicated in traditional child welfare courts; but, given the complex needs facing these families, traditional courts may be insufficient for handling these hard-to-treat cases. Family treatment courts (FTCs) are proliferating as an alternative to traditional courts and a growing body of evidence suggests that FTCs may be more effective than their traditional counterpart at reunifying these families. Gifford et al. (2014) compared parents who were referred but did not enrol, parents who enrolled but did not complete and parents who completed a FTC programme in North Carolina. The authors reported significant differences in reunification between the groups. Those who completed the FTC programme had a 73% likelihood of reunification compared with only 33% and 24% likelihood among the referred and enrolled groups, respectively (Gifford et al., 2014). Similarly, Chuang et al. (2012) examined an FTC in Florida. Using propensity score methods, the authors determined parents in the FTC were about twice as likely to be reunified with their children relative to parents in the matched comparison group (Chuang et al., 2012). Furthermore, Burrus et al. (2011) also reported significant association between reunification and FTC participation. The authors found that 70% families who participated in a FTC located in Baltimore, Maryland reunified compared with only 45% of comparison families (Burrus et al., 2011). Reflecting this growing literature, a recent meta-analysis of FTC studies reported that FTC-involved families were, across 17 studies, 70% more likely to reunify than their matched comparison cases served in traditional child welfare settings (Zhang et al., 2019).

2 | FAMILY TREATMENT COURT PROGRAMME

The FTC described in this manuscript received a Federal programme enhancement grant from SAMHSA in 2015 to provide two evidence-based family skills trainings for FTC-involved families with children ages 0–12. This FTC was established in 2009 to address the high rates of substance-affected families with children in foster care in a rural county in a Midwestern state. The development and practice of the FTC was guided by 11 'key elements' based on previously existing FTC recommendations and research (e.g., 10 Key Components of Drug Courts and the 7 Key Ingredients of Family Treatment Court practice). These elements included (1) use of a steering committee to guide FTC operations; (2) integrated substance use treatment services; (3) use of non-adversarial approach with prosecution and defence council; (4) early identification and prompt placement of eligible participants; (5) access to continuum of substance use treatment services; (6) weekly FTC team meetings to discuss client progress and update case plans as needed; (7) frequent random drug tests; (8) coordinated strategy of sanctions and incentives in response to participant behaviour; (9) judicial interaction with participants and their children; (10) interdisciplinary education including on trauma-informed practice; and (11) partnerships between FTC and community agencies and organizations. In terms of client experience, this was an integrated FTC with one judge overseeing both the child welfare and treatment court aspects of the case. The FTC programme was phased with earlier phases in the case process involving higher levels of care and greater frequency of hearings, drug tests and other monitoring. Successful programme completion resulted when the parent completed all phases and reunified with their child.

Given this FTC's rural setting, it partnered with one substance use treatment provider over the entire project period. This provider conducted initial substance use assessment and drug screening, identified appropriate level-of-care and provided outpatient counselling, substance use treatment and family-centred services, including the evidence-based family skills training interventions supported by the federal grant. FTC participants needing inpatient substance use treatment were referred to another provider outside the county. In addition to challenges accessing inpatient substance use treatment beds, another challenge faced by the FTC participants was the proximity of children's foster care placements. Because of the rural location of the FTC participants, children were frequently placed out of the county, which created challenges when facilitating parent–child visitations and child engagement in the family skills programming.

There is a relatively small body of literature on FTC, and even smaller corpus regarding rural FTC (Pollock & Green, 2015). Using a programme that aligns with many FTC best practices, the purpose of the current study is to examine the effect of FTC participation on key child welfare outcomes including reunification and permanency.

3 | RESEARCH QUESTIONS

This study has two primary research questions:

1. Were FTC participants more likely to reunify compared with matched foster children who did not receive FTC services?
2. Were FTC participants more likely to achieve permanency compared with matched foster children who did not receive FTC services?

4 | METHODS

4.1 | Design

This study used a quasi-experimental longitudinal design.

