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A Longitudinal Analysis of the Impact of Child Custody Loss on Drug Use and Crime among a Sample of African American Mothers

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Abstract

This study examines the influence of child custody loss on drug use and crime among a sample of African American mothers. Two types of custody loss are examined: informal custody loss (child living apart from mother but courts not involved), and official loss (child removed from mother's care by authorities).

Methods—Using data from 339 African American women, longitudinal random coefficient models analyzed the effects of each type of custody loss on subsequent drug use and crime.

Results—Results indicated that both informal and official custody loss predicted increased drug use, and informal loss predicted increased criminal involvement. Findings demonstrate that child custody loss has negative health implications for African American mothers, potentially reducing their likelihood of regaining or retaining custody of their children.

Conclusions—This study highlights the need to integrate drug treatment and other types of assistance into family case plans to improve reunification rates and outcomes among mothers, children, and families. Additionally, the finding that informal loss predicts increased drug use suggests that community-based efforts within the mother's social network could be implemented to intervene before child welfare system involvement becomes necessary.

Keywords

African American; motherhood; child custody loss; substance use; crime; incarceration; social networks; child welfare system; community; inequality

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Conflict of Interest: The authors declare no conflict of interest.

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1. INTRODUCTION

The Adoption and Safe Families Act of 1997 transformed the primary goal of the child welfare system (CWS) from reuniting families to protecting children (ASFA, 1997). Interventions providing family services are less expensive (Johnson-Motoyama et al., 2013), better at reducing parental substance use and out-of-home placement (Kirk & Griffith, 2008), improve child outcomes (Lawler et al., 2011), and oftentimes increase reunification rates (USDHHS, 2011); however, only 11% of the 7.2 billion dollars of federal child welfare funds given to states in 2007 funded preventive and reunification purposes; the majority funded foster care and adoption assistance (Pew Charitable Trusts, 2008). States receive financial incentives for finalized adoptions but not for reuniting a child and parent. Researchers have detailed the deleterious effects that foster care and parent-child separation can have on children (The Children's Aid Society, 2005; USDHHS, 1999), yet little attention has been paid to the effects of custody loss on mothers. Given the importance of the motherhood role in shaping one's identity and the numerous stressors characterizing the lives of many African American mothers, the loss of one's child is expected to negatively affect her health behaviors (El-Bassel et al., 1996; Roberts, 2002; Wells, 2011). This study longitudinally examines the relationship between losing custody of a child and subsequent substance use and crime, using a General Strain Theory (Agnew, 1992) framework.

1.1. Overrepresentation in the Child Welfare System and the Role of Substance Use

Economically disadvantaged African American communities experience intense social surveillance. African American mothers are more likely than other mothers to be reported to child welfare authorities by all reporters (Krase, 2013), including obstetricians suspecting prenatal drug use (Chasnoff et al., 1990; Hill, 2007; Whiteford & Vitucci, 1997), pediatricians, school systems, and neighbors (Roberts, 2008). This creates a CWS with what Dorothy Roberts calls a "racial geography" – one in which communities with large African American populations have a higher concentration of CWS involvement than do communities that are not predominantly African American (2008). These families are overrepresented in the CWS (Summers, 2015), not because they abuse or neglect their children at higher rates, but in part because being poor (Canfield et al., 2017; Derezotes & Poertner, 2005; Sedlak & Schultz, 2005) and African American (Ards et al., 1998; Barth, 2005; Morton, 1999) increase one's risk of being reported for child maltreatment when holding all other factors constant.

Substance use has long been labeled the "chief culprit" in child welfare spending (CASA, 1999). Around 5.5% of all women in the U.S. who live with minor children have a history of substance abuse (Substance Abuse and Mental Health Services Administration [SAMHSA], 2003), while these rates are 50–80% among parents involved with the CWS (Curtis & McCullough, 1993; Larriau et al., 2008; Semidei et al., 2001). Parental risk factors for child maltreatment include having been a victim of abuse during their own childhood, family-related stress or conflicts, financial stress, lack of social support, and substance abuse (Mayo Clinic, 2015). Substance-using, CWS-involved parents suffer from a greater number of, and more severe, social problems than similar non-substance using parents (Hines et al., 2004;

Walker et al., 1991). Thus it is not surprising that parents with many risk factors for child maltreatment will have higher rates of CWS involvement.

African American mothers with substance abuse problems engaging in crime are at significant risk for child custody loss, arrest, and incarceration (Harp & Oser, 2016; Henderson, 1998; Rockhill et al., 2008; Schilling et al., 2004; Sedlak & Schultz, 2004; Tracy, 1994; USDHHS, 1999). A recent study of African American mothers found that mothers incarcerated following a conviction had significantly higher odds of experiencing both informal and official custody loss (Harp & Oser, 2016). Furthermore, while having a childhood history of traumatic victimization increased the mothers' odds for losing *informal* custody, it was homelessness, having more children, identifying as lesbian or bisexual, and using crack/cocaine that increased the odds of official custody loss (Harp & Oser, 2016). Because substance use and criminality increase a parent's likelihood of abusing and/or neglecting their children, they also predict a parent losing custody – while some of the other predictors are not as well understood.

