Outcomes of a Trauma-Informed Arizona Family Drug Court

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ARTICLES

Outcomes of a Trauma-Informed Arizona Family Drug Court

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Family Drug Courts (FDC) support parents’ reunification efforts by providing case management aimed at cross-agency collaborations.

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Innovatively, the Pima County FDC includes trauma-specific treatment provided concurrently with alcohol and other drug (AOD) treatment. This study examines outcomes including AOD use, mental health, education and employment involvement, housing stability, and reunification of 121 FDC participants who completed baseline and 6-month postbaseline self-report assessments. At follow-up, AOD use remained low and mental health problems had decreased. Engagement in employment and education increased, as did housing stability. This study suggests that the Pima County FDC model might be effective for working with parents battling substance abuse.

KEYWORDS child welfare, Family Drug Court, family reunification, foster care, substance use, trauma treatment

The U.S. courts and child welfare agencies have historically struggled to address the complex needs of families involved in the foster system due to parental alcohol or other drug (AOD) use. AOD use is a factor in an estimated 11% to 14% of investigated child maltreatment cases in the United States, and in 50% to 79% of cases in which young children are actually removed from parental custody (Testa & Smith, 2009). Based on these figures, of the estimated 424,000 children in foster care in September 2009, between 212,000 and 334,960 were removed in part due to parental AOD use (U.S. Department of Health and Human Services, 2010). These children have the lowest probability of being successfully reunified with their parents (Green, Rockhill, & Furrer, 2007; Marcenko, Kemp, & Larson, 2000; Murphy et al., 1991; National Center on Addiction and Substance Abuse at Columbia University [CASA], 1998) and are documented to wait longer until reunification than children who are removed for reasons other than parental AOD use (Brook, McDonald, Gregoire, Press, & Hindman, 2010).

Throughout the 1990s, a continuous, dramatic upward trend in the number of children in foster care (Child Trends, 2010) provided impetus for the U.S. Congress to enact the Adoption and Safe Families Act (ASFA) of 1997. Among ASFA’s key provisions is a mandate that parental rights be terminated if the child has been in foster care for 15 of the most recent 22 months and the parent(s) has not met the court-ordered reunification requirements (Pub. L. 105-89). ASFA’s stringent requirements intensified the need to improve service provision for families struggling with parental AOD use (Boles, Young, Moore, & DiPirro-Beard, 2007); in the year AFSA was passed, only 31% of families who needed treatment were able to receive it—often after spending a year on treatment waiting lists (Child Welfare League of America, 1997).
The renewed urgency in connecting parents with AOD treatment services provided a catalyst for the expansion of the Family Drug Court (FDC)\(^1\) model. The first FDC was established in Reno, Nevada, in 1994 (Bureau of Justice Assistance [BJA], 2004), and as of 2009, more than 270 FDCs were in operation around the country (Bureau of Justice Assistance Drug Court Clearinghouse Project, 2009). FDCs are involved in child dependency cases in which allegations of parental substance abuse have been made, and can be characterized by:

court-based collaboration among child welfare, treatment providers, and the legal system. Its design seeks to protect children from abuse and neglect through timely decisions, coordinated services, provision of substance abuse treatment and safe and permanent placements. (Young, Wong, Adkins, & Simpson, 2003, p. 28)

**THE FAMILY DRUG COURT MODEL**

FDCs are loosely based on the adult drug court model. There is wide variation in the rules and structure of adult drug courts, but they typically admit low-level drug offenders who undergo a court-supervised regimen of AOD treatment, frequent urinalysis, rewards for compliance with court orders, and sanctions such as jail time for noncompliance. There are a few fundamental distinctions between adult drug courts and FDCs. First, drug courts handle criminal drug-related cases, whereas FDCs are civil courts that typically handle civil cases of child safety but do not adjudicate (Boles et al., 2007; BJA, 2004; Edwards, 2010). Second, whereas most drug courts consider the use of jail sanctions to be a basic tenet of the program (BJA, 2004), jail sanctions in FDCs have been highly controversial because they can have detrimental effects on children, because parents themselves have often experienced foster care, domestic violence, or sexual abuse, and because significant due process issues arise when a civil court issues jail sanctions (BJA, 2004; Edwards, 2010). As a result, many FDCs do not use jail sanctions (Edwards, 2010), and California’s Supreme Court ruled in 2009 that imprisonment cannot be used as a sanction in dependency court (In re Nolan W., 2009). Third, the majority of adult drug courts clients are male, as compared with primarily female clients in FDCs (BJA, 2004; Edwards & Ray, 2005). This fact carries numerous implications related to treatment appropriateness and client needs.

\(^1\) This article uses the term *Family Drug Court* throughout, although they can also be referred to under other names, including Family Drug Treatment Courts, Family Treatment Courts, and Dependency Drug Courts.
Most FDCs follow one of three dominant models: (a) integrated FDCs, in which a family court judge oversees both the child welfare case (from initial temporary custody proceedings through final disposition of the case, including restoration or termination of parental rights and adoption proceedings) and the parent’s AOD treatment orders, (b) parallel FDCs, in which the dependency proceedings are handled on a separate, regular family court docket and the parent receives specialized services to manage the recovery aspects of the case through the FDC, and (c) dual-track/two-tiered FDCs, which are a hybrid of the other two models. The first track involves increased case management services and access to AOD services for every case in the county in which allegations of parental substance abuse exist. The second track is a separate FDC for parents who have not complied with court orders, and is only concerned with the parent’s compliance with AOD treatment orders (Boles et al., 2007; Young et al., 2003).