4.2 | Data sources

Data come from two sources: (1) a spreadsheet maintained by the FTC coordinator that tracked FTC participants over the course of the project and (2) the state administrative child welfare database. The FTC coordinator captured each participating child's record ID, name and date of birth. In order to conduct propensity score matching and test the outcomes of interest, the first author obtained the state's administrative child welfare dataset for all children in foster care between 1 October 2015 and 30 March 2019. Variables included in this dataset match those tracked in AFCARS. FTC children were identified within the state's administrative dataset based on the record ID. Data on all other children in the dataset who were not served in the FTC constituted the pool from which comparison group children were drawn according to procedures described in the next section.

4.3 | Participants

4.3.1 | Treatment group

Any parent (with exceptions, described below) who had an open dependency case (meaning there were allegations of abuse or neglect) that (1) is under the jurisdiction of a court in the county of the FTC and (2) involves substance use by the parent or guardian would be offered participation in the FTC as an alternative to participation in the traditional child welfare court. Substance use as a factor in the child welfare case was determined by an assessment conducted by the FTC; parent drug use was not necessarily checked as a removal reason in the AFCARS dataset. Per the FTC admission criteria, FTC participation was not offered to parents who were involved in a methadone treatment, had been convicted of a violent felony or drug trafficking charges or had been convicted of sexual abuse. Parents with violent misdemeanours, protective orders and sex crime charges with no conviction were evaluated on a case-by-case basis. Participation in the FTC was voluntary.

Treatment group participants included all FTC children who experienced at least one foster care placement during the period of grant funding that began on 1 October 2015. Of the 119 children served over the course of the project, 28 children's records were excluded from the outcomes analysis: 11 children had no foster care records, nine children started in the FTC on or after 30 March 2019 (the last date of entry for comparison group children) and eight had placements that ended before they started in the FTC. The resulting analytic sample included 91 FTC children.

4.3.2 | Comparison group

The comparison group was selected using propensity score matching procedures from a pool of possible comparison candidates, created from the state's AFCARS dataset. The AFCARS dataset consists of children in this same state as treatment group children who were in foster care during the same time period as treatment group children. Before conducting the matching procedure that identified comparison group children, a comparison 'pool' was generated from the complete AFCARS dataset using exclusion criteria. The following exclusion criteria reflected characteristics of the treatment group and was applied to the comparison pool: (1) children who were discharged due to emancipation, living with other relatives(s), transfer to another agency, runaway, or death were excluded; (2) all children who were discharged prior to the earliest removal date for a treatment group child, 16 November 2012, were excluded; and (3) children who were older at removal than the oldest treatment child at removal (16.35) were excluded. Removal due to parental substance use was not an exclusion criterion because 22% of treatment group children did not have parental substance use identified as a removal reason. The application of these criteria resulted in a pool of 34 273 children for matching.

Table 1 summarizes the differences between FTC children and children in the comparison pool prior to conducting the matching procedure matching. Before matching (Table 1), every variable except for number of prior removals was significantly different between groups.

Stata SE Version 15.1 was used for propensity score nearest neighbour one-to-two matching within a calliper (Guo & Fraser, 2010) using the command package 'psmatch2'. According to Rosenbaum and Rubin's (1985) suggestion, a quarter of a standard deviation of the estimated propensity scores was used as a calliper size (Guo & Fraser, 2010). Per the recommendations of the literature, covariates used to predict propensity scores should presumably predict the likelihood of receiving the treatment (Barth et al., 2008; Kainz et al., 2017). For this reason, 11 variables were used as covariates for matching: (1) observation window, which is the number of days between the child's current foster care episode removal date and the final observation date of 30 March 2019; (2) census population density of child's removal setting based on Federal Information Processing Standards (FIPS) county code; (3) child's age at foster care episode removal date; (4) whether or not the removal was due to parent drug abuse; (5) whether or not the removal was due to alleged or reported neglect; (6) whether or not the removal was due to inadequate housing; (7) whether or not the removal was due to alleged or reported sexual abuse; (8) whether or not the removal was due to alleged or reported physical abuse; (9) number of previous foster care episodes; (10) dummy coded child race variable for American Indian; and (11) dummy coded child ethnicity variable for Hispanic. Cases that were missing data on any of these 11 variables were dropped from the matching procedure (n = 0 treatment cases; n = 679 comparison pool cases).

