

## Parenting and the association between maternal criminal justice involvement and adolescent delinquency<sup>☆</sup>

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### ABSTRACT

The high rate of adult criminal justice involvement in the United States has resulted in many unintended consequences for families of offenders. Families involved with the criminal justice system are disproportionately involved with the child welfare system, and adolescents involved in both systems (i.e., dual system involvement) exhibit higher levels of delinquency. Yet, a lack of research exists on dual system involvement and the effects on youth. The current study leveraged nationally representative and longitudinal data of families involved in the child welfare system to examine whether maternal criminal justice involvement predicted increases in youth delinquency. An ecological model tested the effects of maternal justice involvement beyond cumulative risks as well as the potential buffer of parental monitoring and non-violent discipline on system involvement. Results suggested child welfare-involved youth exhibited similar levels of delinquency over time, regardless of maternal justice involvement. Although youth with maternal justice involvement reported more parental monitoring, the level of monitoring mattered more for youth without maternal justice involvement who exhibited decreased delinquency in the presence of high parental monitoring compared to low monitoring. The differential pattern of association between parental monitoring and youth delinquency for dual-system involved families suggests they are distinct and may carry implications for treatment response aimed at delinquency reduction through parent training. These findings underscore the importance of interagency coordination around policy and interventions to identify these high risk families at risk of slipping through the cracks of multiple service involvement.

### 1. Introduction

The prison population in the United States is the largest in the world and continues to grow at the highest rate compared to other countries (Walmsley, 2013). Reforms in US criminal justice policies in the 1980s and 1990s, including mandatory sentencing laws, have increased the number of people coming into contact with the criminal justice system and lengthened prison sentences (Phillips, Dettlaff, & Baldwin, 2010). Approximately one in thirty-two adults in the United States is under some form of correctional supervision, including parole (Glaze, 2010). This expansion of the criminal justice system has been associated with unintended consequences for youth and families (Travis & Waul, 2003). The most recent survey on parental incarceration among state and federal inmates found that 809,800 had minor children, an increase of 79% between 1991 and 2007 (Glaze & Maruschak, 2008). It is estimated that 2.3% of American youth have been affected by the

incarceration of a parent (Glaze & Maruschak, 2008). The growing trend of parental involvement within the criminal justice system poses a serious public problem, especially given evidence of intergenerational transmission of crime and incarceration (Dallaire, 2007; Huebner & Gustafson, 2007; Murray & Farrington, 2005).

A link between parental incarceration and antisocial and delinquent behavior in youth is well established in the literature (Giordano, 2010; Swisher & Roettger, 2011). When interpreting and comparing the results of these studies it is important to note that there are differences in the operationalization and use of these key terms. The term parental incarceration can range across the spectrum of criminal justice involvement from the detainment by law enforcement authorities in a local jail to the serving of extended sentences in state or federal penitentiaries. The use of antisocial, delinquent, or deviant behaviors generally refers to problem externalizing behaviors that violate established social norms or laws (e.g., persistent lying, criminal behavior) (Murray,

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Farrington, & Sekol, 2012; Rutter, Giller, & Hagell, 1998). The choice of term, operationalization, and measurement varies across studies but nonetheless captures the underlying construct of social norm violation. For the sake of clarity, the term delinquency will be used in this article. A meta-analysis of 40 studies including nearly 45,000 youth found direct effects of parental incarceration on youth delinquency behaviors and no significant influence on other mental health problems, substance abuse, or academic outcomes (Murray et al., 2012). The effect on behavioral problems remained despite the inclusion of key covariates, which confirmed prior research that showed a unique influence of parental incarceration and arrest (Huebner & Gustafson, 2007; Murray & Farrington, 2005). The unique relation between parental incarceration and delinquency in adulthood also emerged in a longitudinal study of mothers and their children in the US (Huebner & Gustafson, 2007). Using prospective assessments of justice involvement in a representative sample, incarcerated mothers were identified within a cohort of adolescents and young adults in 1979 and followed over 15 years, and the children's justice involvement in adulthood was assessed 21 years after the baseline assessment. Adult children of incarcerated mothers were significantly more likely to have been convicted of a crime or been on probation than the adult children of mothers who were not incarcerated. Results showed maternal absence increased the chance of conviction by 75% and that males were 3.5 times more likely to have been convicted of a crime or served time on probation.