1.2. Protocol for Maltreatment Reports and Types of Custody Loss

A few options exist when caregivers are suspected of failing to provide a safe and healthy environment for their child(ren). Each state has its own handbook of procedures for handling a report of child abuse or neglect, however, most states follow the same general process. In Kentucky, the state in which the women in this study reside, citizens are legally mandated to report any suspected abuse, neglect, or dependency of a child per Kentucky Revised Statutes § 620.030 (Kentucky Cabinet for Health & Family Services [KCHFS], 2014). Dependency refers to a parent who is physically or mentally ill or injured in such a way that the child is under “improper care, custody, control, or guardianship that is not due to an intentional act of the parent, guardian, or person exercising custodial control or supervision of the child.” (KCHFS, 2014, p. 5). In our state, the Department for Child and Family Services receives the report of abuse or neglect, and makes a quick determination about the child's level of risk and immediate safety. Based upon that assessment, the cabinet may open a case to investigate the claim or refer the family to a community organization for services (Kentucky Revised Statutes [KRS] § 620.040). In cases of immediate risk, a judge can issue an emergency custody order allowing law enforcement to remove a child from the home immediately for a period of up to 72 hours, during which the caregivers must appear for a court hearing. There is no typical length for a CWS case (from the time the abuse claim is made until the case is resolved) as it varies greatly. A case in which the abuse claim is found to be unsubstantiated may be resolved relatively quickly, whereas a case in which the parent(s) is given a long list of requirements to be fulfilled as part of the case plan (e.g. substance abuse treatment, safer housing, etc.) may last for a year or more.

In cases where child welfare agencies have determined upon investigation that the caregiver is not meeting the minimum safety and wellbeing requirements to retain custody of one or more children, the child is removed from the home and placed in either kinship care (i.e. living with a relative) or foster care until the case is resolved. This is referred to here as *official custody loss*. The resolution of the case may result in the caregiver regaining custody (often with conditions) or with the permanent termination of his/her parental rights for that

child or children. In Kentucky, parental rights can be terminated once a child has been under the care of the State for 15 of the most recent 22 months, if a baby is abandoned, or if the parent has committed certain types of crime (KCHFS, 2012). Exceptions are not made for women who are incarcerated and thus unable to take steps to retain parental rights, other than by special court order. Termination of parental rights, whether voluntary or involuntary, “completely severs the parents’ legal ties to the child and transfers such legal rights, including the right to consent to the child’s adoption, to the Cabinet or other person or agency the court believes best qualified to receive the child” (KCHFS, 2012).

Informal custody loss refers to situations in which the child is living with someone other than the mother – usually a relative – but was not ordered to do so by a child welfare system authority or court order. This is generally referred to as *private* or *informal kinship care*, meaning that the family made the arrangement without CWS involvement (The Urban Institute, 2003). This is different from kinship *foster* care or *voluntary* kinship care where child welfare authorities and/or the courts intervene to place a child with a relative. Substance abuse by a biological parent is the most common reason a child is placed in any kind of kinship care (Weinstein & Takas, 2001). The most current report pertaining to the number of children in *private* kinship care finds that 1,760,000 children are currently living under such an arrangement (The Urban Institute, 2003). This accounts for 76% of the children under *any* type of kinship care (The remaining 24% reside in kinship foster care or voluntary kinship care arrangements – 17% and 6% respectively). Data on how these figures break down by the race of the child are not provided, but we do know that of all children in any kind of kinship care arrangement, most are racial minorities and specifically, 43% are African American (The Urban Institute, 2003). Additionally, according to the 2010 American Community Survey, of the over 1.3 million African American, grandparent-headed households in the U.S., grandparents are responsible for their grandchildren in 47.6% of cases (Bertera & Crewe, 2013). Given the importance of familial and friend support in African American communities, particularly those characterized by poverty and single motherhood (Collins, 1994, 2000; hooks, 2000; Stack & Burton, 1994), it is likely that informal kinship care arrangements are much more common than researchers estimate. This study is unique in its inclusion of this type of custody arrangement, as limited data exist on custody arrangements that occur outside of the child welfare and court system.

While many authors extend the definition of “kin” to include individuals who are not related to the child but with whom the child has a relationship (Geen, 2003; Jantz, Geen, Bess, Andrews, & Russell, 2002), this broader definition is not universally accepted. For that reason we have chosen the term “informal custody loss” to describe mothers whose children are living with a friend or family member or in another location, but have not been ordered to do so by child welfare services or a court.

Informal kinship care arrangements are not uncommon in many African American communities, particularly those which are socioeconomically disadvantaged and have high rates of single motherhood (Collins, 1994, 2000; hooks, 2000; Harris & Skyles, 2008; Stack & Burton, 1994), and can provide important support in childcare assistance. A cultural phenomenon known as “othermothering” or “kin-work” (Collins, 2000; Stack & Burton, 1994) describes when an African American mother’s support network is relied upon to assist

in child-rearing; Bonecutter and Gleeson argue these relationships exist, “not only because these informal systems are cultural strengths, but because African American children for many years were excluded from public and private sector child welfare programs” (1997, p. 100). It is important to add, however, that traditionally, informal kinship care is a reciprocal exchange in which family members are expected to give (in this case, caregive), as well as to receive help (Harris & Skyles, 2008). However, a mother who is dealing with substance abuse and/or is involved in crime is likely unable to reciprocate in these relationships and this could lead to tensions between the mother and caregiver.