Regardless of the model, enhanced case management aimed at facilitating cross-agency collaboration is a fundamental aspect of FDCs. More than 90% of cases involving parental AOD use have coexisting problems with mental health, housing, domestic violence, and parenting and life management skills (Marsh, Ryan, Choi, & Testa, 2006; see also Merrigan, 2000; Testa & Smith, 2009). Obtaining needed services therefore requires crossing boundaries of service agencies, each with unique program eligibility criteria, regulations, and case management systems, as well as institutional barriers and long-established practices that often discourage child welfare agencies and the courts from collaborating despite the shared responsibility for improving outcomes for children in foster care (Pew Commission on Children in Foster Care, 2004). FDCs therefore face challenges in bringing together the child welfare, AOD treatment, and court systems due to their unique and sometimes divergent goals, mandates, training, values, timing, and methods (Young, Gardner, & Dennis, 1998; Young et al., 2003).

PREVIOUS FAMILY DRUG COURT EVALUATIONS

Evaluation of FDCs is in the early stages (Green, Furrer, Worcel, Burrus, & Finigan, 2009; Young et al., 2003). To date, a handful of process evaluations have been conducted for individual FDCs. However, these studies tend to focus on characterizing individual programs and do not provide much insight into the outcomes of FDCs because sample sizes are generally small, programs are relatively new, and insufficient time has elapsed for long-term outcomes to be known, and nonequivalent comparison groups are used but statistical controls are not employed to account for group differences. Three concerted efforts to evaluate FDC features and outcomes are, however, notable.
The first in-depth FDC evaluation was a five-site retrospective study completed in 2003. It was sponsored by several federal agencies and aimed to develop a preliminary picture of FDC accomplishments and barriers. The study utilized a quasi-experimental, nonequivalent comparison group design. Roughly 50 FDC and 50 comparison cases were selected from each of the five sites (a total of 299 FDC and 240 comparison cases). Comparison cases received standard services, were all from the same county as the respective FDC site, and most preceded FDC implementation but would have met FDC eligibility criteria. FDC and comparison cases were fundamentally similar, with significant differences on only 5 of 33 parent demographic characteristics (Young et al., 2003).

Although the authors of the five-site retrospective study note some important threats to internal and external validity, statistically significant results included increased treatment enrollment, participation in more intense levels of care, faster access to treatment, fewer subsequent arrests, and fewer subsequent new cases of child abuse. Across sites, there was no difference between FDC and comparison groups in terms of length of treatment stay, treatment retention, or completion. Additionally, there was no overall significant difference in child–parent reunification rates or average time until case closure. Although there were some statistically significant differences in treatment measures and child outcomes at individual sites, researchers note that positive treatment measures did not always yield better reunification rates (Young et al., 2003).

The second notable evaluation was a continuation of the first. This evaluation focused on four of the five original sites and used nonequivalent comparison groups. Comparison groups for two sites were FDC-eligible families from the same county as the FDC site, but did not enter FDC due to capacity constraints, not receiving an FDC referral, or refusing FDC services. Comparison groups at the other two sites were from other counties that did not have an FDC and were sufficiently comparable to the study counties on a variety of indicators. A total of 802 FDC and 1,167 comparison cases were analyzed, with each one assigned a propensity score to minimize bias (Worcel, Green, Furrer, Burrus, & Finigan, 2007).

The final report found that overall the FDCs had a small positive effect on treatment entry, time to treatment entry, noncompliance with treatment orders, and treatment completion. FDCs also had a more significant impact on length of treatment stay. In terms of child outcomes, there was no significant difference in the number of services received by children, a slight increase in living situation changes, a modest increase in time spent in parental care, no difference in kinship placement, a small decrease in days spent in out-of-home placement, a small increase in time to permanent placement, and slightly longer time until reunification but less time to termination. Additionally, there was a modest increase in reunification
rates but no difference in recidivism (defined as subsequent child welfare involvement after reunification). The researchers also noted that when evaluating the four FDCs by model, statistically and practically significant impacts on treatment and reunification appear for the two sites with a more traditional, stand-alone FDC model serving primarily parents whose children had already been removed. Results for the other two models were more mixed (Worcel et al., 2007).

A third evaluation effort, conducted at the Sacramento Dependency Drug Court in 2007, used longitudinal and cross-sectional data, a comparison group, and intent-to-treat sampling to minimize threats to validity. Comparison group families met FDC criteria but entered the dependency system 6 months before the implementation of a case management program integral to the FDC program. Instead, comparison families received standard services. The study analyzed a total of 1,291 FDC and 111 comparison cases (Boles et al., 2007).

Four years into the program, FDC families had higher reunification rates (42% for FDC and 27% for comparison cases), although time to reunification and recidivism rates were statistically equivalent. Researchers concluded that overall, the FDC's integration of case workers had increased the number of parents with AOD involvement who were screened and assessed for service needs and that timely access to appropriate treatment modalities had improved. These conclusions are supported, in part, due to the finding that more FDC parents enrolled in treatment. However, it is unclear whether this improvement resulted in other improved treatment outcomes; there was no statistically significant difference in intensity of treatment received or satisfactory treatment discharges. Researchers also noted that results cannot be tied directly to effects of the FDC because Sacramento County had six system changes during the previous decade (Boles et al., 2007).