A number of theories on the relation between parental incarceration and youth delinquency exist. Some have emphasized the direct experience of parental incarceration, such as attachment disruptions, family strain related to lost income and time spent caregiving, and the modeling of delinquent behaviors (Murray, Bijleveld, Farrington, & Loeber, 2014). Other theories focused on parental incarceration as an indicator of risk that existed prior to the event of incarceration, including shared genetic risk for delinquent behaviors, limited capacity for quality parenting, and shared exposure of neighborhood conditions that promote delinquent behavior (Arditti, 2005; Murray & Farrington, 2005). Cumulative risks models have suggested adversity experienced across multiple developmental domains overwhelms individual and environmental capacities for healthy adaptation (Rutter, 1987; Sameroff, Bartko, Baldwin, Baldwin, & Seifer, 1998). Many factors that co-occur with parental incarceration, including poverty, family disruptions, caregiver mental health, and substance abuse, are also associated with youth delinquency (Phillips et al., 2010; Seymour, 1998); thus, elevated delinquency may reflect the accumulation of these life stressors rather than parental incarceration, per se.

Although few empirical studies have compared theories, one longitudinal study of boys (Murray & Farrington, 2005) living in a working class neighborhood of London examined whether the effects of parental incarceration were explained by the associated parent-child separation. Boys whose parents were incarcerated at different times in childhood were compared to boys separated for other reasons and boys never separated from their parents. Parental incarceration predicted delinquent problems in adulthood beyond other separations and other individual-, parenting-, and family-risk factors; effects were similar whether the event occurred before birth or during childhood. Findings supported theories emphasizing the event of incarceration, as well as preexisting risks. More recent theoretical conceptualizations have adapted the ecological systems theory to explain direct and indirect effects of parental incarceration on delinquency (Arditti, 2005; Murray et al., 2012; Murray et al., 2014). Ecological factors prior to parental incarceration have been theorized to combine with the event to determine propensity for maladaptive behavioral outcomes. Models have emphasized the presence of risks and supports occurring across bidirectional, interdependent developmental contexts in determining behavioral adaptation (Arditti, 2012; Bronfenbrenner, 1977). The proximal influence of family relationships suggests parental functioning plays a critical role in youth maladjustment (Arditti, 2005). In a meta-analysis

of 161 published and unpublished manuscripts, negative aspects of parenting (e.g., neglect, hostility, and rejection) and poor supervision (low levels of active parental monitoring, parental knowledge, and child disclosure) were strongly linked to delinquency (Hoeve et al., 2009). This is in accordance with the results of a previous meta-analysis which found parental rejection and poor supervision as being among the best predictors of delinquency (Loeber & Stouthamer-Loeber, 1986). Conversely, positive parenting behaviors (i.e., nonviolent alternatives to corporal punishment such as active parental monitoring, explanation, and consistent discipline) have been associated with lower levels of delinquency (Forehand, Miller, Dutra, & Chance, 1997; Griffin, Botvin, Scheier, Diaz, & Miller, 2000; Simons, Chao, Conger, & Elder, 2001). For example, in a study examining a sample of families referred to treatment for antisocial boys, Forgatch (1988; as cited in Patterson, DeBaryshe, & Ramsey, 1989) found that changes in parental discipline and monitoring significantly reduced delinquency in the boys compared to families who did not change these parenting dimensions.

Research on incarceration and parenting has focused on parenting disruptions as a risk factor related to delinquency. Parents with criminal histories have exhibited lower levels of effective parenting and higher rates of child maltreatment and neglect (Kjellstrand & Eddy, 2011; Phillips et al., 2010; Seymour, 1998). One-third of the families investigated for child maltreatment have had a primary caregiver arrested at least once (Phillips & Dettlaff, 2007), and one in eight had been arrested in the past 12 months (Phillips, Burns, Wagner, & Barth, 2004). Extensive literature has demonstrated associations among youth behavioral problems, ineffective parenting, and child welfare involvement (Burns et al., 2004; Dishion & McMahon, 1998; Hoeve et al., 2009; Patterson et al., 1989). Additionally, research has demonstrated that maltreated youth have been shown to be at increased risk of adverse outcomes, including internalizing and externalizing symptoms in adolescence and alcoholism and depression in adulthood (Anda et al., 2002; Moylan et al., 2010). However, less is known about the association between parental incarceration and parenting among child welfare-involved families (Lee, Fang, & Luo, 2013).

