

Effect of an integrated family dependency treatment court on child welfare reunification, time to permanency and re-entry rates

Emmeline Chuang^{a,*}, Kathleen Moore^b, Blake Barrett^b, M. Scott Young^b

^a Graduate School of Public Health, San Diego State University, 5500 Campanile Dr., San Diego, CA 92182-4162, USA

^b Department of Mental Health Law & Policy, University of South Florida, 13301 Bruce B Downs Blvd., Tampa, FL 33612, USA

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ABSTRACT

Family dependency treatment courts (FDTC) have recently emerged as an innovative model for addressing the needs of families involved with the child welfare system and affected by substance use disorders. The current study examined the effect of participation in an integrated FDTC on family reunification, time to permanency, and re-entry into care. Propensity score methods were used to match a group of 95 FDTC participants to non-FDTC participants from a demographically and geographically similar comparison county. Findings indicated that FDTC participation increased families' likelihood of reunification and decreased the odds that children would re-enter care within 12 months of achieving permanency. However, FDTC participation also significantly increased time to permanency. Implications of these findings for research, policy, and practice are discussed.

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1. Introduction

Between 40–80% of substantiated maltreatment cases in the U.S. occur in the context of parental substance use (Jones, 2004; Semidei, Radel, & Nolan, 2001). Children raised by substance-using caregivers are significantly more likely to experience abuse and neglect than children raised in families without substance use (Appleyard, Berlin, Rosanbalm, & Dodge, 2011). These children are also more likely to use substances themselves (Biederman, Faraone, Monuteaux, & Feighner, 2000) and experience negative life course outcomes, such as low academic achievement, poverty, and engagement with the juvenile and/or criminal justice system (Cleveland, Feinberg, Bontempo, & Greenberg, 2008; Wills, Schreiber, Benson, & Vaccaro, 1994).

Treatment can support improved clinical and functional outcomes for families, particularly if services are initiated soon after families first become involved with the child welfare system and include a wraparound component (Grella, Needell, Shi, & Hser, 2009; Howell, Heiser, & Harrington, 1999). For example, prior research has shown that tailored substance abuse treatment programs can decrease substance use, reduce co-occurring mental health symptoms, improve self-reported health status, and increase employment rates of participants (Ashley, Marsden, & Brady, 2003; Marsh, D'Aunno, & Smith, 2000). For families involved with the child welfare system, swift entry into treatment and completion of at least one treatment episode can increase the likelihood of reunification and decrease the amount of time children spend in substitute care (Green, Rockhill, & Furrer, 2007). Unfortunately, many

substance-using caregivers never engage in treatment (U.S. General Accounting Office, 1998). A major contributing factor is the limited availability of treatment programs that address both the substance use disorder(s) and ancillary service needs of the predominantly female caregivers involved with the child welfare system (Ashley et al., 2003). Such programs have been shown to significantly improve treatment initiation, retention, and outcomes (Marsh et al., 2000; Osterling & Austin, 2008), but their long waiting lists, and/or high program expense make them difficult for caregivers to access and complete within the permanency timelines mandated by the 1997 federal Adoption and Safe Families Act (ASFA) (Folkman, 2005).

Under ASFA, caregivers have as little as one year to comply with reunification requirements, including recovery from addiction, before risking permanent termination of parental rights. This legislation seeks to promote children's safety and well-being by reducing the amount of time children spend in non-permanent placement settings (Stott & Gustavsson, 2010). However, ASFA has been criticized for failing to take into consideration the amount of time required for substance-using caregivers to complete treatment and achieve sobriety (O'Flynn, 2000). Conflicting permanency and substance abuse treatment timelines make it difficult for courts to serve these families effectively, and these difficulties are often exacerbated by the differing priorities, perspectives, and information-sharing processes of the child welfare, court, and substance abuse treatment systems (Green, Rockhill, & Burns, 2008; Young, Gardner, & Dennis, 1998).

1.1. Family dependency treatment courts (FDTC)

Over the last decade, family dependency treatment courts (FDTC) have emerged as an increasingly popular method for dealing with

* Corresponding author. Tel.: +1 619 594 6439; fax: +1 619 594 6112.
E-mail address: echuang@mail.sdsu.edu (E. Chuang).

substance-using caregivers whose families become involved with the child welfare system (Boles, Young, Moore, & DiPirro-Beard, 2007). FDTC, also known as family drug courts and drug dependency courts, were first adapted from the adult drug court model in the mid-1990s as a means of providing a less adversarial judicial environment for substance-using caregivers and their families (Hora, 2002). In the mid-2000s, an increasing number of counties began implementing FDTC, and they soon grew to encompass counties in more than 38 states across the United States (Huddleston, Marlowe, & Casebolt, 2008). Recent statistics provided by the National Drug Court Resource Center indicate that there are currently 343 FDTCs in operation today (NDCRC, 2012).