Overall, these studies indicate that FDCs have been better able to facilitate the process of identifying treatment needs and quickly connecting parents with needed services, and that although results are not consistent, a modest impact on reunification outcomes has generally resulted. Indeed, researchers frequently note that before implementation of the FDC (or in comparison counties without an FDC), services were often minimal, insufficient, inappropriate, and inaccessible and that parents struggled to comply with complex court orders without adequate support from the court (Burrus, Worcel, & Aborn, 2008; Wheeler & Fox, 2006). In qualitative interviews, non-FDC mothers in comparison groups generally expressed that they felt case workers were not working in their interest. Mothers in FDC groups, however, expressed that the FDC recovery team provided important emotional support and that the practical support they receive through the FDC—such as help getting housing, employment, tattoo removal, dentures, or obtaining birth control—increased their self-confidence and ability to make improvements in their lives (Worcel et al., 2007).
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At the same time, researchers point out that success in an FDC often takes time (BJA, 2004; Worcel et al., 2007), and that the timeline needs of AOD treatment programs often conflicts with the timeline mandated by ASFA (BJA, 2004). Many note the importance of providing ongoing, transitional, and aftercare services for parents for several months after reunification to decrease the likelihood of relapse (BJA, 2004; Harrell & Goodman, 1999). Because of complex treatment needs and preliminary FDC evaluation findings, Worcel et al. (2007) pointed out that although FDC clients are often able to comply with the ASFA timeline, reduced time to permanency might not be a realistic goal for FDCs.

Finally, it should be noted that researchers in the initial five-site study assert that FDCs are resource intensive; all five sites added resources that increased the number of client meetings, case worker support for each client in navigating services, investment of judicial time devoted to client contact, and the amount of collaboration time devoted to interagency meetings. Each site decreased case manager caseloads and developed new screening, education, employment, and aftercare services, as well as new housing allocations. These new investments, viewed as major advantages for FDC clients, were not available to comparison families—raising questions about (a) whether such results could be achieved in traditional systems if resources were expanded, (b) if FDCs models can be replicated, given the current fiscal climate in which very few states are adding resources, and (c) whether FDCs can be brought to scale, considering that most do not cover all or even most cases that could benefit from enhanced services (the five-site study found that, with the exception of one county that covers all AOD-related cases, FDCs were serving between 2% and 14% of all open cases with AOD issues; Young et al., 2003).

PIMA COUNTY FAMILY DRUG COURT

The Pima County FDC began in 2001 after identifying a need to improve reunification rates for parents whose children have been removed from their care as a result of parental AOD use. The program began as a pilot project serving one high-risk zip code. An evaluation of the project compared post-program summary statistics of Pima County FDC participants \((n = 33)\) with (a) a treatment-as-usual group of families from two other zip code areas (in which FDC was not available at the time) with similar demographics and Child Protective Services (CPS) referral patterns \((n = 45)\) and (b) an FDC-refusal group from the zip code where the FDC was available \((n = 42)\). The study found that the FDC had higher treatment enrollment rates, yet no statistically significant difference in treatment completion rates. FDC participants had a higher percentage of permanency decisions reached within 1 year, as well as less time in months until a permanency decision than
the FDC-refusal group but more months than the treatment-as-usual group. However, earlier permanency decisions did not result in improved family reunification rates; there was no statistically significant difference between the FDC and comparison groups in the percentage of children placed with their parents (Ashford, 2004).

By 2004, the Pima County FDC was expanded to serve all of Pima County. Potential clients are identified by CPS investigators when the parent is assessed to have problems with AOD use. The parent is then referred to the Pima County FDC. In addition, parents, judges, attorneys, CPS case managers, and current or former clients also bring potential clients to the attention of FDC staff. Although participation in FDC is completely optional, parents with AOD use problems are required to attend one FDC session. Those who choose to participate in the Pima County FDC generally recognize that they need additional support to address their AOD use and most realize that the chance of their children being returned to them is greatly improved if they successfully complete FDC. Parents are able to join FDC any time during the first 4 months of their dependency case—with many joining sometime between the second and third months. The 4-month cutoff for enrollment was established because after that point, there is typically not enough time left in dependency cases (which generally last from 12–18 months) to achieve sobriety and complete the required case plan tasks successfully.

Participants who join FDC are expected to follow the requirements of the program, which include attending weekly court sessions, attending AOD treatment, meeting with a case manager, and regular drug testing. The FDC program has three phases, which decrease in restrictiveness as a participant progresses through the program. When the rules of the program are violated, participants receive sanctions that are designed to aid the participants in the area in which they are struggling. The more common sanctions include essay writing, more frequent testing for drug use, additional calls to case managers, and making reminder signs. Jail sanctions are very rarely used and only in extreme circumstances. Participants graduate after completing the three phases, which takes approximately 8 months for a participant who moves through the program with relative ease.

Trauma-Specific Treatment

One especially innovative component of the Pima County FDC is the inclusion of trauma treatment. Past research has shown a significant relationship between AOD use disorders and exposure to trauma, with females more likely than their male counterparts to have acute levels of trauma-related symptoms. Stevens, Murphy, and McKnight (2003) found that 63.4% of adolescent females compared to 40.0% of adolescent males enrolled in AOD treatment were assessed with acute traumatic stress. Research on adult
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AOD-involved populations also indicates high levels of exposure to trauma, with as many as 80% of women who seek treatment for an AOD disorder having reported a lifetime history of sexual assault, physical assault, or both (L. R. Cohen & Hien, 2006). Moreover, studies comparing rates of posttraumatic stress disorder (PTSD) within the civilian population typically find that females are more likely to suffer from PTSD and have elevated levels of PTSD symptoms (Lilly, Pole, Best, Metzler, & Marmar, 2009; Tolin & Foa, 2006). When looking at the cooccurrence of AOD disorders and PTSD in the adult female population, rates of comorbidity range from 30 to 59% (L. R. Cohen & Hien, 2006).