A policy relevant question remains whether youth delinquency associated with parental incarceration functions through deficits in parenting or accumulation of other multilevel risks. Significant overlap between families involved in the criminal justice and child welfare systems suggests potential for intervention. Families in contact with the child welfare system might benefit from tailored screening and intervention. The presence of evidence-based policy and interventions to promote positive parenting practices emphasizes the importance of the question. However, empirical investigation needs to probe the nature of the relationship.

The present study takes advantage of longitudinal data available on a nationally representative sample of families investigated for child abuse and neglect. The data provide an opportunity to examine the extent to which caregivers in the child welfare system report previous justice involvement, as well as change in youth delinquency over time. Using ecological systems theory, models investigate whether maternal justice involvement represents a unique threat for delinquent behavior in the context of accumulated risk at multiple levels and developmental domains. Maternal justice involvement included families with a history of maternal arrest rather than incarceration because they represent a larger at-risk group compared to the small subset of families having had mothers in prison. Empirical evidence has consistently demonstrated that parental arrest is associated with increased exposure to risk factors compared to youth in the general and high risk populations, including parental substance abuse, parental mental health problems, and domestic violence (Dannerbeck, 2005; Farrington, Jolliffe, Loeber, Stouthamer-Loeber, & Kalb, 2001; Murray & Farrington, 2005; Phillips et al., 2004; Phillips, Burns, Wagner, Kramer, & Robbins, 2002; Phillips, Erkanli, Keeler, Costello, & Angold, 2006). Additionally, the role of parenting is investigated; ecological theory suggests positive parenting could buffer the effects of maternal justice involvement, however, this

has yet to be tested.

The first hypothesis predicted that parental incarceration during childhood would relate to greater youth-reported delinquency 18 months following the baseline interview, controlling for multilevel risk and protective factors. The second hypothesis predicted that higher levels of effective parenting practices (parental monitoring and non-violent discipline) would mitigate the effect of maternal justice involvement on youth delinquency. The national study provides extensive assessment on parenting practices, caregiver functioning, and community characteristics and allows modeling of multilevel risk and protective factors. In addition, adolescents report delinquent behaviors at two times 18-months apart, which adds clarification to the temporal precedence of behavior and parenting problems.

## 2. Method

### 2.1. Participants

The present study drew data from the second cohort of the National Survey of Child and Adolescent Well-Being (NSCAW II), a nationally representative longitudinal study of 5873 youth who were the subject of maltreatment investigations closed between February 2008 and April 2009 followed over 18 months (Dowd et al., 2010). A stratified sample randomly selected one child aged 0 to 17.5 years at time of investigation. The current study included youth nearing or in adolescence (e.g., 11 to 17.5 years) at baseline assessment. The sample was further restricted by only including intact families with mothers as the primary caregivers. Families whose youth were removed from the home at initial investigation were excluded as data were not collected from their biological caregivers. The focus of this study was limited to maternal justice involvement to limit potential confounds of gendered responses to parent justice involvement; specifically, research suggested that families reorientate differently in response to maternal versus paternal arrest, which may confound the relationship between parenting and delinquency in these analyses (Murray & Farrington, 2008).

The current study included 554 youth and mothers at baseline. Note the descriptive information of the participants that follows was derived from weight-adjusted data to represent the population from which the sample was drawn. The ethnic composition of youth was 17% African-American, 46% European-American, 29% Hispanic, and 8% who identified as “other.” The majority of youth were male (62%) with mean age of 13.5 years ( $SD = 1.8$ ). Most families were investigated for physical abuse (27%), neglect (27%), sexual abuse (11%) or emotional abuse (35%). The majority of families (70%) reported receiving some kind of child welfare service, such as case management, counseling, day care, and housing services among many others, whereas remaining child protective investigations were closed immediately and services deemed unnecessary. Mothers were 37.7 years on average, 38% reported being married, and most had obtained at least a high school diploma (70%). About half of the mothers reported being unemployed or not working (49%).