There are currently three different types of FDTC: integrated, dual-track, and parallel. All three FDTC variants include a collaborative team of representatives from the child welfare, court, and substance abuse treatment systems working closely with substance-using caregivers to provide intensive judicial monitoring, timely and integrated treatment and wraparound services, frequent drug testing, weekly or biweekly court hearings, and rewards and sanctions associated with treatment compliance (Edwards & Ray, 2005). However, the integrated, dual-track, and parallel FDTC models vary in their approach to how dependency petitions and caregiver compliance with substance abuse treatment orders are managed by the court system (Young, Wong, Adkins, & Simpson, 2003). Under the integrated FDTC model, a single family court judge oversees both parental compliance with substance abuse treatment orders and all dependency-related petitions for that case. In the dual-track model, FDTC judges monitor compliance with substance abuse treatment only for those caregivers who initially failed to participate in court-ordered services; dependency petitions are handled in a separate court. Finally, in the parallel FDTC model, dependency case proceedings are conducted in family court, and a specialized court officer oversees parental compliance and recovery management services (Boles et al., 2007). Since all three types of FDTC contain program characteristics previously shown to improve treatment outcomes and reduce danger and conflict in high-risk families, e.g. intensive cross-systems collaboration, monitoring, case management, and integrated service provision (Coll, Stewart, Morse, & Moe, 2010; Marsh, Smith, & Bruni, 2011), all are expected to result in better treatment and child welfare outcomes for substance-using caregivers and their families than traditional dependency court.

Unfortunately, despite the popularity of FDTC, current empirical research as to their impact on treatment and child welfare outcomes remains limited. Over the last decade, only five articles reporting comparison data have been published in the peer-reviewed literature. These five articles focused on six county-level FDTC, all implemented in the western region of the United States: Pima County (AZ); Sacramento County (CA); San Diego County (CA); Santa Clara County (CA); and Washoe County (NV). Three of the examined FDTC were integrated FDTC models, two were dual-track, and the other was a parallel FDTC. Findings from all five articles suggest that FDTC models can improve short-term treatment outcomes among substance-using caregivers, including greater engagement, retention, and satisfaction with services, as well as improved clinical and social functioning (Ashford, 2004; Boles et al., 2007; Green, Furrer, Worcel, Burrus, & Finigan, 2007, 2009; Worcel, Furrer, Green, Burrus, & Finnigan, 2008).

Study findings also suggest that families involved with FDTCs are more likely to successfully achieve reunification than those served by traditional dependency court (Boles et al., 2007; Green et al., 2009). However, evidence as to the impact of FDTC on other child welfare safety and permanency outcomes is much more limited: four of the five articles found either no impact on time to permanency or a significant increase in time to permanency due to FDTC participation (e.g. Green, Furrer, Worcel, Burrus, & Finigan, 2007). Only one study examined the impact of FDTC on children's risk of experiencing recurring maltreatment following reunification, and that study failed

to detect significant differences in re-entry rates between families participating in a parallel FDTC and families that became involved in the child welfare system prior to the implementation of the FDTC (Boles et al., 2007).

1.2. Study objectives

The current study contributes to the literature by examining whether caregiver participation in an integrated FDTC in a southeastern county (Hillsborough County, FL) positively impacted three child welfare outcomes: reunification, time to permanency, and re-entry into care. In the current study, caregivers are defined as parents or other permanent caregivers facing allegations of abuse or neglect. The three child welfare outcomes were selected based on their relevance to child welfare practice. Current federal guidelines prioritize reunification of removed children with their biological parents whenever safe and possible (Wulczyn, 2004). Time to permanency is important because extended stays in out-of-home settings can adversely affect children's development and well-being (Freundlich, Avery, Munson, & Gerstenzang, 2006; Plunkett & Osmond, 2004). Re-entry into care is a major indicator of whether family safety and service needs were adequately met prior to reunification and is a measure of child welfare system functioning evaluated as part of the federal Child and Family Services Review process (Childrens Bureau, 2010; Connell, Bergeron, Katz, Saunders, & Tebes, 2007; Shaw, 2006). To the best of our knowledge, this study is the first to examine effects of an integrated FDTC on re-entry into care.

1.3. Hillsborough County FDTC program

The Hillsborough County FDTC was first implemented in 2007 as the result of the need for a specialized court to work closely with caregivers of children whose lives have been affected by substance use disorders. With support from a three-year grant from the Center for Substance Abuse Treatment of the Substance Abuse and Mental Health Services Administration (SAMHSA), the court formed a collaborative, multidisciplinary team consisting of a judge; court-employed case managers; local substance abuse treatment providers; the local child welfare agency; Guardian Ad Litem personnel; defense attorneys; and the state Office of the Attorney General. This team works together to provide a holistic treatment approach to substance abusing parents involved in the child welfare system. As an integrated FDTC, a single judge is responsible for overseeing both dependency-related petitions and caregiver compliance with substance abuse treatment orders, and follows the child welfare case from initial temporary custody proceedings to final disposition.

In order to be eligible for entry into the Hillsborough FDTC program, caregivers must meet the following criteria: (1) substance abuse or dependence problem; (2) referral to the program by a dependency judge, drug court case manager, or state attorney; (3) child(ren) removed from the home after initial child welfare investigation and placed in kin care or foster care; (4) no serious and unstable mental illness such as schizophrenia or other psychotic disorders; (5) no prior convictions for violent or sexual offense or serious offenses resulting in incarceration; and (6) family reunification as a case plan goal (Green et al., 2009). Caregiver substance abuse or dependence problems are assessed using the Global Appraisal of Individual Needs (GAIN) Short Screener, which is administered by a FDTC case manager prior to referral as well as via a full face-to-face biopsychosocial assessment conducted by treatment agency personnel following caregiver entry into the FDTC program (Dennis, Chan, & Funk, 2006). Before reunification can occur, FDTC participants must successfully complete court-mandated treatment, i.e. graduate from the treatment program, and satisfy other court requirements such as attending required status hearings.