Bivariate analyses were used to examine differences between the treatment and control group on all covariates. Per the recommendations for the psmatch2 package, cases were seeded and randomly sorted prior to each propensity score match attempt to ensure that the order of variables did not influence results and to enable replicability (Leuven & Sianesi, 2003). All treatment cases without missing data matched to at least one comparison case resulting in 91 treatment cases and 178 matched comparison cases.

Despite matching on length of observation, there were 32 comparison cases whose foster care episodes ended prior to the FTC start date of their matched cases (in the treatment group) and were consequently dropped from the study, resulting in 91 treatment cases and 146 comparison cases.

Once the matching approach was finalized and matching conducted, several balance tests using Stata's 'pstest' command were conducted to assess the similarity between groups. Table 2 presents these findings. According to standards in the literature, balance is reflected in a post-match standardized percentage bias (β) below 25% and R (the variance ratio) above 0.5 and below 2.0 (Austin, 2009; Kainz et al., 2017). Based on these standards, our matching procedure resulted in balance across treatment and comparison groups.

Bivariate analyses of the two groups were conducted to further examine the results of the matching procedure. After matching (Table 3), no statistically significant differences were identified for any of the matching variables, suggesting that the matching procedure successfully identified cases from the comparison pool similar to the treatment cases.

4.4 | Measures

4.4.1 | Dependent variables

The key dependent variables of interest for this study were (1) reunification and (2) permanency. When examining the question regarding likelihood of reunification, children were identified as reunified based on their foster care exit type (1 = reunified; 0 = not reunified). Children who did not experience reunification were treated as censored cases (i.e., they either exited without reunification or remained in foster care) at the end of the study time frame (30 March 2019). When examining likelihood of exiting to permanency, children were identified as exiting to permanency if their foster care exit type was one of the three federal definitions of permanency: reunification, legal guardianship, or adoption (1 = exit to permanency; 0 = no exit to permanency). Children who did not exit to one of these three types were treated as censored cases at the end of the study time frame (30 March 2019).

4.4.2 | Time variables

Time to exit was measured by subtracting the date of placement from the date the child exited care. For cases that did not have an exit date, the date of placement was subtracted from the study end date (30 March 2019).

Because families did not enrol in the FTC programme until 135 days, on average, from the date of child removal, we also calculated time to foster care exit from the date the family entered the FTC. This approach provides a more precise assessment of the impact of the FTC intervention. *Time to exit from FTC start date* was measured by subtracting the date of FTC enrolment from the date the child exited care. For comparison cases, their treatment group match's FTC start date was used. For cases that did not have an exit date, the date of placement was subtracted from the study end date (30 March 2019).

TABLE 1 Prematch descriptives

	Comparison (n = 34 273)		Treatment (n = 91)	
	Mean (SD)	*N* (%)	Mean (SD)	*N* (%)
Observation window***	1452.02 (848.92)		819.13 (455.90)	
Population density***	429.40 (463.07)		57.49 (0)	
Age at latest removal*	4.93(4.47)		3.97 (3.85)	
Removal due to drug use***		15 513 (45)		71 (78)
Removal due to neglect*		20 060 (59)		43 (47)
Removal due to housing**		4898 (14)		4 (4)
Removal due to sexual abuse*		1950 (6)		0 (0)
Removal due to physical abuse**		5128 (15)		3 (3)
Prior removals^{+}	0.10 (0.36)		0.03 (0.18)	
American Indian***		11 095 (32)		57 (63)
Latino/a**		6180 (18)		6 (7)

***P < 0.001.
**P < 0.01.
*P < 0.05.
^{+}P < 0.10.

TABLE 2 Balance test results

	Mean bias	Median bias	β	R	% variance	P
Unmatched	50.7	36.2	163.6	0.13	70	P < 0.001
Matched	2.8	22.1	22.1	0.71	50	

TABLE 3 Postmatch descriptives

	Comparison (*n* = 146)		Treatment (*n* = 91)	
	Mean (SD)	*N* (%)	Mean (SD)	*N* (%)
Observation window	735.12 (508.16)		819.13 (455.90)	
Population density	65.36 (38.24)		57.49 (0)	
Age at latest removal	3.68 (3.95)		3.97 (3.85)	
Removal due to drug use		124 (8)		71 (78)
Removal due to neglect		69 (47)		43 (47)
Removal due to housing		5 (3)		4 (4)
Removal due to sexual abuse		0 (0)		0 (0)
Removal due to physical abuse		1 (1)		3 (3)
Prior removals	0.03 (0.16)		0.03 (0.18)	
American Indian		85 (58)		57 (63)
Latino/a		11 (8)		6 (7)

4.4.3 | Independent variable

This study examined whether participating in FTC impacted reunification outcomes. *FTC participation* was recorded as (1 = yes; 0 = no) for cases that were enrolled in FTC.

