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Mental Health Outcomes, Parenting Skills and Family Functioning of Adult and Family Treatment Court Participants

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ABSTRACT

Background: Parental substance use places children at risk for poor social, emotional, and behavioral outcomes. Many parents with substance use disorders (SUD) are treated through accountability drug courts including adult drug courts (ADC) through the criminal justice system and family drug treatment courts (FTC) through the child welfare system. Little is known about the children of parents who participate in treatment through adult drug courts, which could serve as an important treatment venue for improving child outcomes. Children treated through family treatment courts are often the center of treatment. This research compared outcomes of parents and children involved in adult drug and family treatment courts.

Methods: Participants were 105 drug court clients (80 from ADC; 25 from FTC) from four Georgia based drug courts. Participants completed computerized interviews containing a variety of measures focusing on adult mental health, parenting behaviors and communication, and child mental health and behavior.

Results: Parents in FTC compared to those in ADC reported greater social support ($p = .05$) and better family functioning ($p = .03$). Parents in ADC reported poorer parental involvement and poorer monitoring of children than FTC, but no differences in positive parenting ($p = .13$), inconsistent discipline ($p = .27$), or child abuse potential (total risk > 9, $p = .42$; total risk > 12, $p = .37$). Regarding mental health, ADC parents reported a greater number of symptoms or poor mental health than FTC. No differences were found for parent-child communication skills ($p = .38$), post-traumatic stress symptom severity ($p = .62$), or child behavior problems.

Conclusions: This data suggests that children of caregivers in drug treatment via ADC are at equal and perhaps greater risk than children of caregivers in FTC because of increased parental risk factors. ADC should consider offering family -based treatments that can enhance the parent-child relationship and promote recovery by reducing family conflict.

Keywords: Drug court, substance use disorder, child health outcomes, mental health outcomes, parenting skills
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INTRODUCTION

Substance abuse is a public health problem of great significance. Approximately 21 million people in the United States have substance use disorders (SUD) (SAMHSA, 2012), and the lifetime prevalence of SUD is 9.9% (Grant, Saha, Ruan, et al., 2016). SUD often begins in adolescence (Grant, Saha, Ruan, et al., 2016), and the lifetime prevalence among adolescents age 13-18 is estimated at 8% for alcohol disorders and 2-3% for illicit drug use disorders (Merikangas et al., 2010; Swendsen et al., 2012; SAMSHA, 2011). A number of risk factors relate to increased likelihood of SUD including demographics (Patel, Chisholm, Parikh, Charlson, Degenhardt, et al., 2016), family factors such as family conflict and support, and neighborhood factors (Godley, Kahn, Dennis, Godley & Funk, 2005).

There are short- and long-term adverse outcomes associated with substance use and the accompanying poor decision-making that follows, including spread of sexually transmitted diseases, violence, and physical injury such as suicide, drugged driving, and overdose (Degenhardt & Hall, 2012). Consequences of long-term use include the chronic diseases, comorbidities including mental illness as well as compromised relationships (Degenhardt & Hall, 2012). SUD have a significant annual costs to society; counting only lost productivity, health care and crime, the cost is \$700 billion per year (SAMHSA, 2013; Volkow, Koob, & McLellan, 2016). Of this total cost, more than \$61 billion is the annual cost of drug-related crime.

Impact of SUD on families

SUD among parents is particularly important from a public health perspective because the strong negative impacts on children in the state of Georgia and across the United States (Mallett, Rosenthal, & Keys, 2005). Data from National