As limited data exist on non-legal custody arrangements (for one example, see Harp & Oser, 2016), our inclusion of informal custody loss is an innovative contribution to the literature. These analyses examine (1) informal loss of custody, where the child is not living with the mother but was not legally mandated to do so, and (2) official custody loss, where a court removes a child from their mother’s care. Informal loss may involve a mother voluntarily transferring child guardianship to a relative or friend, or could involve the use of threats to report the mother if she does not relinquish guardianship.

1.3. Negative Effects of Custody Issues on Child and Mother

The negative outcomes children in the CWS experience have been well-researched and established, but bear repeating. While children of all races often experience negative outcomes in the foster system, the fact remains that African American children are especially likely to have poor outcomes (Conners et al., 2004; McNichol & Tash, 2001; Sharp & Marcus-Mendoza, 2001; USDHHS, 1999). There is a disturbing pattern in which many African American children move from the child welfare system to the juvenile justice system (Roberts, 2002). Adolescents in the foster care system are often sent to juvenile detention centers for “acting out” (Roberts, 2002, p. 200), and stressors related to foster care and group home placements often lead adolescents to act out or run away. Upon reaching legal age (18 or 21, depending on the state), young adults must often leave their foster homes or institutions abruptly. Of the approximately 26,000 young people who age out of foster care each year (Biddle, 2011), the vast majority are African American (Roberts, 2002). According to a recent systematic review of foster care outcomes, those who exit the system have much lower rates of graduating high school or college than their peers who are not in the CWS, and graduation rates are even lower for children who are ethnic minorities (Gypen et al., 2017). Former foster children have high rates of unemployment or unstable employment (Gypen et al., 2017). They also have lower annual earnings, more mental health and substance abuse problems, higher rates of criminal involvement, and higher rates of homelessness compared to their peers not in the system (Gypen et al., 2017). Furthermore, one study found that 40–60% of young women were pregnant within 12–18 months of leaving foster care (The Children’s Aid Society, 2005). While many improvements have been made to the CWS in the past decade, significant shortcomings continue to exist and the future of children in this system remains bleak.

While we know much about the effect of parent-child separation on the *child*, we know very little about how this affects the *mother*. Extant research has shown that losing custody of one’s child(ren), regardless of the temporary or voluntary nature, takes a significant

psychological toll (Hollingsworth, 2005; Schen, 2005; Wells & Marcenko, 2011); it creates a tension between a woman's personal identity as a mother and how others view her. Roberts writes that having one's role as a mother devalued "cuts to the heart of what it means to be valued as a woman" (1997, p.10). Once in the system, many mothers lack much-needed support and resources. Studies show that while the majority of white children reported to the CWS receive supportive services to remain in their homes, most African American children are placed in foster care (Harris et al., 2001; USDHHS, 1999). This subjects them to significant social stigma and shame (Wells, 2011). Shame, coupled with ensuing legal battles, can turn a temporary separation into a lengthy one, "accompanied by emotions of guilt, bitterness, anger, feelings of failure as a parent, and helplessness" (Schen, 2005).

Inadequate support makes it difficult for mothers, many who already have substance abuse problems, to avoid a downward spiral into increasingly negative health behaviors (Harp et al., 2012; Schen, 2005). This is particularly harmful to reunification goals because substance use severity is a key factor preventing reunification (Jones et al., 2008). Experiencing custody loss traumatizes substance-using mothers' personal/maternal identities (Denzin, 1987). These mothers may cope by devaluing the importance being a mother plays in their identity, thereby distancing themselves from the negative emotions caused by losing custody (Wells, 2011). Those who feel helpless to comply with "impossible" case plans (Rockhill et al., 2008) may view reunification as hopeless and engage in self-sabotaging behaviors out of anger (Wells, 2011). All of these mechanisms – sense of shame and stigma, devaluing of mother identity, and rage – contribute to harmful coping mechanisms like substance use and crime.

El-Bassel and colleagues (1996) conducted the only other available study on how custody loss affects drug-using mothers, though with a cross-sectional sample of incarcerated women. They found that losing custody of one's children (a psychologically distressing event) was associated with increased crack use. Drug-using mothers continue to be treated punitively by child protection agencies and the criminal justice system (Golembeski & Fullilove, 2005), without consideration given to their prevalent abusive backgrounds, mental health, or family history of drug problems (Glaze & Maruschak, 2008). Instead, more efficient but less effective methods are preferred – specifically, removing children from the mother's custody. Once this occurs, many women turn to drug use or other harmful behaviors in a desperate attempt to cope – although this ultimately worsens their situation and chances of reunification (Nelson-Zlupko et al., 1995).

1.4. Rationale and Theoretical Framework

It is important to justify focusing on how custody loss impacts mothers. Research has given significant attention to the effects of abuse, parent-child separation, and foster care on children, as well as predictors of child maltreatment and custody loss. We assert, however, that the impact of custody issues on mothers is important both in itself and because of its trickle-down effect on her child(ren) and community. Because mothers with more severe problems are less likely to be reunited with their children (Jones et al., 2008; Larrieu et al., 2008; Wulczyn, 2004), those who turn to behaviors like substance use and crime following custody loss (or increase the frequency of these behaviors) are of particular concern here.

Additionally, a mother's inability to regain custody may have long-term negative psychological, behavioral, and other health consequences for her as well as her child(ren).