### 2.2. Measures

#### 2.2.1. Delinquency

Youth self-reported on their delinquency at the baseline and follow-up assessments. The Self-Report of Delinquency (SRD; Elliott & Ageton, 1980) is a 72-item measure assessing participation in and frequency of delinquent acts. Frequency of delinquent acts was captured through Likert-type responses (1 = *once* to 5 = *5 or more times*), while dichotomous responses (*yes, no*) assessed which specific delinquent acts were committed. Sample items included, “In the past 6 months, have you run away from home?” and “How many times in the past 6 months have you run away from home?” Nine types of delinquent behavior are captured, including felony assault, felony theft, robbery, fraud. Minor theft, illegal services, property damage, public disorder, and status

offenses. The current study used a total delinquency sum score that captured the number of delinquent acts committed in the past six months; higher scores indicated participation in more delinquent acts. Scores on this scale range from 0 to 36. This measure has adequate test-retest reliability and internal consistency (Dunford and Elliott (1984) in addition to adequate psychometric properties and validity within the NSCAW sample ( $\alpha = 0.98$ ; Dowd et al., 2004).

#### 2.2.2. Maternal justice involvement

Mothers reported on their involvement with the criminal justice system at baseline and at the 18 month follow-up, including the number of arrests, date of arrests, whether the arrest resulted in a conviction, probation placement, periods of incarceration, and duration of incarceration. A dichotomous variable was created to capture whether mothers reported *any* arrests prior to baseline that occurred during the youth's lifetime. Several studies have used a binary variable to distinguish youth with parental justice involvement from others in a comparison group (e.g., Geller, Garfinkel, Cooper, & Mincy, 2009; Huebner & Gustafson, 2007; Phillips et al., 2002).

#### 2.2.3. Nonviolent discipline

The Parent-Child Conflict Tactics scale assessed parental discipline within the past 12 months per mother report (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998). The current study used the Nonviolent Discipline subscale that measured the use of four disciplinary practices commonly used as alternatives to corporal punishment (explanation, time out, deprivation of privilege, and substitute activity). The measure uses an 8-point Likert-type scale (*1 time, 2 times, 3 to 5 times, 6 to 10 times, 11 to 20 times, > 20 times, not in the past 12 months, never*) to measure the total frequency of parental acts of non-violent discipline as reported by youth. Used extensively in prior research of at-risk adolescents, this measure has demonstrated marginal internal consistency with Cronbach's alpha ranging from 0.55 for the Physical Assault subscale to 0.70 for the Nonviolent Discipline subscale (Straus et al., 1998). Construct validity has been moderate, with a correlation of  $-0.33$  between the parent age and the Corporal Punishment scale and  $-0.12$  between parent age and the Severe Assault scale (Straus et al., 1998). Internal consistency is good in the NSCAW I sample, with Cronbach's alpha on the Total score on the caregiver report 0.97 and Nonviolent Discipline 0.97 (Dowd et al., 2004).

#### 2.2.4. Parental monitoring

The Parental Monitoring Scale was adapted by the Fast Track Committee from the original measure created by Loeber, Farrington, Stouthamer-Loeber, and Van Kammen (1998) that examines family factors associated with delinquency. The adapted 18-item youth-reported scale assessed parenting supervision and involvement. Per Fast Track scaling, six items were excluded due to the response format requiring a time of day or having categorical coding and another item was removed due to a high level (55.9%) of missingness. The remaining 11 items had Likert-type responses (*never, almost never, once in a while, pretty often, very often*), with example items including, “How often do you leave the house without telling your caregiver or without leaving a note?” and “How often does your caregiver know where you are when you are away from home?” A total sum score was computed, with higher scores reflecting closer supervision. Scaling of the 11 items was based on previously derived constructs of the original measure (Loeber et al., 1998). The results of a confirmatory factor analysis found support for the supervision dimension that the 11 items assess.