Survey on Drug Use and Health (NSDUH) indicated that 11.9% of children live with at least one parent with alcohol or drug use disorders (NSDUH, 2009), and an incident of alcohol or drugs as the reason for a child removal has more than doubled between 1999 and 2014 (National Conference of State Legislators, 2017). Simultaneously, but not scientifically linked, between 2013 and 2014 there was an increase, especially in opioid overdose deaths (Martins, Sampson, Cerda, & Galea, 2015; Rudd, Aleshire, Zibbell, & Gladden, 2016) as well as a 3.5% increase in children in foster care (Wiltz, 2016). Some child welfare systems do report that the increase in neglect and maltreatment cases can be linked to the opioid epidemic (Falletta, Hamilton, Fischbein, Aultman, Kinney, & Kenne, 2018). Although a variety of substances make an impact every day in the state of Georgia, there has been a statistically significant increase in drug overdose death rates involving opioids, notably between 2010 and 2015 (Rudd, 2016; Rudd, Aleshire, Zibbell, & Gladden, 2016). Parental SUD can have negative impacts on children from pre-birth through young adulthood. It was shown that in Georgia and 8 other southern states, opioid use disorders were the reason for 25% of pregnant women being admitted to substance use disorder treatment programs (Hand, Short, & Abatemarco, 2017). And the greatest increase in this disorder among pregnant women between 1992 and 2012 occurred in southern states (Hand, Short, & Abatemarco, 2017). Negative impacts due to prenatal substance exposure may be associated with atypical brain development, cognitive impairments including delayed language (Irner, 2012), heart defects, hearing and vision problems, stillbirth, miscarriage, and infant mortality (Dore, Doris, & Wright, 1995). As children age, this prenatal drug exposure may be associated with an increased risk for negative health behaviors and outcomes. These include delayed development, poor regulation of emotional and social functioning, poor memory, delinquency, aggression, hyperactivity, depression, anxiety, and substance abuse (Calhoun, Conner, Miller, & Messina, 2015; Dunn, Tarter, Mezzich, Vanyukov, Kirisci, & Kirillova, 2002; Imer, 2012; Makris et al., 2010; Neger & Prinz, 2015; Niccols, Milligan, Sword, Thabane, Henderson, & Smith, 2012; Park & Schepp, 2015).

In addition to the impacts of parental SUD alone, poor parenting, which is common among parents with SUD, can magnify poor outcomes for children. According Calhoun, Conner, Miller, and Messina (2015) as well as Miller (1999), parents who abuse substances supervise their children less and parent more harshly using heavy punishment. Parents who abuse substances also engage in dysfunctional interactions and parenting behaviors, which lead to children's misbehavior including aggression (Fals-Stewart W, Kelley ML, Fincham FD, Golden J, Logsdon T, 2004; Calhoun, Conner, Miller, & Messina, 2015). These misbehaviors and improper ways of handling them may increase an already stressful and unstable home, not ideal for recovery.

In addition to poor child outcomes and poor parenting, parents with SUD are at increased risk of child maltreatment (Calhoun, Conner, Miller, & Messina, 2015). Parental

substance abuse is one of the strongest risk factors for child maltreatment (Cash, & Wilke, 2003; Chaffin, Kelleher, & Hollenberg, 1996; Kelleher, Chaffin, & Fischer, 1994), and the combination of parental SUD and child maltreatment is associated with poor child outcomes in virtually every realm – health, well-being, academic, employment and social (Bauman & Levine, 1986; Bennett, Wolin, & Reiss, 1988; Magura & Laudet, 1996). Between 50 and 80% of children involved in the welfare system have a drug-dependent parent (Dakof, Cohen, Henderson, Duarte, Boustani, Blackburn, et al., 2010), and thus substance use treatment has become a focal point of the child welfare services (Azzillessing & Olsen, 1996; Grella, Hser, & Huang, 2006; Young, Boles & Otero, 2007). Addiction impairs judgment and decision-making. The addiction needs may become a higher priority than the child's needs for safety and security. This can lead to child neglect, a failure to satisfy the child's basic needs, which in turn, can result in harm (Dunn, Tarter, Mezzich, Vanyukov, Kirisci, & Kirillova, 2002). Thus, it is clear that addressing parental SUD is a key component of improving child and family outcomes.

Treatment of parental SUD

According to the Surgeon General's Report of 2016 only about 1 in 10 people with a substance use disorder receive any type of treatment (U.S. Department of Health and Human Services & Office of the Surgeon General, 2016). Treatment venues range from medical providers, community-based mental health services, criminal justice systems, and for parents, child welfare systems. Of those venues, despite the risk to children of parental SUD, only child welfare systems have an explicit focus on family issues and child safety and well-being.