Robert Agnew's General Strain Theory (GST) (Agnew, 1992) posits that people engage in illegitimate coping (e.g. substance use) as a means of escaping or alleviating strain (Agnew, 1992; Broidy, 2001). GST argues that strain causes negative emotions which necessitate a corrective action or coping behavior that may be internalized or externalized and legitimate or criminal (Agnew, 1992; Broidy, 2001). Three types of strain are specified: (1) failure to achieve positively valued goals (e.g., inability to obtain employment) (2) removal of positively valued stimuli (e.g., loss of social support), and (3) the presence of negative stimuli (e.g., legal problems) (Agnew, 1992; Agnew et al., 2002). Although not yet studied within a GST framework, these characteristics of strain apply to custody loss, which could be viewed as removing positively valued stimuli. Child custody loss is likely experienced by mothers as high in magnitude (especially when the child is removed from her care) and unjust. Mothers may also expect custody issues to persist for some time; as several factors precipitate custody issues, several factors must be addressed to resolve them. Finally, custody loss produces strain because it challenges a woman's core identity as a mother. Motherhood is a value-laden, all-encompassing social role in Western culture. Terms like "bad mother" and "unfit mother" are used to reiterate the idea that these are mothers lacking in moral character (Radcliffe, 2011), and stereotypes like "welfare queen" have historically been used to pathologize Black motherhood specifically (Roberts, 1997, 2002).

These tenets of GST support our conceptualization of custody loss as increasing in severity based on the type of loss experienced. Informal custody loss is certain to cause strain as mother and child are physically separated. Even if the mother agrees to this arrangement, the distance from her child is likely to challenge the "core goals" of her "good" mother identity, a type of strain more conducive to crime (Agnew, 1992). Additionally, there is concern about the potential for mother-child reunification in these arrangements because the mother is not being mandated by courts to get any type of substance abuse treatment and no direct effort is being made to address these issues and work towards reunification. On the other hand, because these types of arrangements are not legally determined, the mother may have more opportunities for contact or visitation with her child than she would if an official court order were in place. Furthermore, research shows that children in any kind of kinship care are better able to maintain emotional bonds with their families than children in foster care (Harris, 1997, 1999, 2004; Grant, 2004). While there are positive and negative aspects for all involved in these informal arrangements, because the mother likely has more frequent contact with her child and retains legal custody without having to fulfill a case plan, we perceive of this as less severe. Thus, we expect that mothers who experience this type of custody loss will report increases in their substance use and crime in the months after losing custody, but less so than mothers who lost official custody.

Official custody loss is viewed as more severe because it involves legal intervention with its attendant stress, and decreases the likelihood a mother will regain custody. To be clear, we are not classifying whether informal or official custody loss are "good" or "bad", but rather hypothesizing about the severity of the effect each will have on a mother using GST as a framework. There has been much research demonstrating the negative effects of official

custody loss on a mother's identity and the trauma she experiences as a result (Hollingsworth, 2005; Schen, 2005; Wells & Marcenko, 2011), as well as feelings of hopelessness due to "impossible" case plans (Rockhill et al., 2008). Because official loss is likely experienced as great in magnitude, challenging the mother's core identity, and expected to endure for some time, we expect that women will have little reason not to turn to unhealthy coping mechanisms or increase their involvement in substance use and crime in the months afterward.

2. MATERIALS AND METHODS

2.1. Data Source and Sample

Four waves of data from 643 African American women were collected in the Black Women in the Study of Epidemics project between 2009 and 2013. Specifically, 240 prisoners, 197 probationers, and 206 community-based women (i.e. not involved in the criminal justice system) were recruited by trained African American female interviewers. For the present study, 339 of the 643 African American women reported being mothers to at least one minor child, resulting in a sample of $n=339$ mothers. Eligibility criteria included: (1) self-identifying as African American; (2) being at least 18 years old; and (3) willingness to participate. For the prison sample, women had to be eligible for release within 60 days of baseline interview (i.e., meeting the parole board or serving out). Probationers were included if on probation at baseline, and community participants could not have any criminal justice system involvement at baseline. All women were asked on the screener if they used a drug in the past year and were stratified by drug use status (yes/no). Determination of drug-user status was the same across all samples (Note: women in the prison sample were asked about drug use in the year *prior* to incarceration). Of those incarcerated, 78.4% reported any past year drug use as compared to probationers (48.7%) and community women (53.0%), respectively ($p<.000$).

The baseline interview included informed consent, baseline questionnaire completion using laptops outfitted with Computer Assisted Personal Interviewing software, and locator information. Women recruited for participation were contacted for 6- (Wave 2), 12- (Wave 3), and 18-month (Wave 4) follow-ups with all response rates above 90% and were compensated for their participation.

2.2. Variable Measurement

Any Custody Loss—At baseline, respondents indicating that they had a child previously living with someone other than themselves (unofficial loss) or had lost official custody of any child were coded as a "1" (=custody issue prior to study). For the analytical models where each type of custody loss was examined separately, participants experiencing both types were categorized by the most severe issue they reported during each wave. Severity was viewed as a continuum where informally losing custody was a less severe event than official loss. Prior research has not distinguished between different custody arrangements; however, this classification was justified theoretically. Each custody issue was coded dichotomously based on whether the mother experienced it in the past six months (1=yes;

assessed at each wave). Baseline reports of custody loss prior to the study were only used in the descriptive statistics, not the multivariate models.