FDC case specialists screen Pima County FDC participants during intake for traumatic stress including childhood sexual or physical abuse; traumatic loss; domestic, school, or community violence; exposure to disasters; terror attacks or war; and accidents or medical trauma. Participants who are assessed to have exposure to and symptoms of traumatic stress are referred to trauma-informed mental health therapy in addition to AOD treatment. Two evidence-based trauma therapies are used: (a) trauma-focused cognitive behavioral therapy (TF–CBT; J. A. Cohen & Mannarino, 1997; Deblinger, Lippmann, & Steer, 1996) and (b) abuse-focused cognitive behavioral therapy (AF–CBT; Kolko, 1996). Although the treatment sessions all follow in the exact sequence detailed in the models, the type and frequency of the treatment are dependent on individual participant needs and therapeutic assessments. These treatment models, like most trauma-focused treatments, include developing a strong therapeutic relationship, education about normal responses to trauma, anger and anxiety management, parent training, constructing a coherent trauma narrative, employing strategies that allow exposure to traumatic memories in tolerable doses, empowerment activities, and closure.

The therapists were trained in the evidence-based treatment models via the National Child Traumatic Stress Network (NCTSN) online training Web site, which is jointly supported by the University of California—Los Angeles and Duke University. This online training curriculum utilized a series of didactic and video training. Further, the division director of the treatment agency was trained by the developers of the models and conducted individual and group supervision on the models.

Given limited research on FDC programs in the United States, and given the uniqueness of the inclusion of a trauma treatment component in the Pima County FDC program, the purpose of this study is to contribute to this research gap by examining outcomes from the Pima County FDC program with regard to (a) AOD use, (b) mental health, (c) education and employment involvement, (d) housing stability, and (e) child reunification. In addition, we examined the relationship between receiving trauma treatment on child reunification rates.
Study Participants

A total of 166 adults were enrolled into the study and were administered a baseline assessment. The majority of the participants participated in the 3-month postbaseline assessment ($n = 152$) and a 6-month postbaseline assessment ($n = 121$). Table 1 presents demographic data from the initial assessment. Although most of the participants were female (83.1%), Pima County FDC is unique in the large number of fathers who participate in this FDC program. Most participants were between 25 and 34 years old (51.5%), and the majority of all participants were racial or ethnic minorities (54.9%). At baseline, most participants had one or two biological children (53.0%), and 7 of the female participants were currently pregnant. For 158 (95.1%) of the participants, the state had temporary custody of one or more of their children due to their AOD use. The median monthly income was $370.

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<td>More than 75th percentile</td>
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**TABLE 1** Demographic Characteristics of the Sample at Baseline
Study Design and Procedures

The Pima County FDC program and external evaluation component was funded by the Substance Abuse and Mental Health Services Administration–Center for Substance Abuse Treatment (SAMHSA–CSAT). This study evaluates the following hypotheses with regard to participants enrolled in the Pima County FDC by comparing data collected at the baseline and the 6-month follow-up assessments. Participants will (a) show drug use stability—reflecting the low levels of drug use reported at baseline (note that enrollment into FDC was typically 2 to 3 months following involvement with the child welfare system), (b) report reduced levels of mental health symptoms (e.g., anxiety and depression), (c) have greater involvement in education and employment, (d) report improved housing stability, and (e) evidence higher child(ren) reunification rates if having completed trauma treatment.

Data were collected from people who entered Pima County FDC between October 2006 and January 2010. Potential participants were informed of the ongoing research project when they enrolled in FDC and were given the opportunity to participate at that time. Although being an FDC participant was the only criteria for participating in the research component, specific requirements for participation in FDC include (a) having a current open dependency case in the juvenile court system in which AOD use is a documented problem and (b) being at least 18 years of age. Prior to recruitment, University of Arizona (UA) institutional review board approval was received and all research staff completed human subject certification and evaluation assessment and protocol training. Research staff met with potential participants to explain the research project along with the risks and benefits of participating in the interviews. Potential participants were made aware that they would be asked to complete individual interviews at three different time points (baseline, 3 months, and 6 months). Interested participants signed an informed consent form prior to the baseline interview and were told that they could discontinue their participation at any time. Participants were also told that their participation in the research was separate from their involvement in FDC and that either one could be discontinued without affecting the other.

The baseline interview was conducted with participants when they entered FDC, the second interview occurred 3 months later, and the final interview was conducted 6 months after the baseline interview. All data collection interviews were conducted by either the lead evaluator or a research technician and at a private location convenient to the participant. The structured interviews took between 45 min and 1.5 hr to complete. Participants were given a gift card ($10 value) after completing of the baseline interview and $20 cash after completing the 3- and 6-month postbaseline interviews.
Measures

Several assessments were used in this research, including the CSAT Government Performance and Results Act (GPRA) Client Outcome Measures for Discretionary Programs, Global Appraisal of Individual Needs (GAIN), and Treatment Satisfaction Index. In addition, Pima County Juvenile Court records were used to document engagement in trauma treatment and documentation of child reunification. For the purpose of this study, baseline and 6-month follow-up data from the GPRA and GAIN were used to look at pre–post changes with regard to AOD use, mental health, employment and education, housing stability, and other relevant variables. Descriptions of the GRPA and GAIN measures as well as the process for the Pima County Juvenile Court record documentation and data retrieval follow.