4.5 | Analysis

Cox proportional hazards models (a type of survival analysis) were estimated to answer this study's research questions. Survival analysis is the preferred method to analyse data where not all cases achieve the outcome of interest (i.e., reunification or permanency) within the study timeframe but may achieve that outcome after the study concludes. These cases are called 'censored' and are handled properly in survival analysis compared with other types of regression techniques (Allison, 2004). Survival analysis measures the likelihood of an event occurring at a given time interval during the study period depending on the level of an independent variable (i.e., likelihood of reunification for FTC vs. comparison cases). Cox proportional hazards models were estimated at the bivariate level (unadjusted). We did not estimate multivariate level (adjusted) models because the treatment and comparison groups were balanced on all covariates after propensity score matching was conducted.

5 | RESULTS

5.1 | Participant description

Regarding characteristics of the post-match sample (Table 3 above), the average age of children was slightly less than four. Over half of all children were American Indian/Native American and less than 10% were Hispanic. Regarding case characteristics, the average number of previous removals was very small (measured in decimals), indicating that the current foster care placement is their first out-of-home care experience for the vast majority of participants. Over three fourths of children had parent drug use identified as a reason for their placement in foster care. Slightly fewer than half of children also had neglect identified as a removal reason. Few children had other removal reasons including housing, sexual abuse and physical abuse. Reflecting that all treatment group children come from the same small county, the mean population density is 57, with no variance. After matching, the mean population density for comparison group children was 65 with some variability indicating that comparison children also came from rural settings. Finally, we observed both groups for over 2 years on average.

5.2 | Group difference in reunification likelihood

Results of the Cox regression analysis estimating likelihood of reunification between groups (Table 4, first row) indicate that FTC participation was significantly associated with an increased hazard of reunification (likelihood of exiting to reunification on any given day in the study) compared with comparison cases. The size of the effect was 170% increased hazard of reunification in the bivariate model, meaning that, on any given day of observation, the treatment group had a 170% higher likelihood of reunifying. According to traditional cut-offs, these are considered medium effects (Rosenthal, 1996).

To better control for the effect of FTC, we also conducted a Cox proportional hazards model comparing FTC with comparison cases with FTC enrolment date as the study start date. For this analysis, time to reunification was calculated based on time from FTC start to reunification (or study end date). As noted in Section 4.4, matched cases were given the FTC start date of their treatment group match. Table 4 (second row) presents the results of the bivariate analysis and unadjusted hazard ratio. The results suggest that FTC participation was associated with an increased hazard of reunification compared with comparison cases. The size of the effect was substantial—a 292% increased hazard of reunification in the bivariate model. In other words, on any given day of observation after FTC start date, treatment cases had a 292% higher likelihood of reunifying than matched comparison cases. Similar to the results obtained using date of

TABLE 4 Reunification and permanency for FTC (n = 91) and comparison (n = 146) cases

			95% CI				
	Unadj. hazard ratio	*P*	Lower	Upper	No. of obs.	No. of failures	Wald $\chi^2(1)$
FTC—reunification from date of removal	2.695	$P < 0.001$	1.716	4.232	237	80	18.53***
FTC—reunification from FTC start date	3.918	$P < 0.001$	2.424	6.332	237	80	31.09***
FTC—permanency from date of removal	1.582	$P < 0.05$	1.107	2.263	237	121	6.32*
FTC—permanency from FTC start date	2.183	$P < 0.001$	1.512	3.153	237	121	17.32***

Abbreviation: FTC, family treatment court.
*$P < 0.05$.
**$P < 0.01$.
***$P < 0.001$.

removal as the study start date, these results meet the criteria for medium–large effects (Rosenthal, 1996).