A relatively new venue for treatment of individuals with SUD are drug courts. There are two primary types of drug courts, adult drug courts (ADC) and family treatment courts (FTC). Many parents with SUD are treated through these accountability courts (Child & McIntyre, 2015; Wilson, Mitchell, & MacKenzie, 2006; Worcel, Furrer, Green, Burrus, & Finigan, 2008). ADC are part of the criminal justice system and treat adults arrested for non-violent drug-related crimes. FTC serve families from the child welfare system and focus on treating parenting SUD for goal of improving child welfare or reuniting children and parents. These two accountability courts both treat adults with SUD, and both treat parents with SUD; however, FTC have an explicit focus on child well-being, while the ADC do not.

ADC serve individuals convicted of non-violent drug-related crimes as an alternative to incarceration. The drug court model was developed to combat the frequent recidivism and re-arrest of offenders motivated by a drug habit (Mitchell, Wilson, Eggers, & MacKenzie, 2012; Sevigny, Fuleihan, & Ferdik, 2013). The goal was to break the cycle of drug use and related crime by addressing the substance use problem (Mumola, & Karberg, 2006; Sevigny, Fuleihan, & Ferdik, 2013). FTC treat parents with drug-related problems who are reported for suspected abuse or neglect, but not arrested for a crime. FTC were adapted from the drug court model to stop the cycle of abuse and

neglect among parents with SUD and to protect children (Child & McIntyre, 2015; Fay-Ramirez, 2015; Gifford, Eldred, Vernerey, & Sloan, 2014b; Green, Furrer, Worsel, Burrus, & Finigan, 2009; SAMHSA, 2012). Clients in FTC have had their children temporarily removed, and so a primary goal is often to promote reunification (Center for Substance Abuse Treatment, 2004).

Several studies have examined outcomes of children whose parents are involved in FTC (Bruns, Pullmann, Weathers, Wirschem, & Murphy, 2012; Green, Furrer, Worcel, Burrus, & Finigan, 2007; Worcel, Furrer, Green, Burrus, & Finigan, 2008). However, little is known about the children of parents treated in ADC. It is not known whether ADC clients have parenting deficits in line with parents in FTC. If deficits are present, it would be important for ADC to consider this in their treatment. In addition to the negative impacts of parental SUD on children, family conflict can exacerbate drug problems (Knight, Simpson, 1996; Mowen, Thomas, & Visher, 2015) and thus better parenting may actually promote recovery (Cosden, Koch, 2015).

There is minimal research on ADC participants and their families. Nationally, in 2008, 50% of clients in ADC had children (Rossman, Roman, Zweig, Rempel, & Linquist, 2011) under the age of 18, and 20% of those had primary care responsibilities. Most research done has focused on specific criminal justice outcomes of participants dealing with substance abuse, but not specifically on outcomes related to families involved in drug treatment programs. The primary goal of this paper is to examine differences in parents and their children who receive treatment through FTC and ADC. Understanding the similarities and differences may provide information about utilizing ADC as a venue to reach children and improve child outcomes. The study uses data from an ongoing evaluation to compare parents involved in ADC and FTC on demographics and family variables; parenting behaviors, mental health variables that can affect parenting, and child outcome variables.

METHODS

This data presented are baseline data from a quasi-experimental evaluation of families in two ADC and two FTC in Georgia. At each court, drug court clients and their families (one other caregiver and one child) were invited to participate in the evaluation by completing an annual assessment. The annual assessment included computerized surveys for both adults and children who were 8 years or older, and having the adults and child engage in play or discussion activities while being videotaped by the research team. All research done followed the protocol approved by the Georgia State University Institutional Review Board (IRB).

Participants Recruitment

DC clients at each court were recruited once they completed the initial phase of treatment, typically a detoxification and stabilization phase. Clients were recruited either at the court or at their treatment centers by the research team, who

conducted short presentations on the project, and described study participation. Interested clients indicated whether they were the primary caregiver for a child; only clients who were primary caregivers were eligible for the study. All clients who were eligible and indicated an interest were contacted and eligibility was confirmed. The team also assessed the possibility of recruiting a co-parent and a child to participate in the study, but here only the client data are presented. The sample included 105 clients (80 drug court and 25 family treatment court). In addition, this sample was recruited from 407 total participants from all four courts, only 164 participants were eligible (they were a parent/caregiver to a child under 18 years old), and 105 enrolled and had completed their baseline survey to be included in this data analysis.