Drug Use—Addiction Severity Index – modified (McLellan et al., 1999). Participants were asked how often they used 10 illegal drugs in the past six months: 0=Never/Not used, 1=1–3 times, 2=About once per month, 3=About 2–3 times per month, 4=About once per week, 5=About 2–6 times per week, 6=About once per day, 7=About 2–3 times per day, and 8=About 4 or more times per day. The drug use variable includes use of all drugs combined, excluding marijuana. Marijuana use was excluded as it is more culturally acceptable among African Americans and use was high among this sample (Stevens-Watkins et al., 2012). As it is more culturally acceptable, there is reason to expect women may use marijuana for different reasons than “harder” drugs (e.g., recreationally versus physiological dependence). Alcohol was excluded for the same reason. Analyses including alcohol and marijuana use *were* conducted and as expected, were not associated with the outcome variables and were omitted from the final models. Averages were then computed based on responses for each drug by transforming the categories into numbers approximating the number of times each drug was used in the previous six months. Scores for each of the 10 drugs were averaged. For example, someone who reported using crack between 1–3 times *total* in the past six months (response category 1), was coded as a “2” for that item, because two is the average of 1 and 3, and someone who used opiates 2–3 times *per day* in the past six months would be coded as a “455”, because 2.5 (the average of 2–3) was multiplied by number of days in the past six months (182) to equal 455. Table 1 presents a list of the numerical average calculated for each response category. Numerical averages for drug use resulted in large, unwieldy values. For instance, someone using three different drugs four times daily would have a score of 2184 (728×3). To adjust for the negatively skewed distribution (range: 0–54), we first added one to all values so that zero scores would have a positive integer, and then did a log transformation so for instance, a score of 1 originally would be .693 (range: 0–4.00).

Criminal Involvement (modified) (Oser and Leukefeld, 2005)—Participants were asked on how many of the past 30 days they engaged in 12 crimes (excludes drug possession/use/consumption since use was examined separately). Offenses ranged from sex trading and theft to assault and homicide. The number of days each participant engaged in all 12 crimes was summed, so number of criminal “days” could range from 0–360 (if all 12 crimes were committed every day). To correct for the skewed distribution (range: 0–110), we added one to all of the values and then did a log transformation for this variable in each wave of data (range: 0–4.71) for the regression models (raw drug use and crime scores are reported in descriptive table).

2.2. Control Variables

Baseline Criminal Justice and Drug User status. Women were placed into a criminal justice status category based on recruitment (reference group = community). Drug user status, past six month employment, marital status, and past year homelessness were coded dichotomously (0=no, 1=yes). Baseline age was reported in years and education was a continuous measure. Household income was based on the respondent’s income in thousands

of dollars from all sources in the last year. All measures were given *at each wave in reference to the previous six months*, except where noted above for the baseline. Thus, in longitudinal models, all variables refer to the same time frame except education. Since it is relatively stable, only baseline education was included.

2.3. Analytic Plan

Waves 1–4 were combined into one Stata dataset for longitudinal secondary analysis and were reviewed for outliers. After reshaping data into long form, casewise deletion was used when a participant had not completed an interview at a given wave (because study enrollment is on a rolling basis, not all women were eligible for Wave 2–4 interviews at time of publication). In the 10 cases where a data point was missing, we were able to impute these values based on responses from a previous wave (e.g. child’s age). Lastly, missing values due to interview skip patterns were recoded appropriately. Geometric means are reported rather than odds ratios, given the logged nature of the outcome variables.

Prior to analysis, multicollinearity diagnostics were run and no issues were detected. Adequate observations were available to include a lagged measure of custody issues in each model – not including custody loss prior to baseline interview. What a lag does is anchor the data so that for example, if a mother had lost informal or official custody at Wave 3, her Wave 3 data in the six months after custody loss are compared to her Wave 2 data (before losing custody) and the differences are computed and tested for significance. Random-intercept and random-coefficient models were used to determine the strength of the relationships hypothesized and are ideal for looking at within person changes over time. Control variables included socioeconomic status, age, marital status, past year homelessness, and baseline criminal justice status. Geometric means were reported to evaluate differences in drug use scores and crime based on if a participant experienced custody loss. The first set of models examined the effect of (1) informal custody loss and (2) official custody loss on drug use. The second set of models examined the effect of these same types of loss on crime. Standard errors, p-values, intraclass correlations, and overall model characteristics are reported.

3. RESULTS

3.1. Descriptive Statistics

As displayed in Table 2, 41% of the women were recruited from prison, 34.5% from probation, and 24.5% from the community. Over 93% were between 18 and 44 years old and 59.9% had a high school diploma/equivalent. Nearly 44% had been arrested between one and five times, and over a quarter had been arrested more than 10 times. Only 16.2% were married and 48.4% were employed in the past year. The average annual household income category reported was \$15,990. One fifth of the women reported any past year homelessness.

Of the 339 mothers, 211 had one or two minor children (62.2%) at baseline, and the remaining 37.8% had three or more children. Over 72% had experienced any custody loss *prior* to the study, and 41.9% experienced custody loss during the study timeframe. At

baseline, 29.5% (n=100) had lost custody informally, and 42.8% (n=145) had lost official custody.