5.3 | Group difference in permanency likelihood

To answer research question two, we conducted a Cox proportional hazards models comparing FTC with comparison cases on likelihood of exit to permanency using date of removal as the study start date. Table 4 (third row) presents the bivariate analysis (unadjusted hazard ratio). The results suggest that FTC participation was associated with an increased hazard of permanency compared with comparison cases. The size of the effect was 58% increased hazard of permanency in the bivariate model. In other words, on any given day of observation, the treatment group had a 58% higher likelihood of achieving permanency than comparison cases. According to traditional cut-offs, this is considered a small effect (Rosenthal, 1996).

Finally, to better control for the effect of FTC, we estimated another Cox proportional hazards model on likelihood of achieving permanency from FTC enrolment date. Table 4 (fourth row) presents the results of the bivariate analysis and unadjusted hazard ratio. The results suggest that FTC participation was significantly associated with a 183% increased hazard of permanency compared with comparison cases. In other words, on any given day of observation after starting in the FTC programme, treatment cases had a 183% higher likelihood of achieving permanency. Similar to the results obtained using date of removal as the study start date, these results meet the criteria for small–medium effects (Rosenthal, 1996).

6 | DISCUSSION

Using the most rigorous quasi-experimental evaluation tools at the disposal of researchers in child welfare—a setting where randomized controlled trials are often unfeasible—this study adds to a growing body of literature suggesting that FTCs are an effective service delivery strategy for meeting policy-driven goals with a challenging population. This study demonstrated that FTC-involved cases were anywhere from 170% to 292% more likely to reunify and from 58% to 183% more likely to achieve permanency within the study period (depending on the start date of the analysis), after controlling, through propensity score matching, for multiple variables which are known to influence child welfare outcomes. These findings are consistent with previous research that find positive effects of FTC involvement on both reunification (Zhang et al., 2019) and permanency (Moore et al., 2020). Some studies find no significant difference between FTC and comparison cases on these outcomes, however (Moore et al., 2020).

In the current study, the stronger effect of the FTC programme on reunification versus permanency when compared with matched cases served in a traditional setting may illustrate the relative efficacy of this model for facilitating reunification. Based on findings in earlier literature that reunification for this population is heavily dependent on parents successfully completing SUD treatment and other case plan-mandated services (Doab et al., 2015), this association may reflect that FTC's are more effective than traditional child welfare courts at ensuring parental case plan compliance and substance use treatment completion. Prior literature reports poor treatment completion rates among parents with substance use disorder in the child we fare system, whereas FTC research documents that these programmes significantly improve case plan compliance (Fessinger et al., 2020), reduce substance use and mental health symptoms (Moore et al., 2012) and increase treatment completion (van Wormer & Hsieh, 2016). The overarching paradigm, and central focus of FTC programmes, is to leverage rewards, sanctions and oversight to increase parent compliance with case plans and ensure adequate substance use treatment receipt. In a current study, it appears that these efforts have had the intended effect.

Given the thrust of these programmes on enabling parent–child reunification, it is notable that the children served in the FTC programme were also more likely to achieve permanency. Although permanency includes reunification, it is a child-focused outcome that encompasses any legally permanent arrangement, which includes adoption and legal guardianship. The results from the current study suggest that the high-intensity FTC programme may have, for parents who were not successful in the programme, reduced the time it took to pursue alternative permanency arrangements for their children. This may reflect the fact that the 'reasonable efforts' requirement characterizing the state's burden to pursue parent–child reunification is easily documented and met in a FTC environment where parents

are offered a cadre of services and supports, frequently drug-tested and monitored in other ways. Faster time to permanency is certainly a marker of success according to Federal child welfare policy. However, it may be important to inform parents who are considering a voluntary FTC programme that participation may lead to a potentially faster route to termination of parental rights if they are unsuccessful in the programme (Lloyd, 2015). Giving parents full knowledge of the opportunities and the risks inherent in FTC participation is ethnically necessary to ensure that their engagement is both voluntary and informed.