2. Methods

To examine the effects of FDTC participation on child welfare outcomes, we utilized a quasi-experimental nonequivalent group research design in which propensity score methods were used to match FDTC participants with control cases from a demographically and geographically similar county with no FDTC program.

2.1. Study design and sample selection

2.1.1. Hillsborough County FDTC program

We collected data on 95 caregivers that were enrolled in the Hillsborough County FDTC program between March 2007 and March 2009 and subsequently received 9–12 months of intensive outpatient services from a local substance abuse treatment agency. As part of their intensive outpatient therapy, participants received 8 hours of group counseling and 1 hour of individual counseling each week. These group counseling sessions also included an evidence-based trauma-informed psycho-educational counseling component (TRIAD; Clark et al., 2004), as well as an intervention to foster parental nurturing (Nurturing Parents; Bavolek, Kline, & McLaughlin, 1979), both intended to promote families' safety and well-being.

FDTC participants were also required to attend weekly Alcoholics Anonymous/Narcotics Anonymous self-help groups, undergo three random drug screens each week, and make bi-weekly court appearances. Other services provided by the treatment agency on an "as needed" basis included psychiatric counseling, vocational counseling, and GED courses. Bus passes also were available to participants on an as needed basis. Consistent with previous research suggesting that FDTC have a positive impact on short-term treatment outcomes, preliminary examination of six-month treatment outcomes among FDTC participants enrolled during the first year of the FDTC program indicate significant reductions in substance use, anxiety, and depression among participants, as well as high rates of treatment satisfaction (Moore, Barrett, & Young, 2012).

2.1.2. Comparison group

Child welfare administrative data on a comparison group of families from a neighboring county without an FDTC program were obtained from the Florida Department of Children and Families. The neighboring county, Pinellas County, is both geographically and demographically similar to Hillsborough County (U.S. Census Data, 2010). To be eligible for inclusion in the control sample, caregivers in Pinellas County had to meet similar criteria to the Hillsborough County FDTC participants: (1) involved with the child welfare system between 2007 and 2009; (2) verified maltreatment resulting in child removal from the home; (3) parental substance abuse or dependence affecting caregivers' ability to adequately care for children; (4) no parental incarceration; (5) no serious and unstable mental illness such as schizophrenia or other psychotic disorder; (6) no immediate termination of parental rights; and (7) family reunification as a case plan goal. Families that did not meet all of these criteria were eliminated from the sample. Application of these inclusion criteria reduced the control sample from 958 to 424 cases.

2.2. Study measures

2.2.1. Child welfare outcomes

Reunification was measured as a dichotomous variable (0 = no, 1 = yes) indicating whether children were reunified with their primary caregivers/parents after discharge from out-of-home care. Time to permanency was defined as the number of days it took to achieve final case disposition (reunification or adoption). Re-entry into care was a dichotomous variable (0 = no, 1 = yes) measuring whether the child experienced a subsequent removal from the home within 12 months after permanency was achieved.

2.2.2. Demographic and background variables

Four caregiver demographic and background variables potentially affecting FDTC participation were measured: caregiver age in years; caregiver male gender (yes/no); caregiver non-violent criminal history (yes/no); and caregiver race and ethnicity: African-American, Hispanic, and white or other (referent) (Huddleston et al., 2008).

2.3. Analyses

To minimize selection bias and permit the estimation of causal effects, propensity scores were used to match FDTC participants with comparable control cases from Pinellas County (Guo & Fraser, 2010). In general, propensity score techniques involve three steps (D'Agostino, 1998). The first step is an estimation of the propensity score using conditional variables known to impact FDTC participation. The second step involves matching FDTC participants ("treated" group) to comparison cases ("untreated" group); the resultant sample is typically a re-sampled subset of the original sample (Guo, Barth, & Gibbons, 2006). Finally, the third step is analysis of the matched sample to determine the effect of FDTC participation on the selected outcomes, reunification, time to permanency, and re-entry into care.

In the current study, we utilized a propensity score matching (PSM) technique known as nearest neighbor matching with calipers and without replacement (Guo et al., 2006). The calipers refer to the size of the common support region used to identify the control case with the closest propensity score. As suggested by Rosenbaum and Rubin (1985), calipers were defined as one quarter of the standard deviation of the propensity score. Reunification and re-entry into care were analyzed using logistic regression. Cox regression, also known as proportional hazard modeling, was used to examine effects of FDTC participation on time to permanency. Cox regression allows for the calculation of an unobserved variable known as a hazard rate, which translates the length of time it takes an event to occur (i.e. permanency) into a rate expressing the speed at which it occurs (Cleves, Gutierrez, Gould, & Marchenko, 2010). Under this framework, the longer it takes to achieve permanency, the smaller the hazard rate (Wells & Guo, 2006). Cox regression was selected due to its ability to make use of information from censored observations, i.e. those participants who did not achieve permanency during the study period (Cox, 1972; Singer & Willett, 2003). In the matched sample, the Kaplan–Meier product-limit method was also used to generate survivor functions to describe the elapsed time to permanency between caregivers that did and did not participate in the FDTC. All analyses were conducted using Stata 12.0 and incorporated the Huber–White correction to ensure coefficients with heteroskedasticity-robust standard errors as well as an adjustment for the potential clustering of children within families (StataCorp., 2011).