Assessment Protocol

Assessments took place primarily in participants' homes, and typically, two research assistants would be present. DC clients who consented to participate in the study, from both the ADC and FTC, are referred to as the Drug Court Participant (DCP). The DCP and other caregiver were consented, and signed an assent for a child to participate if applicable. The consent and assent forms were approved and subject to full board review by the Georgia State University IRB. Researchers read language appropriate assent forms to children older than 6 (ages 6-7, 8-10, and 11+), to which they verbally agreed to participate in the assessment and physically signed if they were 11 and older. The survey was presented on a laptop or tablet with headphones for privacy, via an Audio Computer-Assisted Self-Interview (ACASI). Participants were instructed to answer as honestly as possible and were reassured that research data would not be shared with the drug court program. After the survey, a parent-child interaction task was conducted and recorded via video, in which each parent was videotaped interacting with the child; the observational data are not part of this research project so is not discussed further. Upon completion of the assessment, adult participants received a \$75 gift card. Children who completed a survey (eight years and older) were given a \$20 gift card for participating; children under 6 received a toy for participating in the parent-child interaction video observation.

Measures

The survey was given via the Audio Computer-Assisted Self-Interview Software (ACASI) and measured, parenting skills and family functioning, child mental health and well-being, family structure, and other demographics.

Parenting Skills

Parenting skills were assessed by the Alabama Parenting Questionnaire (Frick, 1991) a 42-item APQ measures five dimensions of parenting of 6-18 year olds: (1) involvement with children (10 items), (2) positive parenting (6 items), (3) poor supervision and monitoring (10 items), (4) inconsistent discipline (6 items), and (5) use of corporal punishment (3 items). Items were answered on a 5 point response scale where 1 = "Never" and 5 = "Always." The items on each subscale were summed to obtain a total score. Higher scores

on supervision, inconsistent discipline and corporal punishment indicate poorer parenting; higher scores on involvement and positive parenting indicate better parenting practices.

The Brief Child Abuse Potential Inventory (Ondersma, Chaffin, Mullins, & LeBretin, 2005) is an abbreviated form of the Child Abuse Potential Inventory (Milner, 1994). The BCAP is an actuarial risk assessment tool that contains 33 items. Seven factors form the Total Abuse Risk Scale (24 items), and the Lie (6 items) and Random Responding (3 items) items form a Validity Scale. The subscales of the BCAP are: (1) Distress Factor (e.g., "I often feel very upset"); (2) Family Conflict (e.g., "My family has problems getting along"); (3) Happiness (reversed) (e.g., "I am a happy person"); (4) Rigidity (e.g., "Children should never disobey"); (5) Feelings of Persecution (e.g., "People have caused me a lot of pain"); (6) Loneliness (e.g., "I often feel very alone"); (7) Financial Insecurity (e.g., "I sometimes worry that I will not have enough to eat"); and (8) the Total Abuse Risk Scale (24 items). For the current analyses, the cut-points of the Total Abuse Risk Scale identified by Ondersma and colleagues (Ondersma et al., 2005) for increased risk for child abuse (9 or greater) and high risk for child abuse (12 or greater) were used.

Parent child communication was assessed with the Parent-Child Communication (PCC)-scale – Parent Adult Report, an adaptation of the Revised Parent-Adolescent Communication Form of the Pittsburgh Youth Study (Conduct Problems Prevention Research Group (CPPRG), 1994; Loeber, Farrington, Stouthamer, & VanKammen, 1998; Thornberry, Huizinga, & Loeber, 1995). The PCC contains 20 items and assesses caregivers' perceptions of their openness to communication and their children's communication skills. The answers were coded along 5-point scales where 1 represents "almost never" and 5 represents "almost always," and a total sum was used for analyses. An overall communication score, which consisted of 20 items was averaged to form a single score representing more positive parent-child communication.