The GPRA (Initial and Follow-up) is a federal government-mandated assessment required by SAMHSA–CSAT. It measures six domains: (a) drug and alcohol use, (b) family and living conditions, (c) education, employment, and income, (d) crime and criminal justice status, (e) mental health and physical health problems and treatment/recovery, and (f) social connectedness (http://www.samhsa.gov/Grants/tools.aspx). Most questions assess for the past 30 days, although a few items assess lifetime experiences (e.g., number of children for whom the participant has lost parental rights). The instrument also collects demographic data at the baseline interview, and information on the services each participant received at the time of the 6-month interview. For this study, GPRA data were used for demographic characteristics, AOD use, mental health, education, employment, and housing.

The GAIN (Initial and 90 Day-Monitoring) is a comprehensive, evidence-based bio-psychosocial assessment designed to assist both researchers and clinicians in obtaining information for diagnosis, placement, treatment planning, and outcomes monitoring. It has eight domains, including (a) background and treatment arrangements, (b) substance use, (c) physical health, (d) risk behaviors, (e) mental health, (f) environment, (g) legal, and (h) vocation. The GAIN has been normed on adolescents and adults and has repeatedly shown to have excellent reliability and validity (Dennis, Funk, Godley, Godley, & Waldron, 2004; Dennis, Scott, and Funk, 2003; Dennis, Scott, Godley, and Funk, 1999, 2000; Dennis, Titus, et al., 2003). With regard to the outcomes variables, in some cases, shortened versions of the scales were used. These cases are noted later in the scale descriptions. For this study, GAIN data were used for questions with regard to situations the participant was currently worried about and whether the participant was currently in a traumatic situation.

The process of the Pima County Juvenile Court record documentation and data retrieval included the FDC Supervisor accessing court records of participants (as agreed on at the time of consent) and providing
Outcomes of a Trauma-Informed Family Drug Court

engagement in trauma treatment and child(ren) reunification data to UA research staff.

Statistical analysis was conducted to determine if there were significant differences between various subgroups, including (a) participants who completed versus those lost to follow-up, (b) participants referred to trauma treatment (because they screened positive for traumatic exposure) versus those not referred to trauma treatment, (c) participants who completed versus those who did not complete trauma treatment, and (d) participants reunited versus those not reunited with children. The variables examined included (a) demographic variables, including pregnancy and number of children, (b) AOD-related variables (i.e., type of drugs used including alcohol, AOD treatment received, involvement in formal and informal self-help type activities, and impact of AOD use on stress, activities, emotional problems), (c) general mental health indicators (i.e., depression, anxiety, treatment received for mental health problems), (d) housing, income, employment, and education, (e) risky sexual behavior and HIV status, (f) involvement in the criminal justice system (i.e., arrest, on probation or parole), and (g) various social support variables. Significant differences are reported in the results section. All other comparisons were not found to be significant.

RESULTS

Attrition Analyses

To understand if the study sample that completed the 6-month follow-up was representative of the entire sample, we compared the baseline data from participants who completed the 6-month follow-up assessment \( (n = 121) \) with those who did not \( (n = 45) \). There were no significant demographic differences between completers and noncompleters (e.g., race, ethnicity, gender). There were also no differences on any drug and alcohol use variables, or variables regarding aspects of life that the participants might be worried about. However, some differences were detected for certain aspects of social support, particularly with regard to mental health. As shown in Table 2, completers were not more likely to attend 12-step programs or faith-affiliated (nonprofessional-led) recovery groups than noncompleters, but they were more likely to attend “other” organizations that supported recovery (17% vs. 0%, respectively; \( \chi^2 = 6.99, p = .01 \)). Although participants did not specify what “other” organization(s) they attended that supported recovery, all professional-led organizations were included in “other” (i.e., residential treatment, intensive outpatient treatment, outpatient treatment, etc.). Additionally, there were several differences between completers and noncompleters on reported mental health for the past 30 days, including depression, anxiety, being prescribed psychiatric medication, being
TABLE 2  Differences in Mental Health Variables at Baseline Between Those Who Did and Did Not Complete the 6-Month Follow-Up Assessment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Completers</th>
<th>Noncompleters</th>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>42%</td>
<td>58%</td>
<td>$\chi^2$</td>
<td>3.30*</td>
</tr>
<tr>
<td>Anxiety</td>
<td>45%</td>
<td>67%</td>
<td>$\chi^2$</td>
<td>6.17*</td>
</tr>
<tr>
<td>Psychiatric medication</td>
<td>28%</td>
<td>47%</td>
<td>$\chi^2$</td>
<td>5.30*</td>
</tr>
<tr>
<td>Psychiatric symptoms</td>
<td>2.62</td>
<td>3.06</td>
<td>$t$</td>
<td>1.90+</td>
</tr>
<tr>
<td>DOA stress</td>
<td>3.41</td>
<td>4.38</td>
<td>$t$</td>
<td>2.79**</td>
</tr>
<tr>
<td>DOA emotional problems</td>
<td>3.57</td>
<td>4.43</td>
<td>$t$</td>
<td>2.86**</td>
</tr>
<tr>
<td>DOA impact on activities</td>
<td>3.09</td>
<td>4.38</td>
<td>$t$</td>
<td>3.39**</td>
</tr>
</tbody>
</table>

Notes. DOA = drug- or alcohol-related.

*All variables had a time frame of the past 30 days. *$t$ values were computed for interval/scale variables; means are presented. $\chi^2$ values were computed for nominal/ordinal variables; percentages are presented.

bothered by psychiatric symptoms, and having more stress, emotional problems, and AOD use impacting other social activities (see Table 2). In sum, participants who did not complete the 6-month assessment reported more mental health distress at the initial interview than those who completed the assessment.