Propensity score matching is sensitive to selection of appropriate conditioning variables (Thoemmes & Kim, 2011). Due to the nature of administrative data, only a limited number of conditioning variables were available. Therefore, we tested for potential bias in the use of propensity scores by rerunning all analyses in the full, unmatched sample. These models did not include propensity score adjustments, but controlled for differences in caregiver demographic characteristics. We also conducted post-hoc sensitivity analyses to test the robustness of study findings to slight variations in model input. These sensitivity analyses involved rerunning all models using two additional PSM techniques: (1) Mahalanobis metric matching including the propensity score and (2) propensity score weights. Mahalanobis metric matching is similar to nearest neighbor matching in that it also involves a three-step matching process (Guo & Fraser, 2010). Propensity score weights, however, operate somewhat differently. When propensity scores are used as sampling weights, the estimation process is reduced to two steps instead of three (Guo & Fraser, 2010), because the second step ("matching") is removed. In this method, calculated propensity scores are used to re-weight treated and control participants to make them representative of the

population of interest for stratified sampling. In the current study, propensity score weights were used to calculate the average treatment effect (ATE) of FDTC participation on selected outcomes. None of these post-hoc analyses altered the direction or significance of the findings (not shown but available from the authors upon request).

3. Results

In the Hillsborough County FDTC sample, approximately 53% of children were reunified and 2% of children re-entered care within 12 months after achieving permanency. However, it took families an average of 495 days (s.d. 300) to achieve permanency. In contrast, 42% of children in Pinellas County were reunified with caregivers, 12% re-entered care within 12 months after achieving permanency, and families took an average of 395 days (s.d. 208) to achieve permanency. These differences were statistically significant ($p < 0.05$).

Table 1 presents descriptive statistics for caregiver demographic and background variables before and after matching. On average, caregivers in both the treatment and control groups were between 29 and 30 years old, and the majority of these caregivers (75–80%) were non-Hispanic whites. Differences between counties in the percentages of African-American or Hispanic caregivers were not statistically significant. However, FDTC participants in Hillsborough County and control cases in Pinellas County differed significantly in the percentage of caregivers with criminal history and in the percentage of male caregivers, suggesting a potential need to control for selection bias as an extraneous factor in the analytic process. After propensity score matching, there were no significant differences between the “treated” and “untreated” groups on the identified demographic characteristics of caregiver criminal history, age, gender, or race/ethnicity.

Tables 2–4 show the results of regression models conducted on both the full unmatched and matched samples. Participation in the FDTC program was significantly associated with odds of caregiver-child reunification in both the unmatched sample (odds ratio or O.R., 1.69, $p < 0.05$) and the matched sample (O.R. 2.12, $p < 0.05$). These findings suggest that even after accounting for the identified caregiver demographic and background variables FDTC participants were approximately twice as likely to be reunified with their children as the controls. Results also indicated that FDTC program participation decreased the odds that children would re-enter care within twelve months after achieving permanency. This finding was consistent in both the unmatched (OR 0.16, $p < 0.05$) and matched (OR 0.12, $p < 0.01$) samples. However, FDTC participants took significantly longer to achieve permanency in both the unmatched (hazard ratio 0.50, $p < 0.01$) and matched samples (hazard ratio 0.52, $p < 0.01$). As depicted in Fig. 1, these results indicate that FDTC participants achieved permanency at a slower rate than families that did not participate in FDTC. Using the Kaplan Meier method, differences between the survivor functions for these two groups were statistically significant ($p < 0.05$) on the Breslow, Tarone–Ware, and log-rank tests.

Table 1
Demographic characteristics of caregivers in the overall and matched samples.

	Overall, untreated (N = 424)	Overall, treated (N = 95)	Matched, untreated (N = 91)	Matched, treated (N = 91)
Criminal history (yes/no)	78%	67%	67%	67%
Caregiver age (years)	29.2	29.7	29.6	29.6
Caregiver is male (yes/no)	9%	24%	22%	22%
Caregiver race/ethnicity: white and other (referent)	75%	80%	84%	82%
Caregiver race/ethnicity: African-American	21%	14%	12%	13%
Caregiver race/ethnicity: Hispanic	4%	6%	4%	5%

Table 2
Logistic regression results: reunification.

	Overall, unmatched		Matched	
	O.R.	Robust S.E.	O.R.	Robust S.E.
FDTC participation	1.69*	0.42	2.12**	0.66
Caregiver criminal history	0.82	0.21	–	–
Caregiver age	1.02	0.14	–	–
Caregiver is male	1.25	0.47	–	–
Race/ethnicity: African-American	0.95	0.28	–	–
Race/ethnicity: Hispanic	0.64	0.31	–	–

* $p < 0.05$.