Concerning drug use, 62% (n=210) reported any past year drug use at baseline. Drug use was frequent, with an average use of 186.9 times in the past six months (just over once per day). Participants averaged 9.1 days of past month criminal involvement.

3.2. Multivariate Models

Lagged multi-level mixed effects random coefficient models examined the effect of experiencing each type of custody loss on drug use in the following six months. We hypothesized that official custody loss would lead worse outcomes than informal loss. As Table 3 illustrates, both informal and official custody loss affected drug use in the six months after it occurred. Specifically, informally losing custody was associated with a 72% increase in the geometric mean of drug use ($p<.001$) and homelessness increased the geometric mean of drug use by a factor of 2.16 ($p<.001$).

Results in Model 2 indicate that losing official custody in the current wave increased the geometric mean of drug use by a factor of 4.14 ($p<.05$) – which is a markedly higher increase than was found after informal custody loss. Also, more education was associated with an 8% decrease and being older was associated with a 2% increase in the geometric mean of drug use (both $p<.05$). Homelessness was also significant, increasing the geometric mean of drug use by a factor of 2.75 ($p<.001$). The intraclass correlation of scores over time was moderately strong within each individual in the informal loss model ($\rho=0.57$) and very strong in the official loss model ($\rho=0.89$). This indicates that the correlation of drug use scores for each participant over time was stronger among women who experienced official loss compared to women who experienced informal loss.

Official custody loss was expected to have a greater effect on criminal involvement than unofficial loss. Two random coefficient models were used to investigate the effect of each type of custody loss on crime (Table 4). It was not possible to calculate a lag in the criminal involvement models due to insufficient data and limited within-person variation. As shown in Table 4, official custody loss – considered the most severe custody issue – failed to predict crime, contrary to our hypothesis. Informal custody loss (Table 4, Model 2), however, did increase the geometric mean of crime score by a factor of 1.39 ($p<.001$) in the six months after it occurred. Furthermore, among both women who lost custody informally and those who lost custody officially, any drug use and being in prison at baseline predicted an increase in crime (both $p<.001$). The intraclass correlation of scores over time was moderately strong in this model ($\rho=.60$).

4. DISCUSSION

This study demonstrates how common child custody issues can be among African American women. Nearly two-thirds experienced some form of child custody loss prior to baseline, while over 40% experienced custody loss at least once during the 18-month study timeframe. These alarmingly high rates reflect the high number of African Americans in the

CWS and provide new information about women who experience informal loss and therefore aren't counted in official statistics.

Findings for women who lost custody informally were surprising and informative. While women who lost custody officially reported increased drug use (and a much greater increase compared to the informal loss group), those who lost custody informally reported an increase in drug use *and* an increase in crime in the six months surrounding informal loss. Informal custody loss was perceived of initially as less severe than official loss because the mother still retains *legal* custody of her child, and may have better access to her children via visitation.. Official custody loss, which involves CWS authorities and courts and often leads to termination of parental rights, was conceptualized as more strain-inducing since it greatly reduces a mother's chance to regain custody and poses a greater threat to her identity as a mother. While our inability to create a lagged variable for criminal involvement limits the interpretation of results, this is certainly something researchers should investigate further in the future.

Given the importance of extended family and kin networks for providing social support, and knowing most of these informal custody arrangements occur within the family context, there is plenty of room for tension (on all sides!) when a family member takes over care of a mother's child. While kinship care arrangements may be preferable over other foster care placements because they are more stable, last longer, and allow for more mother-child contact, they can also lead to conflict and feelings of anger, abandonment, and jealousy on the part of the mother (Crumbley & Little, 1997). They can also lead to feelings of resentment on the part of the new caregiver for being thrust into a parenting role they did not volunteer for, and often on very short notice. When a relative is caring for the mother's child and the relationship is tense, both parties are also probably providing less social support to one another as a result of this tension. Future studies should try to further parse out the intricacies of such relationships revolving around informal custody arrangements, and their potential effect on mother, child, and caregiver outcomes. And while these tensions may just as commonly occur in official custody arrangements where a family member is given custody of a child, those families are more likely have access to CWS resources not available to families with arrangements outside of the system.

While kinship care arrangements are generally viewed as ideal by child welfare workers and some researchers (Child Welfare Information Gateway, 2016), results of this study indicate that in some cases, these arrangements are associated with worse maternal outcomes than in cases of official custody loss. This, in turn, could jeopardize the mother's ability to retain custody of her children. The finding that informal loss was associated with increased drug use and crime suggests that without treatment or other supportive health interventions, this arrangement may not be conducive to mother/child reunification. It is also possible that there are mediating or moderating factors that would further elucidate the relationship between these two types of custody loss and substance use and crime in the six months afterward. This is an important limitation of the current study, and we hope to examine this in the future.

Access to culturally competent interventions aimed at reducing crime and drug use must be prioritized (Child Welfare Information Gateway, 2016; Crampton & Jackson, 2007; Harris, 2004). More effective, targeted interventions with women, their children, and families, could integrate services addressing these issues without jeopardizing the legal integrity of the mother/child relationship. A bigger issue is that mothers often avoid seeking drug treatment or other services because they worry they will lose custody. If more services were available that sought to reunite women and children without being entangled in the justice system, women may be more likely to seek help for issues that impede their ability to adequately parent. More research and funding is still needed, however, to design community-level interventions that are culturally-grounded, judgment-free, and aware of the social context in which they are to be implemented (Aronowitz et al., 2015).