Changes Over Time

ALCOHOL AND DRUG USE

We compared participants’ self-reports from the baseline and 6-month assessments of using drugs and alcohol in the past 30 days, as shown in Table 3. As indicated, at baseline most participants had already been involved with CPS for at least a month, which accounts for initial low rates of substance use. In spite of this, significant decreases in AOD use were reported; this was mostly due to a 7.4% decrease in alcohol use. Increases in marijuana use and decreases in other drug use were not statistically significant.

MENTAL HEALTH

As shown in Table 3, there were significant decreases in mental health problems over time. At the 6-month follow-up, fewer participants reported psychological symptoms such as depression, anxiety, and trouble concentrating or remembering. Also, significantly fewer participants reported taking psychiatric medication at follow-up.

EMPLOYMENT AND EDUCATION

At the 6-month assessment, the number of participants who reported being employed or enrolled in job training or educational programs during the
### TABLE 3 Outcomes at Baseline and 6-Month Follow-Up Assessments by Percent, Including 95% Confidence Interval for Change in Percentage

<table>
<thead>
<tr>
<th>Variable (Past 30 Days)</th>
<th>Baseline</th>
<th>6 Months</th>
<th>% Δ</th>
<th>95% CI for % Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol and drug use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any drug or alcohol use</td>
<td>15.7</td>
<td>8.3</td>
<td>−7.4</td>
<td>[−2.6, −12.2]</td>
</tr>
<tr>
<td>Alcohol use</td>
<td>10.7</td>
<td>3.3</td>
<td>−7.4</td>
<td>[−2.6, −12.2]</td>
</tr>
<tr>
<td>Marijuana use</td>
<td>0.0</td>
<td>2.5</td>
<td>2.5</td>
<td>[−0.3, 5.3]</td>
</tr>
<tr>
<td>Other illegal drug use</td>
<td>8.3</td>
<td>6.6</td>
<td>−1.7</td>
<td>[−4.1, 0.7]</td>
</tr>
<tr>
<td>Mental health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>46.3</td>
<td>30.1</td>
<td>−16.2</td>
<td>[−22.9, −9.5]</td>
</tr>
<tr>
<td>Anxiety</td>
<td>51.3</td>
<td>31.0</td>
<td>−20.3</td>
<td>[−27.6, −13.0]</td>
</tr>
<tr>
<td>Trouble concentrating</td>
<td>45.1</td>
<td>29.2</td>
<td>−15.9</td>
<td>[−22.5, −9.3]</td>
</tr>
<tr>
<td>Psychiatric medication</td>
<td>32.9</td>
<td>26.4</td>
<td>−6.5</td>
<td>[−11.0, −2.0]</td>
</tr>
<tr>
<td>Education/employment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any enrollment/employment</td>
<td>38.0</td>
<td>60.3</td>
<td>22.3</td>
<td>[14.7, 29.9]</td>
</tr>
<tr>
<td>Enrolled in school/job training</td>
<td>6.6</td>
<td>13.2</td>
<td>6.6</td>
<td>[2.1, 11.1]</td>
</tr>
<tr>
<td>Employed full-time</td>
<td>19.8</td>
<td>31.4</td>
<td>11.6</td>
<td>[5.8, 17.4]</td>
</tr>
<tr>
<td>Employed part-time</td>
<td>14.0</td>
<td>19.0</td>
<td>5.8</td>
<td>[1.0, 9.0]</td>
</tr>
<tr>
<td>Housing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Own housing</td>
<td>46.3</td>
<td>56.5</td>
<td>7.4</td>
<td>[4.7, 15.7]</td>
</tr>
<tr>
<td>Friend/relative/foster/dorm</td>
<td>25.6</td>
<td>25.2</td>
<td>−1.7</td>
<td>[−1.5, 0.7]</td>
</tr>
<tr>
<td>Institution/treatment</td>
<td>28.1</td>
<td>17.4</td>
<td>−11.6</td>
<td>[−5.1, −16.3]</td>
</tr>
<tr>
<td>Homeless</td>
<td>0.0</td>
<td>0.9</td>
<td>0.8</td>
<td>[−0.8, 2.5]</td>
</tr>
</tbody>
</table>

Note. CI = confidence interval.

Past 30 days increased by 22%. Significant increases were seen in all areas: educational enrollment, part-time employment, and full-time employment.

**Housing**

Many participants reported obtaining more stable housing by the 6-month assessment. The past 30-day measure showed a significant increase in living in one's own home or apartment and a significant decrease in living in institutional or treatment facilities; there was no change in the percentage of participants living with friends or relatives.

**Trauma treatment**

At the initial interview, participants were assessed for the need for trauma treatment; 45% (n = 74) were referred to trauma treatment, with more women (53%) than men (25%) referred, \( \chi^2(1, N = 155) = 7.08, p = .008 \). Participants who were referred to trauma treatment did not differ from those who were not referred on whether or not they completed the 6-month assessment, \( \chi^2(1, N = 155) = .001, p = 1.00 \). Of the referred group, however, participants who completed the 6-month assessment were more likely to also complete trauma treatment than those who did not complete the
6-month assessment (76% vs. 42%, respectively), $\chi^2(1, N = 74) = 7.56$, $p = .006$.