** $p < 0.01$.

4. Discussion

Previous research on family dependency treatment courts (FDTC) has provided preliminary evidence of FDTC effectiveness at improving treatment outcomes for families, including swifter entry into treatment, longer treatment duration, and greater likelihood of successfully completing treatment (e.g. Green, Furrer, Worcel, Burrus, & Finigan, 2007). Examination of short-term treatment outcomes for caregivers in the Hillsborough County FDTC also indicated that FDTC participation resulted in significant reductions in caregiver reports of past-month substance use, anxiety, and depression as well as high rates of treatment satisfaction (Lesperance et al., 2011; Moore et al., 2012). However, research examining the impact of FDTC participation on child welfare outcomes is much more limited, particularly with regards to the effect of FDTC participation on children's likelihood of re-entering care. The one study that examined the impact of FDTC participation on re-entry rates was conducted in a parallel FDTC and found no effect (Boles et al., 2007).

In the current study, participation in an integrated FDTC was shown to have a positive effect on two key child welfare outcomes: reunification and re-entry into care. FDTC participants were significantly more likely to be reunified with their children than caregivers from the comparison county who did not participate in the FDTC. More critically, children of FDTC participants were also less likely to re-enter care within 12 months after permanency was achieved. Recurrence of maltreatment and re-entry into care are problematic because they suggest that the issues that triggered families' involvement with the child welfare system were not adequately addressed prior to permanency. Analysis of a multi-state foster care data archive indicated that average state-level re-entry rates are quite high, ranging from 21% to 38% (Wulczyn, Hislop & Goerge, 2000). A more recent study involving Florida child welfare administrative data indicated that between 2005 and 2007, approximately 11% of children in Florida re-entered foster care less than 12 months after a permanency decision was made (Vargo, Armstrong, Jordan, et al. 2009). Therefore, the finding that children of FDTC participants were only 0.12 times as likely to re-enter care within 12 months of achieving permanency as children of matched non-FDTC participants is a particularly encouraging sign.

Table 3
Cox proportional hazards model results: time to permanency.

	Overall, unmatched		Matched	
	Hazard ratio	Robust S.E.	Hazard ratio	Robust S.E.
FDTC participation	0.50**	0.09	0.52**	0.10
Caregiver criminal history	1.05	0.13	–	–
Caregiver age	1.00	0.01	–	–
Caregiver is male	1.02	0.22	–	–
Race/ethnicity: African-American	0.99	0.12	–	–
Race/ethnicity: Hispanic	0.85	0.16	–	–

* $p < 0.05$.

** $p < 0.01$.

Table 4
Logistic regression results: Re-entry into care.

	Overall, unmatched		Matched	
	O.R.	Robust S.E.	O.R.	Robust S.E.
FDTC participation	0.16*	1.29**	0.12**	0.95
Caregiver criminal history	0.77	0.32	–	–
Caregiver age	1.04	0.02	–	–
Caregiver is male	1.56	0.79	–	–
Race/ethnicity: African-American	0.32*	0.18	–	–
Race/ethnicity: Hispanic (dropped) ^a	–	–	–	–

* $p < 0.05$.

** $p < 0.01$.

^a Hispanicity perfectly predicted failure to re-enter care and was dropped from the model.

Why did the current study find that FDTC participation reduced re-entry rates when the previous Boles et al. (2007) study did not? First, the current study examined an integrated rather than a parallel FDTC. While parallel and integrated FDTC models utilize a collaborative team of representatives from the child welfare, justice, and substance abuse treatment systems, the integrated FDTC is unique in that a single FDTC judge oversees both parental compliance with substance abuse treatment orders and all dependency-related petitions for each case. Cross-systems collaboration is notoriously challenging, particularly for child welfare and substance abuse treatment agencies with differing priorities and timelines (Chuang & Wells, 2010; Drabble, 2007). Thus, one possible explanation is that having a single judge to which both agencies are accountable and with which caregivers interact regularly may result in improved service coordination and greater family engagement than a FDTC model where accountability is dispersed.

Another possible explanation for the differential effect of FDTC participation on re-entry rates in the two studies relates to the average time to permanency in the two programs. In the current study, the average time to permanency in the overall sample was 406 days, with FDTC participants taking approximately 27–29% longer to achieve permanency than non-FDTC participants. In contrast, Boles et al. (2007) found that in the parallel FDTC court the average time to permanency was 285.3 days and there were no significant difference in time to permanency for the treatment and control groups. In the current study, longer time to permanency and lower re-entry rates among reunified families could be attributed to increased monitoring of risky behaviors through mechanisms like random drug screening and judicial status hearings. ASFA legislation places pressure on child welfare

agencies to achieve permanency for children in less than a year. For families affected by substance use disorders, this timeline often conflicts with the time needed for caregivers to achieve sobriety and may negatively impact family well-being in the long term (Semidei et al., 2001). Certainly evidence suggests that children with short lengths of stay in out-of-home care re-enter care at higher rates than children who remain in care for longer periods of time (Frame, 2002; Wells & Guo, 1999). Thus, while more costly in the short term, it is possible that the increased time to permanency in the Hillsborough County FDTC program may be more beneficial for families and less expensive for the state in the long-term by decreasing the need for re-entry into care.