Family Protective Factors

Three family/parenting constructs were measured via the protective factors survey (Counts, Buffington, Chang-Rios, Rasmussen, & Preacher, 2010): family functioning/resiliency (5 items, e.g., "My family pulls together when things are stressful"), social support (3 items, e.g., "When I am lonely, there are several people I can talk to"), and concrete support (3 items, e.g., "I would have no idea where to turn if my family needed food or housing"). Family functioning measures the stability and cohesion of the family to work through crises, as well as problem-solving skills. Social support is the perceived help that may be obtained from family, friends, neighbors in times of need to help deal with stress. Concrete support measures tangible

Demographic Variables

Included in Table 1 are demographic variables across the drug courts and family treatment courts. Due to small

goods and services that a family may have access to in a time of need. Greater scores on each scale indicate better family functioning/resiliency and support.

Parent Mental Health

The Brief Symptom Inventory (BSI) measures a range of mental health symptoms including somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism (Derogatis & Melisaratos, 1983). This measure was normed on patient and non-patient adolescents and adults 13 years and older. Three global scales of the BSI measure broader functioning: the Global Severity Index (GSI) measures overall psychological distress level, the Positive Symptom Distress Index measured symptom intensity and the Positive Symptom Total (PST) measures the number of reported symptoms. This self-report survey of 53 items uses 5-point Likert scale responses and responses are converted to t-scores to describe the level of symptoms relative to a normed population.

Symptoms of post-traumatic stress disorder were measured via the Posttraumatic Stress Diagnostic Scale (PDS). The PDS measures severity of symptoms and functioning in patients identified as suffering from PTSD related to a single identified traumatic event (Foa, 1995). Total symptoms and total severity are measured with 49-items. The PDS assesses all DSM-IV criteria for PTSD (criteria A-F). Of four sections, the PDS has a trauma checklist (section 1), description of most impactful traumatic event (section 2), frequency of 17 PDS symptoms and severity (section 3), and symptom interference (section 4). Here, we focus on total symptoms and symptom severity.

Child Mental Health

The Behavior Assessment System Children– Parent Rating Scale (BASC) (Reynolds & Kamphaus, 2006) is a normed scale assessing children's mental health that yields t-scores for several global scales: internalizing behaviors, externalizing behaviors, behavioral symptom index, and adaptive functioning. The internalizing behaviors scale includes items on anxiety (14 items), depression (14 items), and somatization (12 items). The externalizing behavior index includes items on aggression (11 items), hyperactivity (10 items), and conduct problems (9 items). The adaptive behaviors scale includes items assessing activities of daily living (8 items), adaptability (8 items), leadership (8 items), social skills (8 items), and functional communication (12 items). Finally, the behavioral symptoms index includes items assessing attention problems (6 items), learning problems, atypicality (13 items), and withdrawal (12 items). Greater scores represent higher levels of maladjustment and may be behaviors to monitor before they become severely problematic.

sample size continuous variables were grouped into categories. Participants were 80 ADC triads and 25 FTC triads (DCP, another caregiver, and child). During the time this data was collected, 407 total drug court clients were

pitched to across courts, 164 were parents and eligible to participate in the study, and 105 participants decided to enroll in the study. Variables included were race (white, black, other), number of adults living in the household (1, 2, 3+), level of education reached (less than high school (HS), HS graduate, some college), income (below \$35,000 and above \$35,000), and dichotomous variables include sex (male/female), ethnicity (Latino-y/n), social services they receive (any/none), custody (any/none).

RESULTS

Demographics and family composition

First, differences in demographics and family composition by participant court type were examined (Table 1). We expected significant differences based on the source of clients for ADC (criminal justice system) and FTC (child welfare system). Compared to FTC participants, ADC participants were more likely to be black and male (63%). They also had a higher income ($p = .014$) and were less likely to receive public assistance ($p < .0001$). There was no difference in education level or employment status. ADC participants were less likely to have custody of the child than FTC participants ($p = .0015$), and they had fewer children ($p = .05$). ADC participants reported living arrangements that included a greater number of adults in the home compared to FTC participants ($p = .026$).