As with much of the other FTC research, models of FTC implementation vary from court to court. Therefore, it is unknown whether the comprehensive service experience or the individual ingredients of the FTC have produced the greater impact. These issues have been raised in prior FTC publications (Brook et al., 2016; Marlowe & Carey, 2012). It is worthy of consideration that no families in the public child welfare system receive the exact same service intervention and studies that can isolate an individual component are rare with this population because families receive a variety of services. This is no difference in FTCs. However, there are service aspects unique to FTCs, such as routine communication between providers, client accountability, the role of the judge, structured programming, and drug testing, which have shown to uniquely increase treatment court effectiveness (Center for Children and Family Futures & National Association of Drug Court Professionals [CFF & NADCP], 2019). These service characteristics should be studied further as we do not know whether certain unique features make the difference. In a time of scarce resources, it would be beneficial to know whether certain elements of FTCs are most influential.

In addition to understanding the programmatic attributes of greatest effect, future research is also needed to clarify the target population for these courts. Currently, most programmes utilize limited inclusion/exclusion criteria (CFF & NADCP, 2019), typically offering services to any family with parental SUD so long as there are no concurrent severe mental health issues or incredibly severe child abuse allegations. The population served by FTCs is undoubtedly one of the most challenging to serve in the context of child welfare, and these cases are increasing in frequency. Demonstrating a more effective way for them to achieve reunification and permanency is a significant advancement. Further research should also continue to tease out for whom FTCs work best. While there has been some research into this topic, it is dated, and the models of FTC have since evolved significantly. Previous studies have shown that parental age, race, number of treatment episodes and drug of abuse impact FTC outcomes—including reunification. However, much more work in this area is needed to accurately characterize the FTC target population (Bruns et al., 2012; Green et al., 2007; Worcel et al., 2007). FDCs are proliferating rapidly in the United States, and with this innovation comes changes in implementation that should be carefully studied.

Our findings suggest that programme effects were more robust when estimated from the date the child's family entered the FTC. Using the FTC entry as the study start date permitted a more precise evaluation of the FTC intervention impact. As noted, the average time from child removal to FTC entry in our sample was 135 days. Previous research suggests that the sooner the family is enrolled in the FTC, and, given the greater effect sizes we observed from FTC start date, is reflected in our findings. This is also consistent with recommendations in the recently released Family Treatment Court Best Practice Standards, which emphasize timely identification of eligible families and prompt programme enrolment (CFF & NADCP, 2019). Unfortunately, one significant barrier to timely identification of parental SUD for FTC enrolment is delayed identification of parental substance use. In our study, 22% of families that ultimately enrolled in the FTC did not have parental SUD identified at the time of removal. Previous research suggests that using a universal substance use screening tool early in the case can identify high-risk parents whose SUD was not identified at the time of the investigation (Brook et al., 2014).

It is also worth noting and discussing the rural setting for this court. Given the relative intensity of FTC practice compared with services as usual, implementation of the model may be fraught in a resource-scarce rural environment. Previous work has documented the relative paucity of treatment across a continuum of care in rural settings, including the impact of limited access to treatment on child welfare experiences and outcomes (Belanger & Stone, 2008; Buykx et al., 2013; Hancock et al., 2019; Pullen & Oser, 2014). That said, research on other rural FTC programmes demonstrates their effectiveness for reuniting families (Green et al., 2007; Pollock & Green, 2015). Children and Family Futures' peer learning court programme has included rural programmes that demonstrate best practices and provide guidance and technical assistance to similarly situated peer programmes across the United States (Breitenbucher et al., 2013). Effective and formalized interdisciplinary relationships between the FTC and providers across the range of family-serving agencies is anecdotally possible in any environment. Future research is needed to better understand the strengths and challenges to interdisciplinary collaboration in a rural FTC setting.

As FTCs continue to expand, the role of social work within the court structure, and implications for social work practice models, need to be the subject of social work education. Social workers play several roles on FTC teams or among FTC-connected community providers including, for example, FTC programme coordinator, SUD treatment professional, mental health provider, child welfare worker or children or family services practitioner. Social workers are also frequently called upon to evaluate and research these programmes, provide guidance to policymakers or develop funding priorities that impact these programmes. Social workers are therefore engaged in the assessment of children, parents and families, services referral and service provision and contributing to FTC policy, research and evaluation and political advocacy. There are various roles available to social work practitioners in these settings, and they provide an opportunity to work with clients who have a high level of both risk and reward.