Finally, the integrated FDTC program examined in this study may also differ from other FDTC models in its explicit inclusion of evidence-based therapy and wraparound services. Previous research has shown that child welfare caseworkers often have little understanding of the addiction experience or of caregivers' wraparound service needs (Akin & Gregoire, 1997) and that provision of substance abuse treatment alone cannot reduce re-entry rates for child welfare-involved children unless those services are appropriate and evidence-based (Barth, Weigensberg, Fisher, Fetrow, & Green, 2008; Guo et al., 2006). The intensive outpatient services received by participants in the integrated FDTC in this study included a trauma-informed group psycho-educational curriculum tailored specifically to the needs of low-income women (Clark et al., 2004) as well as wraparound services such as transportation assistance, vocational counseling, and GED courses. Tailored treatment and provision of wraparound services have both been associated with more positive substance abuse treatment outcomes (Campbell et al., 2007; Friedmann, Lemon, & Stein, 2001); thus, another plausible explanation for lower re-entry rates among FDTC participants is that these individuals received more effective treatment. Previous studies of FDTC programs have not provided much detail about the type of treatment received by participants; Boles et al. (2007)'s study of a parallel FDTC program discussed the use of a voucher program, but the other FDTC studies did not discuss the treatment provided in any depth, only the speed of entry, duration of treatment, and intensity of services received. Given a growing body of research questioning the effectiveness of behavioral health services received by families involved with the child welfare system (e.g. Guo et al., 2006), the type of treatment received is a topic that should be examined more closely in future studies.

4.1. Limitations

Several limitations must be taken into account in interpreting current study findings. First and foremost, the quasi-experimental non-equivalent group research design utilized in the study was feasible and cost-effective but cannot match the rigor of a randomized study design involving larger sample sizes. Propensity score matching techniques were utilized to help adjust for potential selection bias, but can only account for bias on the observed variables. The use of child welfare administrative records to identify control cases limited our ability to control for a wider range of other variables that might also influence child welfare outcomes, such as service delivery features, child behavioral or physical disabilities, or other family demographic and background characteristics. Finally, the current study focused on child welfare outcomes for caregivers whose scores on the GAIN assessment resulted in their initial placement into intensive outpatient therapy at a single local treatment agency; we did not analyze outcomes for caregivers receiving treatment at other local treatment agencies. While the treatment services offered by the two other treatment agencies in the county were determined to be very similar due to strict eligibility requirements for serving as an FDTC treatment provider, the use and focus on FDTC participants from a single treatment agency does limit the sample size and generalizability of study findings.

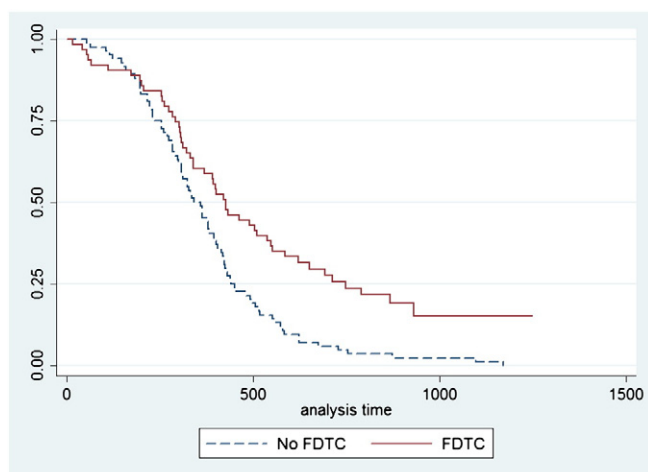


Fig. 1. Time to permanency by FDTC participation in the matched sample.

5. Conclusion

Despite the limitations described above, the current study is the first to offer evidence that an integrated family dependency treatment court (FDTC) offering evidence-based substance abuse treatment with a wraparound component can improve reunification rates and reduce the likelihood of children re-entering care. However, study findings also suggest that achieving these positive outcomes may be contingent on offering effective treatment programs and on courts allowing longer time to permanency for caregivers to achieve sobriety. Given the increase in FDTC in the United States over the last decade, additional research is needed to better understand the precise mechanisms by which FDTCs produces these positive child welfare outcomes and the extent to which they are affected by different service delivery and case characteristics. Future research could also extend current study findings by examining how FDTC participation affects child and family well-being as well as safety and permanency over a longer period of time.