Table I. Demographic and Family Structure Characteristics of Adult Drug Courts (ADC) and Family Treatment Courts (FTC)

Court Type	ADC (N=80)		FTC (N=25)		p-value ($\alpha=.05$)	χ^2
	<i>n</i>	%	<i>n</i>	%		
Age <i>M(sd)</i>		35.48(8.44)		27.64(6.19)	.0001	
Sex					<.0001 †	
Male	51	63.4	2	8.0		
Female	29	36.3	23	92.0		
Race					<.0001 †	
White	35	53.8	24	96.0		
Black	43	43.8	1	4.0		
Other	2	2.5	0	0		
Latino					.29 †	.63
Yes	4	5.0	2	8.0		
No	76	95.0	23	92.0		
Education Level					.96	.08
< HS	14	17.5	5	20.0		
HS Graduate	26	32.5	8	32.0		
Some College	40	50.0	12	48.0		
Employment Status					.25	2.74
Unemployed	8	10.0	4	16.0		
<30 hrs/ wk	25	31.25	11	44.0		
+ 30 hrs/wk	47	58.75	10	40.0		
Annual Household Income					.014	8.51
<\$35,000	49	61.25	23	92.0		
>\$35,000	25	31.25	2	8.0		
missing	6	7.50	0	0		
Total # of Adults in Home					.026	9.28
1	14	17.50	9	36.0		
2	32	40.0	12	48.0		
3+	15	18.75	4	16.0		
Missing	19	23.75	0	0		
Receiving Public Services					<.0001	21.88
None	58	72.5	5	20.0		
Any	22	27.5	20	80.0		
Family Structure						

Court Type		ADC (N=80)		FTC (N=25)	p-value ($\alpha=.05$)	χ^2
Children <18 M(<i>sd</i>)	143	1.79(1.23)	59	2.36(1.22)	0.04	
Age						
0-2	20	13.9	17	28.8		
3-5	15	10.5	8	13.6		
6-11	52	36.4	26	44.1		
12-18	56	39.2	8	13.6		
Custody Status					0.0015	10.06
None	34	42.5	2	8.0		
Any	46	57.5	23	92.0		

Parenting

T-tests were used to examine the differences in mean total risk scores (PDS, BASC, BCAP, PCC, BSI) as well as the subscales within the assessment tool (APQ, BASC, BCAP, PFS) between the ADC and FTC participants. The results are shown in Table 2. Compared to ADC participants, FTC participants reported greater involvement in their children's lives ($M=41.74$ vs. 37.32 , $p < .01$), and better monitoring skills ($M=14.70$ vs 19.79 , $p < .01$). The groups were not

different on any of the other parenting measures including positive parenting, discipline use, or corporal punishment. No differences were found between ADC and FTC parents for scores on the BCAP risk (p 's = .42 and .37), or the Parent Child Communication measure ($p = .38$). FTC participants reported greater functioning/resiliency ($p = .03$) and greater social support than drug court clients ($p = .05$), but there was no difference in concrete support ($p = .60$).

Table 2. Drug Court Participants (DCP) in Adult Drug Courts (ADC) and Family Treatment Courts (FTC) Characteristics on Parenting Skills Measures, Mental Health and Child Mental Health Outcomes