4.1. Theoretical Implications

These results provide preliminary support for perceiving of child custody loss as a strain-producing event that affects maternal substance use and crime. Unlike informal custody loss, official loss did not affect criminal involvement in this study. Studies employing a GST framework consistently find that strains which are responded to with self-directed negative emotions like depression are often responded to in self-directed ways (e.g., drug use), while strains producing other-directed negative emotions like anger more often lead to outward-directed behaviors like crime (Agnew, 1992; Broidy & Agnew, 1997; Jang, 2007; Piquero & Sealock, 2004). There is little question that women's health is significantly impacted by both informal and official child custody loss. As one interviewee in a qualitative study of mothers using crack/cocaine stated, "When they took my babies, they took myself" (Murphy & Rosenbaum, 1999, p. 10). In light of the despair mothers experience after being separated from their children, an increase in unhealthy coping behaviors like substance use is unsurprising, even if self-destructive and -defeating. Another interviewee said, "When my kids were taken from me, I wanted to die...And so I took every penny I had and bought every hubba [piece of crack] I could find" (Kearney et al., 1994, p. 356). Women already struggling with drug use are presented with a familiar form of escape in drugs after losing custody, thereby worsening their health and exacerbating this critical public health problem.

4.2. Additional Implications

Issues related to low socioeconomic status posed significant challenges for the African American mothers in this sample, especially those who lost custody. While the mean annual income *for women who experienced any custody issue prior to baseline* was \$14,960 (still well below the national poverty line), the *median* annual income was \$7,500 (results not shown). Only a quarter reported annual incomes were over \$17,500. This is important to consider as economic difficulties create barriers to a parent's ability to provide adequate housing, healthcare, child care, food, and clothing – all things contributing to a child being removed from the home (Canfield et al., 2017; Pelton, 1994). Once a child is removed from the home, parents face extreme challenges in improving these conditions and fulfilling case plan requirements (Rockhill et al., 2008). Research has demonstrated that the provision of material/economic services to families can delay or prevent removing the child from the home altogether, and also shortens the time to parent-child reunification (for a review, see USDHHS, 2011). The finding that homelessness was associated with an increase in

substance use from the six months before becoming homeless to the six months after, demonstrates that becoming homeless is likely a very vulnerable time for mothers and efforts to intervene as soon as possible could be protective against negative health outcomes.

A final important group of mothers to consider is those who are incarcerated. As demonstrated in our analysis, being incarcerated at baseline predicted an increase in criminal involvement following both types of custody loss. While not unexpected, concentrated efforts could be made to improve these outcomes. Because incarcerated individuals are under intensive criminal justice system supervision for a time, the incarceration period presents a unique opportunity to provide drug treatment, parenting skills, anger management programs, reintegration assistance, and other health services to increase their chances of rehabilitation and reunification with their children post-release.

4.3. The Imperative for Integrating Drug Treatment into CWS Services

There remains a lack of drug treatment programs tailored to women's needs, as only 33% of treatment facilities have special women-only programs (SAMHSA, 2009). To be successful, treatment programs must holistically address all of women's health needs (NIDA, 2001). Addressing the physical, mental, social, structural, and other health needs of women in treatment is associated with decreased substance use, improved mental and physical health, and higher rates of employment; thus, there is a growing emphasis on developing holistic programs (Ashley et al., 2003; Bride, 2001; CASA, 2006; Child Welfare Information Gateway, 2016). This study highlights the need for changing CWS policies as those currently in place are aimed more at reforming and punishing the behavior of economically disadvantaged (and disproportionately African American) mothers, and less at improving the conditions in which children grow up.

4.4. Limitations

There are measurement limitations to any study using secondary data. For the dependent variables, responses on several ordinal variables were transformed into an aggregate value of the total number of times any drug was used in the past six months and number of crime days in the past month. Although this measurement of self-reported data is imperfect, it has offsetting strengths. The frequency of use of all substances and crimes was captured, rather than restricting analyses to use of a single drug or crime. Additionally, this method allowed for observations of within-persons change in frequency over time, so while the exact unit measure itself may be of limited use, the change from one wave to the next is meaningful for interpretation.

The measurement of custody loss is imperfect in a few important ways. First, some women experienced both informal and official custody loss during a given wave, but were placed in one group based on what was perceived as the most serious custody issue. Also, additional data on the voluntary nature of informal custody loss was not available, which could have implications for involvement in drugs and crime. For example, a woman whose child was taken by threat might be more likely to reduce her substance use in hopes of persuading this individual to return her child, while someone who voluntarily relinquished custody to another individual might be experiencing negative consequences associated with their

substance use disorder and decide their child would thrive better elsewhere. If this were the case, one would expect the latter to increase her substance use and criminal involvement. Additional research is needed, including qualitative data, to examine the relationship between experiencing informal loss and changes in substance use and crime.

There is also a lack of information regarding the reason(s) for custody loss, how long the mother-child separation lasted and if they were reunified, and details regarding mother-child visitation allowance, frequency, etc. Obtaining this information would require verification by examining child welfare case and court documents, which was not possible due to participant confidentiality. Future researchers who aim to draw more precise conclusions about the relationship between these complex events should investigate avenues for collecting data on these and other aspects of the custody loss event.