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References

- Akin, B., & Gregoire, T. K. (1997). Parents' views on child welfare's response to addiction. *Families in Society*, 78, 393–404.
- Appleyard, K., Berlin, L. J., Rosanbalm, K., & Dodge, K. A. (2011). Preventing early child maltreatment: Implications from a longitudinal study of maternal abuse history, substance use problems, and offspring victimization. *Prevention Science*, 12(2), 139–149.
- Ashford, J. (2004). Treating substance abusing parents: A study of the Pima County family drug court approach. *Juvenile and Family Court Journal*, 55, 27–37.
- Ashley, O. S., Marsden, M. E., & Brady, T. M. (2003). Effectiveness of substance abuse treatment programming for women: A review. *The American Journal of Drug and Alcohol Abuse*, 29(1), 19–53.
- Barth, R., Weigensberg, E. C., Fisher, P. A., Fetrow, B., & Green, R. L. (2008). Reentry of elementary aged children following reunification from foster care. *Children and Youth Services Review*, 30(4), 353–364.
- Bavolek, S., Kline, D., & McLaughlin, J. (1979). Primary prevention of child abuse: Identification of high risk adolescents. *International Journal of Child Abuse and Neglect*, 3, 1071–1080.
- Biederman, J., Faraone, S., Monuteaux, M., & Feighner, J. (2000). Patterns of alcohol and drug use in adolescents can be predicted by parental substance use disorders. *Pediatrics*, 106(4), 792–797.
- Boles, S. M., Young, N. K., Moore, T., & DiPirro-Beard, S. (2007). The Sacramento Dependency Drug Court: Development and outcomes. *Child Maltreatment*, 12(2), 161–171.
- Campbell, C. I., Wells, R., Alexander, J., Jiang, L., Nahra, T., & Lemak, C. (2007). Tailoring of outpatient substance abuse treatment to women, 1995–2005. *Medical Care*, 45(8), 775.
- Childrens Bureau (2010). *Child maltreatment 2009*. : U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth, and Families, Children's Bureau Available from http://www.acf.hhs.gov/programs/cb/stats_research/index.htm#can
- Chuang, E., & Wells, R. (2010). The role of inter-agency collaboration in facilitating receipt of behavioral health services for youth involved with child welfare and juvenile justice. *Children and Youth Services Review*, 32(12), 1814–1822.
- Clark, C., Giard, J., Fleisher-Bond, M., Slavlin, S., Becker, M., & Cox, A. (2004). Creating alcohol and other drug, trauma, and mental health services for women in rural Florida: The triad women's project. *Alcoholism Treatment Quarterly*, 22(3), 41–61.
- Cleveland, M., Feinberg, M., Bontempo, D., & Greenberg, M. (2008). The role of risk and protective factors in substance use across adolescence. *Journal of Adolescent Health*, 43(2), 157–164.
- Cleves, M., Gutierrez, R., Gould, W., & Marchenko, Y. (2010). *An introduction to survival analysis using Stata* (third edition). College Station, TX: Stata Press.
- Coll, K. M., Stewart, R. A., Morse, R., & Moe, A. (2010). The value of coordinated services with court-referred clients and their families: An outcome study. *Child Welfare*, 89(1), 61–79.
- Connell, C., Bergeron, N., Katz, K., Saunders, L., & Tebes, J. (2007). Re-referral to child protective services: The influence of child, family, and case characteristics on risk status. *Child Abuse & Neglect*, 31, 573–588.
- Cox, D. R. (1972). Regression models and life tables. *Journal of the Royal Statistics Society*, 34, 187–220.
- D'Agostino, R. (1998). Tutorial in biostatistics: Propensity score methods for bias reduction in the comparison of a treatment to a non-randomized control group. *Statistics in Medicine*, 17, 2265–2281.
- Dennis, M., Chan, Y., & Funk, R. (2006). Development and validation of the GAIN Short Screener (GSS) for internalizing, externalizing, and substance use disorders and crime/violence problems among adolescents and adults. *American Journal of Addictions*, 15(S1), 80–91.
- Drabble, L. (2007). Pathways to collaboration: Exploring values and collaborative practices between child welfare and substance abuse treatment fields. *Child Maltreatment*, 12(31–42).
- Edwards, L. P., & Ray, J. A. (2005). Judicial perspectives on family drug treatment courts. *Juvenile and Family Court Journal*, 56(3), 1.
- Folkman, C. (2005). Family drug courts: A new approach to help solve the crisis in child welfare. *Children's Legal Rights Journal*, 25(4), 15–24.
- Frame, L. (2002). Maltreatment reports and placement outcomes for infants and toddlers in out-of-home care. *Infant Mental Health Journal*, 23(5), 517–540.
- Freundlich, M., Avery, R., Munson, S., & Gerstenzang, S. (2006). The meaning of permanency in child welfare: Multiple stakeholder perspectives. *Children and Youth Services Review*, 28, 741–760.
- Friedmann, P. D., Lemon, S. C., & Stein, M. D. (2001). Transportation and retention in outpatient drug abuse treatment programs. *Journal of Substance Abuse Treatment*, 21(2), 97–103.
- Green, B. L., Furrer, C., Worcel, S., Burrus, S., & Finigan, M. (2007). How effective are family treatment drug courts? Outcomes from a four-site national study. *Child Maltreatment*, 12(1), 43–59.
- Green, B. L., Furrer, C., Worcel, S., Burrus, S., & Finigan, M. (2009). Building the evidence base for family drug treatment courts: Results from recent outcome studies. *Drug Court Review*, 6(2), 53–82.
- Green, B. L., Rockhill, A., & Burns, S. (2008). The role of interagency collaboration for substance-abusing families involved with child welfare. *Child Welfare*, 87(1), 29–61.
- Green, B. L., Rockhill, A., & Furrer, C. (2007). Does substance abuse treatment make a difference for child welfare case outcomes? A statewide longitudinal analysis. *Children and Youth Services Review*, 29(4), 460–473.
- Grella, C. E., Needell, B., Shi, Y., & Hser, Y. I. (2009). Do drug treatment services predict reunification outcomes of mothers and their children in child welfare? *Journal of Substance Abuse Treatment*, 36(3), 278–293.
- Guo, S., Barth, R., & Gibbons, C. (2006). Propensity score matching strategies for evaluating substance abuse services for child welfare clients. *Children and Youth Services Review*, 28(4), 357–383.
- Guo, S., & Fraser, M. (2010). *Propensity score analysis: Statistical methods and applications*. Thousand Oaks, CA: Sage Publications.
- Hora, P. (2002). A dozen years of drug treatment courts: Uncovering our theoretical foundation and the construction of a mainstream paradigm. *Substance Use & Misuse*, 37, 1469–1488.
- Howell, E., Heiser, N., & Harrington, M. (1999). A review of recent findings on substance abuse treatment for pregnant women. *Journal of Substance Abuse Treatment*, 16(3), 195–219.
- Huddleston, C., Marlowe, D., & Casebolt, R. (2008). *Painting the current picture: A national report card on drug courts and other problem-solving court programs in the United States*. Alexandria, VA: National Drug Court Institute.
- Jones, L. (2004). The prevalence and characteristics of substance abusers in a child protective services sample. *Journal of Social Work Practice in the Addictions*, 4(2), 33–50.
- Lesperance, T., Moore, K., Barrett, B., Scott, M. S., Clark, C., & Ochshorn, E. (2011). Relationship between trauma and risky behavior in substance-abusing parents involved in a family dependency treatment court. *Journal of Aggression, Maltreatment, and Trauma*, 20, 163–174.
- Marsh, J., D'Aunno, T., & Smith, B. (2000). Increasing access and providing social services to improve drug abuse treatment for women with children. *Addiction*, 95(8), 1237–1247.
- Marsh, J., Smith, B., & Bruni, M. (2011). Integrated substance abuse and child welfare services for women: A progress review. *Children and Youth Services Review*, 33(3), 466–472.
- Moore, K. A., Barrett, B., & Young, M. S. (2012). Six-month behavioral health outcomes among family dependency treatment court participants. *Journal of Public Child Welfare*, 6, 1–17 <http://dx.doi.org/10.1080/15548732.2012.683370>.
- NDCRC (2012). *Frequently asked questions*. Alexandria, Virginia: National Drug Court Resource Center, Bureau of Justice Assistance.
- O'Flynn, M. (2000). The Adoption and Safe Families Act of 1997: Changing child welfare policy without addressing parental substance abuse. *Journal of Contemporary Health Law and Policy*, 16, 243–272.
- Osterling, K., & Austin, M. (2008). Substance abuse interventions for parents involved in the child welfare system: Evidence and implications. *Journal of Evidence-Based Social Work*, 5(1&2), 157–189.
- Plunkett, R., & Osmond, O. (2004). Permanency planning: Choosing between long-term foster care and adoption. *OACAS Journal*, 48(1), 7–14.
- Rosenbaum, P., & Rubin, D. (1985). Constructing a control group using multivariate matched sampling methods that incorporate the propensity score. *American Statistician*, 39, 33–38.
- Semidei, J., Radel, L., & Nolan, C. (2001). Substance abuse and child welfare: Clear linkages and promising responses. *Child Welfare*, 80(2), 109–128.
- Shaw, T. (2006). Reentry into the foster care system after reunification. *Children and Youth Services Review*, 28, 1375–1390.
- Singer, J., & Willett, J. (2003). *Applied longitudinal data analysis*. New York, NY: Oxford University Press.