Court Type	ADC (N=80)		FTC (N=25)		p-value ($\alpha=.05$)	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Parenting Skills Measures						
Involvement	37.32	6.96	41.74	5.9	0.01	0.66
Positive Parenting	26.52	3.2	27.74	2.68	0.13	0.40
Poor Monitoring	14.91	4.8	10.79	2.06	<.0001†	0.95
Inconsistent Discipline	12.94	4.41	14.26	5.11	0.27	0.29
Corporal Punishment	4.35	1.64	3.79	0.92	0.06†	0.37
Other Discipline	17.38	2.72	17.63	2.79	0.72	0.09
BCAP						
Total Risk > 9	0.24	0.43	0.16	0.37	0.42	0.19
Total Risk > 12	0.15	0.36	0.08	0.28	0.37	0.20
Parent Child Communication	3.19	0.44	3.26	0.27	0.38†	0.17
Parent Mental Health						
Global Severity Index	57.9	10.85	53.04	10.53	0.05	0.45
PST Sum	58.89	10.13	53.64	10.8	0.03	0.51
Positive Symptom Distress Index	54.7	9.35	48.88	7.72	0.006	0.65
Psychoticism	61.35	10.82	55.08	10.59	0.01	0.58
Somatization	53.01	9.51	47.92	7.61	0.02	0.56
Depression	56.0	10.95	51.2	9.2	0.05	0.45
Hostility	55.53	10.24	52.56	9.34	0.20	0.30
Phobic Anxiety	56.38	9.75	52.28	7.93	0.06	0.44
Obsessive-Compulsive	57.48	10.65	55.68	10.94	0.47	0.17
Anxiety	54.48	10.69	51	11.24	0.16	0.32
Paranoid Ideation	57.86	10.46	53.4	9.41	0.06	0.44
Interpersonal Sensitivity	57.28	10.57	53.36	10.45	0.11	0.37
Trauma Symptoms						
Total Symptoms	5.45	5.09	5.28	4.42	0.88	0.03
Symptom Severity	8.13	8.92	7.16	6.72	0.62	0.12
Number Traumatic Events	3.40	2.34	3.8	2.18	0.45	0.17
Protective Factors						

Court Type	ADC (N=80)		FTC (N=25)		p-value ($\alpha=.05$)	
Overall Family Function	26.33	6.49	28.77	3.84	0.03†	0.41
Social Support	18.34	3.92	19.73	2.29	0.05†	0.39
Concrete Support	17.09	4.46	17.68	4.96	0.60	0.13
Child Mental Health Outcomes						
Externalizing	51.49	10.64	53.5	13.97	0.51	0.18
Internalizing	48.62	9.32	51.06	11.2	0.35	0.25
Behavioral Symptoms Index	50.58	9.59	54.06	12.8	0.21	0.33
Adaptive Skills	47.3	11.12	48.89	9.4	0.58	0.15
Pooled. † Fisher's. †Satterthwaite.	<i>BCAP = Brief Child Abuse Potential Inventory.</i>					

Parent mental health outcomes

On the BSI, differences were found on each of the global scales with the ADC participants reporting greater severity of symptoms (GSI, $p = .05$), a greater number of symptoms ($p = .03$) and greater distress ($p = .006$). Looking at the individual subscales of the BSI, ADC participants reported significantly greater psychoticism, somatization, and depression than FTC participants, but the groups did not differ on any other scales (hostility, phobic anxiety, obsessive-compulsive, anxiety, paranoia, interpersonal sensitivity), though all means were nominally higher among the ADC participants. No statistically significant differences regarding the trauma indices. ADC participants and FTC participants did not differ in either number of trauma symptoms ($p = .88$) or symptom severity ($p = .62$). Additionally, FTC participants did not statistically differ from ADC participants in terms of number of traumatic events ($p = .38$).

Child mental health outcomes

There were no differences between groups on any of the major mental health subscales of the BASC including internalizing, externalizing, the behavioral symptom index, or adaptive functioning (all $p > .21$).

Controlling for family wise error rate: Benjamini-Hochberg procedure

Because multiple tests of significance were conducted, to control for family wise error rate and avoid Type I errors, we conducted the Benjamini-Hochberg procedure (Benjamini & Hochberg, 1995). This procedure controls for family wise error by dividing the rank of each p-value by the total number of tests and multiplying it by the chosen critical value ($Q = .05$). When conducting this procedure, 8 of 19 variables were considered significant and 11 were potential false discoveries, and thus the results should be viewed with caution. Effect sizes for all statistically significant variables were in the medium to large range (all d 's $> .39$), suggesting that the differences between groups was not trivial.

DISCUSSION

In the present study, we investigated the concentrations of The goal of this study was to compare parents receiving treatment in ADC with those receiving treatment in FTC on a range of outcomes including parenting skills, family functioning, mental health, and child mental health. Each

court type includes clients who are parents and whose children may be affected by parental substance abuse, but drug courts typically give very little attention to family issues as part of treatment.