We also compared the referred and not referred groups on drug and alcohol, education and employment, and housing variables. There were no differences between referred and not referred participants in any AOD use at baseline or at 6 months. There were differences, however, between the kinds of treatments clients were receiving at baseline; referred (34%) were more likely than not referred (12%) participants to have received inpatient treatment for AOD use in the past 30 days, $\chi^2(1, N = 121) = 10.82, p = .002$, whereas not referred (73%) were more likely than referred (47%) participants to have received outpatient treatment for AOD use in the past 30 days, $\chi^2(1, N = 121) = 10.57, p = .002$. At the follow-up assessment, these differences were no longer significant, with about half of the participants (45% of referred and 59% of not referred) receiving outpatient treatment for AOD use.

Similarly, differences were found between referred and not referred participants at baseline, with referred participants more likely than not referred participants to currently be in inpatient treatment facilities (38% vs. 19%, respectively), $\chi^2(1, N = 121) = 7.97, p = .019$. This difference was no longer statistically significant by follow-up, $\chi^2(1, N = 121) = 5.88, p = .053$.

No differences were found between referred and not referred participants on employment or education variables. At baseline, 38% of not referred and 31% of referred participants were either employed or enrolled in college or vocational schools.

Additional analyses of psychosocial and mental-health-related variables revealed some other differences. Referred participants (68% vs. 43%) were more likely than not referred participants to attend voluntary self-help recovery groups (like Alcoholics Anonymous or Narcotics Anonymous) at baseline, $\chi^2(1, N = 121) = 9.26, p = .004$, and this difference persisted over time (75% vs. 48% at 6 months, respectively), $\chi^2(1, N = 121) = 7.66, p = .009$. No differences were found in participation in religious or faith-affiliated recovery groups or other recovery groups. In contrast, referred (35% vs. 15%) participants were more likely to have received outpatient treatment in the past 30 days for mental or emotional difficulties at baseline, $\chi^2(1, N = 121) = 8.14, p = .004$, but this difference disappeared by the 6-month assessment (28% and 20%, respectively), $\chi^2(1, N = 121) = 1.02, p = .31$. Finally, referred participants were more likely to be on psychotropic medication (43% vs. 22%, respectively), $\chi^2(1, N = 121) = 8.28, p = .005$, and this difference persisted over time, $\chi^2(1, N = 121) = 5.38, p = .03$.

We also examined differences within the referred group between participants who completed trauma treatment ($n = 50$) and those who did not ($n = 24$) on all AOD use, mental health, education and employment, and housing outcomes. Participants who did not complete trauma treatment had significantly higher levels of depression ($M = 8.71, SD = 11.86$) and
anxiety ($M = 10.63, SD = 11.30$) than participants who completed treatment ($M = 3.27, SD = 6.30$ and $M = 5.68, SD = 8.97$, respectively), $t(70) = 2.55, p < .05$ and $t(70) = 2.01, p < .05$. No other differences were found between these two groups of participants.

**Child reunification**

By the 6-month assessment, 68% ($n = 108$) of participants were reunified with children who had been in the custody of the state, 30% ($n = 47$) were not reunited, and data were not available for the remaining 3 participants. We conducted $t$ test comparisons between parents who were and were not reunified with their children at the 6-month assessment for all demographic, drug and alcohol use, employment, education, and housing variables.

Reunified parents were more likely than not reunified parents to complete the 6-month assessment, $\chi^2(1, N = 155) = 9.88, p = .002$. Although reunified parents were just as likely to be referred to trauma treatment as not reunified parents (51% vs. 41%, respectively), $\chi^2(1, N = 155) = 1.38, p = .28$, referred parents who completed trauma treatment were more likely to be reunified (82% vs. 28%, respectively), $\chi^2(1, N = 155) = 18.35, p = .00$.

Men (89%) were more likely than women (66%) to be reunified with their children at the 6-month assessment, $\chi^2(1, N = 155) = 5.22, p = .02$. As shown in Table 4, parents who were reunified with their children were likely to be older, have more children, and have a higher income. No differences were found between reunified and not reunified participants in any AOD use at baseline or follow-up. At the 6-month assessment, not reunified parents (30%) were more likely than reunified parents (5%) to be admitted to the emergency room for physical problems in the past 30 days, $\chi^2(1, N = 121) = 12.90, p = .002$. As shown in Table 5, not reunified parents had more depression and anxiety than reunified parents at both baseline and the 6-month follow-up.

**TABLE 4** Differences Between Parents Who Were Reunified With Their Children and Those Who Were Not in Demographic and Mental Health Variables at Baseline and 6 Months

<table>
<thead>
<tr>
<th>Variable</th>
<th>Reunified</th>
<th></th>
<th></th>
<th>Not Reunified</th>
<th></th>
<th></th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Baseline</td>
<td>31.93</td>
<td>9.16</td>
<td>28.28</td>
<td>6.82</td>
<td></td>
<td>−2.45*</td>
</tr>
<tr>
<td>Number of children</td>
<td>Baseline</td>
<td>2.90</td>
<td>1.85</td>
<td>1.87</td>
<td>1.01</td>
<td></td>
<td>−3.53**</td>
</tr>
<tr>
<td>Income (past 30 days) Baseline</td>
<td>308.01</td>
<td>759.65</td>
<td>65.72</td>
<td>202.92</td>
<td></td>
<td>−3.80***</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>Baseline</td>
<td>4.47</td>
<td>8.66</td>
<td>8.11</td>
<td>11.15</td>
<td></td>
<td>2.01*</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Baseline</td>
<td>6.13</td>
<td>9.80</td>
<td>10.91</td>
<td>11.43</td>
<td></td>
<td>2.61**</td>
</tr>
<tr>
<td></td>
<td>6 months</td>
<td>2.21</td>
<td>6.11</td>
<td>5.92</td>
<td>10.60</td>
<td></td>
<td>2.19*</td>
</tr>
</tbody>
</table>

*Notes.* $^*p < .05$. $^{**}p < .01$. $^{***}p < .001$. 