Given the scope of potential involvement with FTC programmes, the increasing numbers of FTCs and other ‘problem-solving’ treatment courts, the unique needs and challenges of working with families in child welfare due to parental substance use disorder, all levels of social work education would benefit from required content on substance use disorders that includes an introduction to these programmes. As noted,

the proportion of families in CWS due to parental SUD is high and only increasing, and FTC programmes consistently demonstrate positive effects for this population. Our study confirmed the logical suggestion that the effect of an FTC does not begin until the family is connected to the intervention. Previous qualitative research suggests that social workers and treatment professionals are integral in recommending and referring parents to these programmes (Lloyd Sieger & Haswell, 2020). Therefore, educating social workers regarding these court programmes, their evidence base and presence across the United States could impact the speed at which eligible families are identified and referred for these programmes.

Another important aspect of social work education and practice relevant to this population is that unlike adults with SUD served in traditional community treatment settings, parents with SUD in child welfare are more likely to face complex and interrelated service needs including significant case management needs. Very few families with parental SUD in child welfare are only dealing with the substance use. In fact, one study documented that a mere 8% of parents with SUD had no major co-occurring service needs. As noted, the FTC programme evaluated in this study connected participants to a range of services beyond SUD treatment and utilized the programmatic structure (i.e., rewards and sanctions and judicial oversight) to encourage engagement with all case plan requirements, not just treatment. The complexity of these families' needs means that social work education on addictions in child welfare must incorporate macro frameworks such as the social determinants of health (Council on Social Work Education, 2020).

7 | STRENGTHS AND LIMITATIONS

The findings must be viewed in the context of the study design's strengths and limitations. The use of a quasi-experimental approach, characterized by propensity score matching, and the use of Cox proportional hazards address the concerns that not all families exit the system in the study period. Further, this approach allowed the researchers to control for important variables known to influence reunification and permanency. Further, to address the fact that families enter the system at different points in time (and thereby may be influenced by something other than the intervention), the researchers analysed the impact of FTC participation from two different points in time to increase the rigour and trustworthiness of the study. Although propensity score matching attempts to address several key threats to validity in the absence of an experimental study, this quasi-experimental design is limited in that it cannot address as many threats as a randomized control trial. Selection bias, one of the most consistent threats to research on FTC effectiveness, remains operative. Because this study relied on administrative child welfare data to conduct matching and create a comparison group, we were limited to variables collected during the course of child welfare practice. Therefore, we lacked parent-level data included in our matching model, including variables such as parental substance use disorder severity, readiness to change, co-occurring mental health issues, referral to substance use treatment and substance use treatment outcomes. Overall, the literature would benefit from future studies designed with randomization and additional primary data collection to evaluate whether participation in FTC is associated with lasting permanence among children affected by parental substance use disorder. In instances when randomization is untenable due to ethical concerns, future research should incorporate ways to match on parent variables, such as cross-referencing data in state administrative databases that contain parent substance abuse treatment information. It should also be noted that these authors acknowledge that, while reunification and permanency are critical first steps in the process, the ultimate test of success for the FTC intervention is the long-term stability of these events for families. This outcome (i.e., likelihood of re-entry into the system) will not be known for years to come.

Despite limitations, this study adds to the growing literature regarding the effectiveness of FTCs, using rigorous standards for programme evaluation. The families receiving these services are challenging to serve, underscoring the value of any scientific advancements on this topic to the courts, child welfare, substance abuse treatment and (most importantly) the children and families they are designed to benefit.

AUTHOR CONTRIBUTIONS

Lloyd conceptualized the study, conducted the analyses and contributed to all sections of the manuscript. Becker contributed to the analyses and the introduction, methods and results sections. Brook contributed to the study conceptualization, discussion and limitations sections.

CONFLICT OF INTEREST

Lloyd and Brook were subaward recipients on the project described in this manuscript. Becker has no conflict of interest.

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ETHICS STATEMENT

This article contains original research with human subjects. All research activities were approved by the University of Connecticut Institutional Review Board. All study procedures in this study were in accordance with the ethical standards of the IRB.

INFORMED CONSENT

Written informed consent was obtained from all family treatment court participants included in the study.

DATA AVAILABILITY STATEMENT

Data subject to third-party restrictions.

ORCID

Margaret H. Lloyd Sieger https://orcid.org/0000-0002-4536-2035
Jody Brook https://orcid.org/0000-0002-8681-1343

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