The findings indicate some important differences between ADC and FTC parents. Differences were found on demographic variables and family structure, some parenting variables, and many of the parental mental health variables. Differences in parenting and mental health favored the FTC participants, who reported more positive parenting skills (involvement, monitoring) and fewer mental health problems. No differences were found in child maltreatment risk, concrete support, or child mental/behavioral health.

Regarding demographics, FTC participants were younger, female, lower income, had custody of their children, and were more likely to have lived alone, and received public assistance, whereas ADC participants were, older, male, without custody of their child and were more likely to live with other adults. These demographic and family structure differences may be a function of the child welfare and criminal justice system populations: child welfare clients are primarily women (U.S. DHHS, 2016), and males comprise a majority of the criminal justice population (Glaze & Parks, 2011). These differences in demographics (especially gender) should not be overlooked when examining some of the other differences.

Differences were found in parenting and adult mental health variables. In each case, where differences were found, they favored FTC participants, who reported more positive parenting skills and better mental health. The parenting differences for involvement and monitoring variables may simply reflect the fact that FTC parents spend more time with their children compared to ADC parents because they are more likely to have custody. The higher family functioning and greater social support reported in FTC parents compared to ADC parents is surprising given that they are receiving services through the child protection system, a system that mandates treatment for parents with poor family functioning.

These findings are important because they support the idea that ADC participants have similar or greater needs as FTC participants with regard to family support for their children. FTC participants, though they are being served by the child protection system, are in many ways, better positioned with

their children because of greater involvement and monitoring. It is possible that differences favoring FTC participants were caused by treatment they received prior to taking the survey (when the study began, we recruited all eligible clients regardless of treatment stage). However, if this is the case, it suggests that parents in ADC may benefit from these services as well.

These findings add to current literature as an initial comparison of parents in ADC with parents in FTC. There is little research on family factors of parents in ADC because the focus is on the sobriety and outcomes of the individual and not on their children's outcomes. The data reported here are important because they show that parents in ADC have needs similar or greater to those of parents in FTC, a sample with known parenting and family deficits. Possible treatment targets for ADC clients include parenting services, targeted mental health services including trauma treatments. Parenting services for parents with SUD can be effective at improving parenting skills (Usher, McShane, & Dwyer, 2015), reducing maltreatment (Chaffin, Hecht, Bard, Silovsky, and Beasley, 2012), and reduced family conflict may also promote recovery and abstinence (Neger & Prinz, 2015). Regarding mental health treatment, trauma treatment and "trauma informed care" is beginning to permeate the child welfare system in recognition that trauma can impact treatment responses (Hanson and Lang, 2016). Given the high and similar levels of trauma experiences and symptoms among FTC and ADC clients, this suggests that trauma services may be critically important to ADC clients as well.

Although the current study includes some findings worthy of note, there are several limitations and weaknesses. This study has a small sample and unequal number with FTC having less than a third of the ADC population. Though this study represents an initial look at the differences between parents with SUD being served by ADC and FTC. There are many questions left unanswered that should be explored in future research, and first and foremost is a replication with a larger sample that would allow more nuanced analyses than those conducted here. Second, all data reported here are self-report, which are subject to a number of biases including recall biases and social desirability. Because all participants here were in court-supervised treatment programs, participants may have been especially motivated to 'fake good', and thus results may be more positive than would be expected. Indeed, reported parenting levels were positive (DC Involvement $M=37.32$, FTC Involvement $M=41.74$). Another weakness is that only bivariate analyses were done, and the interrelationships between variables (e.g., parenting and mental health) was difficult given the sample size and uneven distribution of clients across court types. Finally, all clients who participated were already enrolled in treatment at the time of baseline, so any treatment effects would be captured in baseline data. In particular, clients in FTC may already have received some parenting programming as part of their treatment and this may have influenced responses.

CONCLUSIONS

Research involving families should continue in these courts in order to continuously improve the drug court programs, and especially ADC. Systems that offer treatment typically focus those treatments on the outcomes most relevant to their own system. Child welfare systems focus on promoting child safety, well-being, and placement stability. Criminal justice systems focus on criminal recidivism and drug use. We argue that ADC, which serve many, many parents, have an opportunity to improve family functioning of the clients served by their program, but cross system collaboration is needed.

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