An additional limitation is the absence of mediation and moderation analyses to examine if there is something separate altogether affecting the relationship between each type of custody loss and changes in substance use and crime.

Finally, generalizability is limited as this sample includes African American mothers from one southern state, many who were involved with the criminal justice system. Despite this, these findings add significantly to our knowledge about the effects of custody loss on maternal health and shed light on the culturally relevant phenomenon of kinship care.

5. CONCLUSIONS

This study fills a large gap in research on child custody loss and maternal substance use and crime, by longitudinally examining these relationships among a sample of African American mothers. Using Agnew's General Strain Theory as a framework, findings support the conceptualization of custody loss as a strain-producing event that has negative maternal health outcomes. This research highlights the need to more closely examine mothers involved in custody arrangements outside the CWS, as they had some of the most severe health problems, but also often had access to more economic resources. If informal custody loss often precipitates increased substance use and crime, researchers should investigate routes for improving these outcomes in non-coercive ways. Given the importance family and friend support networks have for African American women, the frequency of these informal custody arrangements presents a critical intervention point. Current, punitive policies that treat substance-using mothers as criminal adversaries incapable of and reluctant to care for their children are failing, and the time has come to move away from this mindset and towards policies that empower, heal, and reunite African American mothers with their children and communities.

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Table 1

Recoded Values for Past Six Month Drug Use

Original Response Category for frequency of use in past 6 months	Recoded Numerical Average
Never/not used	0
Only 1–3 times	2
About 1 time per month	6
About 2–3 times per month	15
About 1 time per week	26
About 2–6 times per week	104
About 1 time per day	182
About 2–3 times per day	455
About 4 or more times per day	728

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Table 2

Baseline Descriptive Statistics for Full Sample (n=339)

	Mean/Percent	SD	Range
Criminal Justice Status at Baseline			
Prison	41.0%		
Probation	34.50%		
Community	24.50%		
Socio-demographics			
Education (years)	11.97	2.06	5.00–20.00
Total annual income (thousands)	15.99	16.08	0.00–87.50
Age (years)	32.26	7.50	19.00–54.00
Currently married	16.22%		
Employed full/part-time	48.38%		
Homeless in past 6 months	20.35%		
Number of Children and Custody Issue History at Baseline			
Number of children <18	2.37	1.42	1.00–8.00
Any past custody issue(s)	72.27%		
Drug Use in Past 6 Months (number of times)			
Drug use	186.93	455.85	0.00–4550.00
Criminal Involvement			
Number of crimes in past 30 days	9.13	19.19	0.00–110.00

Table 3

Random Coefficient Models Examining the Effect of Informal and Official Custody Loss on Drug Use

	Model 1	Model 2
Drug Use		
Type of Custody Loss		
Informal Loss in current wave	1.72 (0.17) ***	
Informal Loss in lagged wave	1.02 (0.14)	
Official Loss in current wave	--	4.14 (0.61) *
Official Loss in lagged wave	--	1.15 (0.18)
Socio-demographics		
Education	0.96 (0.03)	0.92 (0.03) *
Total annual income	1.00 (0.00)	1.00 (0.01)
Age	1.01 (0.01)	1.02 (0.01) *
Married	0.80 (0.15)	0.77 (0.17)
Employed full/part-time	0.92 (0.10)	0.92 (0.11)
Homeless in past 6 months	2.16 (0.20) ***	2.75 (0.19) ***
Criminal Justice Status at Baseline¹		
Prison	0.92 (0.16)	0.97 (0.17)
Probation	0.86 (0.13)	0.77 (0.16)
Number of obs	684	682
Number of groups	265	265
Wald χ^2	47.81 ***	55.12 ***
Intraclass Correlation	0.57	0.89

¹Omitted category is "community (not currently involved with criminal justice system)"

*
p < .05;

**
p < .01;

p < .001

Note: Geometric means are presented, standard errors in parentheses

Table 4

Random Coefficient Regression Models Examining the Effect of Informal and Official Custody Loss on Criminal Involvement

	Model 1	Model 2
	Past 30-day Criminal Involvement	
Custody Issue		
Informal Custody Loss	1.39 (0.09) ***	
Official Custody Loss	--	1.04 (0.12)
Illicit drug use (logged score)	1.19 (0.02) ***	1.19 *** (0.02)
Socio-demographics		
Education	1.01 (0.02)	1.03 (0.02)
Total annual income	1.00 (0.002)	1.00 (0.002)
Age	0.99 (0.004)	0.98 ** (0.004)
Married	0.97 (0.08)	0.96 (0.08)
Employed full/part-time	0.99 (0.06)	1.00 (0.06)
Homeless in past 6 months	0.85 (0.09)	0.84 (0.10)
Criminal Justice Status at Baseline¹		
Prison	1.51 (0.09) ***	1.79 *** (0.07)
Probation	1.06 (0.07)	1.13 (0.07)
Number of obs	1031	1,030
Number of groups	339	339
Wald χ^2	338.66 ***	357.28 ***
Intraclass Correlation	0.60	0.63

¹Omitted category is "community (not currently involved with criminal justice system)"

* p < .05;

** p < .01;

*** p < .001

Note: Geometric means are presented, standard errors in parentheses