- StataCorp. (2011). *Stata statistical software: Release 12*. College Station, TX: StataCorp LP.
- Stott, T., & Gustavsson, N. (2010). Balancing permanency and stability for youth in foster care. *Children and Youth Services Review*, 32(4), 619–625.
- Thoemmes, F., & Kim, E. (2011). A systematic review of propensity score methods in the social sciences. *Multivariate Behavioral Research*, 46, 90–118.
- U.S. Census Bureau (2010). *State and County QuickFacts*. Retrieved from: <http://quickfacts.census.gov/qfd/states/12000.html>
- U.S. General Accounting Office (1998). *Foster care: Agencies face challenges securing stable homes for children of substance abusers*. Washington, DC: GAO/HEHS-98-182.
- Vargo, A. C., Armstrong, M. I., Jordan, N., Sharrock, P., Sowell, C., & Yampolskaya, S. (2009). *IV-E Waiver Demonstration Evaluation Semi-Annual Progress Report 5, SFY08–09*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute.
- Wells, K., & Guo, S. (1999). Reunification and reentry of foster children. *Children and Youth Services Review*, 21(4), 273–294.
- Wells, K., & Guo, S. (2006). Welfare reform and child welfare outcomes: A multiple-cohort study. *Children and Youth Services Review*, 28, 941–960.
- Wills, T., Schreibman, D., Benson, G., & Vaccaro, D. (1994). Impact of parental substance use on adolescents: A test of a mediational model. *Journal of Pediatric Psychology*, 19(5), 537–556.
- Worcel, S., Furrer, C., Green, B. L., Burrus, S., & Finnigan, M. (2008). Effects of family treatment drug courts on substance abuse and child welfare outcomes. *Child Abuse Review*, 17(6), 17.
- Wulczyn, F. W., Hislop, K., & George, R. (2000). *An update from the multi-state foster care data archive: Foster care dynamics, 1983–1999*. University of Chicago: Chicago, IL: Chapin Hall Center for Children.
- Wulczyn, F. W. (2004). Family reunification. *Future of Children*, 14, 95–113.
- Young, N. K., Gardner, S., & Dennis, K. (1998). *Responding to alcohol and other drug problems in child welfare: Weaving together policy and practice*. Washington DC: Child Welfare League of America.
- Young, N. K., Wong, M., Adkins, T., & Simpson, S. (2003). *Family drug treatment courts: Process documentation and retrospective outcome evaluation*. Irvine, CA: Children and Family Futures.