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Finally, we examined housing stability and education and employment on their association with reunification. As shown in Table 5, reunified parents were more likely to be employed or educationally enrolled at baseline, \( \chi^2(1, N = 121) = 10.04, p = .002 \), but this difference disappeared by the 6-month follow-up, \( \chi^2(1, N = 121) = 1.46, p = .26 \). Similarly, reunified parents were more likely to have their own house or apartment at baseline, \( \chi^2(2, N = 121) = 13.95, p = .001 \), but this difference disappeared by the 6-month follow-up, \( \chi^2(2, N = 121) = 1.44, p = .70 \).

**DISCUSSION**

The majority of the Pima County FDC participants are very poor; making more than $832 per month places a participant over the 75th percentile. Raising children under these circumstances can be very stressful. With the positive association between stress and relapse in AOD use, programs and policies need to consider the impact of poverty on health and how people recovering from AOD use issues can be best supported to manage the stress associated with poverty through services such as securing entitlements for which they qualify, providing job training to improve their ability to obtain higher paying jobs, and offering financial coaching. Also noteworthy is that the Pima County FDC includes more men than most FDCs in the United States. Male participants in this study were more likely to be successful in terms of securing jobs, obtaining stable housing, and being
reunified with their children. They also were half as likely to be screened, to need, and to be referred to trauma treatment. This might be indicative of the relationship between symptoms of trauma and reduced program success.

Data on attrition from the evaluation component indicate that participants who drop out of the program start off worse on mental health and the negative impact of AOD use on their lives than those who complete the evaluation component. This might indicate that FDCs are a better fit with higher functioning adults. At minimum, additional support might be needed for higher needs participants. FDCs should consider using an initial standardized assessment to identify the “riskiest” clients and allocate more resources toward tracking them and assisting them through programs. With regard to research follow-up, losing those who start off worse with regard to mental health and AOD use could potentially mean that outcomes for the Pima County FDC are skewed to appear better than they actually are—if one can assume that those lost to follow-up are participants who are less likely to be successful with regard to AOD and other outcomes.

At the 6-month data collection point, AOD use remained low and actually showed significant decreases, primarily due to reduced alcohol use. Significant decreases were also evidenced for mental health problems. Moreover, engagement in employment and education increased, as did housing stability. These important outcomes indicate that the Pima County FDC model of program delivery might be an effective model for working with parents battling substance abuse.

A closer look at the trauma treatment component shows that participants who dropped out of trauma treatment are also those who did not complete their 6-month assessment. Once again, those with the greatest mental health problems are those lost to follow-up. Reasons for dropping out of the trauma treatment component are not known. However, the data indicate that although those who dropped out were similar to those who were retained on most variables (e.g., AOD use, AOD treatment, social supports, education), those who dropped out evidenced elevated levels of anxiety and depression. Perhaps some participants did not complete trauma treatment because it triggered more anxiety and depression or perhaps the specialized treatment did not meet their clinical needs in other ways. Research is needed on what types of trauma treatment might be more appropriate and effective when working with FDC participants with greater anxiety and depression severity. The good news with regard to those who completed trauma treatment is that they were more likely to be reunified with their children. Although we cannot conclude a causal relationship between trauma treatment and child reunification, assessing for trauma and adding a trauma treatment component
to traditional FDCs might improve participant outcomes, including child reunification. With regard to child reunification, the data indicate that the majority of Pima County FDC participants are reunified with their children—a major goal of FDCs. It should be noted that participants who are not reunified with their children start off with higher levels of severity than those who are reunified, particularly with regard to mental health. Even though participants with higher levels of severity make more gains between the baseline and 6-month follow-up, it appears that they are not making these positive changes quickly enough to be reunified with their children. These data suggest that earlier identification and rapid entry into intensive treatments might be necessary for higher severity participants to succeed in FDC.

Study Limitations

There are several limitations to this study. Although data on engagement in trauma treatment and child reunification came from court records, other measures (AOD use, mental health, employment, education, housing stability), collected by an independent evaluator, were based on participant self-report. Because data were only collected for FDC participants, there was no control group. Another limitation is the data collection points. Because federal mandates called for data to be collected 6 months after participants entered the program, participant data are not captured at program completion, which takes about 8 months. This prevented the analysis of final outcome data from participants who completed FDC and from those who discontinued participation after 6 months. In addition, the baseline data were collected after participants were involved in the child welfare system for at least 1 month—thus baseline measures, particularly AOD use, might not be an accurate reflection of participants’ behavior, symptoms, or situations when they first entered the system.

The results of this study cannot be attributed to any one particular AOD treatment program, trauma-specific therapy method, or level of treatment (e.g., residential treatment or intensive outpatient treatment) for several reasons. Although FDC participants are required to participate in formal AOD treatment, the type and intensity of treatment are dictated by participants’ individual needs and circumstances, and many attend several different types of AOD treatment while in FDC. Nevertheless, all FDC participants were in AOD treatment that allowed them to participate in community activities, including FDC. Moreover, participants were screened and referred for trauma treatment, if indicated, and their individual treatment plan varied in both method and frequency and duration of treatment sessions. In spite of this limitation, the data suggest that a trauma treatment component can increase the overall effectiveness of an FDC program, particularly rates of child reunification.
REFERENCES


Outcomes of a Trauma-Informed Family Drug Court