#### 2.2.5. Youth demographics

Youth demographic information was collected during the baseline interview. Gender is a dichotomous variable (male/female), derived from five source variables reporting gender when discrepancies existed. The hierarchy was as follows: the majority from the parent, caseworker, and youth-reported gender; the majority of all responses on the five

source variables; if gender still could not be determined, parent report of the youth's gender at baseline was used. Youth age was also given. Youth, mothers and caseworkers were asked for the youth's date of birth to calculate age. When age discrepancies existed, age was determined by the following reporting hierarchy: youth, caseworker, mother. The ethnicity variable of each youth was measured at baseline as a four-option categorical variable (Black/Non-Hispanic, White/Non-Hispanic, Hispanic, Other) and derived from reports given by caseworkers and parents. A series of dichotomous variables compared each race category with youth from all other categories.

### 2.2.6. Abuse type

At baseline, caseworkers were asked to select the most serious type of abuse or neglect they believed the youth experienced. If this item was missing, the most serious type of abuse was derived from an item that documented all the suspected types of maltreatment only if there was one type selected; otherwise, the most serious type of abuse was coded as missing. The categories were then condensed to indicate physical abuse, sexual abuse, emotional abuse (including emotional maltreatment, moral/legal maltreatment, educational maltreatment, exploitation, and other), and neglect (including failure to provide, no supervision, and abandonment).

### 2.2.7. Child welfare services

A dichotomous variable differentiated the youth and their families who received services paid for by Child Welfare agencies during baseline from those who did not. Such services included but were not limited to case management, counseling, day care, education, training, employment, family preservation/reunification. Families who received at least one type of service at the time the data files were compiled were classified as having received services, regardless of whether their case was substantiated.

### 2.2.8. Maternal demographics

Mothers self-reported sociodemographic information including age in years, employment status, marital status, and level of education at baseline. Employment status was assigned to one of five categories: full-time, part-time, unemployed, do not work, and other. From this source variable, a dichotomous *unemployment* variable was created that compared unemployment and do not work to all other categories. Marital status was assigned to one of five categories: married, divorced, widowed, separated, and single. A dichotomous *marital status* variable was created that compared married to all other categories. A dichotomous *caregiver education* variable was created that compared high school graduates and beyond to all others groups.

### 2.2.9. Maternal substance abuse

Mothers self-reported their substance use within the past 12 months. The Drug Abuse Screening Test (DAST-20; Skinner, 1982) is a 20-item instrument that provides a brief but valid assessment of psychoactive drug abuse. A total sum score reflected the degree of problematic drug use, with higher scores indicating increased severity of problems. The item response format was dichotomous (*yes, no*), with items including, "Do you abuse more than one drug at a time" and "Are you always able to stop using drugs when you want to?" High internal consistency and validity has been demonstrated across various populations (Cocco & Carey, 1998).

### 2.2.10. Neighborhood problems

Mothers were asked about their neighborhood at baseline. Nine items were asked on the abridged community-environment measure developed for the Philadelphia Family Management Study (Furstenberg, 1990). The first five items ask how much of a problem certain occurrences are within the neighborhood. These questions are rated on a 3-point Likert scale (*not a problem at all, somewhat of a problem, or a big problem in your neighborhood*). The final four items ask the

respondents to compare their neighborhood to others on safety, neighbor support, parent involvement, and whether or not it is a better or worse place to live. The mean of the nine community items measured the overall neighborhood environment, with higher scores indicating worse neighborhoods. Sufficient reliability has been reported for this measure in NSCAW ( $\alpha = 0.86$ ; Hazen, Connelly, Kelleher, Barth, & Landsverk, 2006).

### 2.2.11. Change in out-of-home placement status

Although the entire sample of youth was living with their mothers at baseline, some youth were removed from their homes by the follow-up assessment. A dichotomous variable was created to identify the youth who were living in an out-of-home setting.

## 2.3. Procedure

NSCAW II employed a two-stage stratified cluster sampling procedure to ensure a representative estimate of the child welfare population. The sample contained nine strata composed of 81 primary sampling units throughout the country. Eight strata comprise the eight states with the highest number of Child Protective Services (CPS) cases, with each state representing one stratum. The ninth stratum contained the remaining states. Primary sampling units (PSU), which represented the population in a geographic area served by a single CPS agency, were formed within each stratum. PSUs were assigned a selection probability and randomly selected. One child from each family was randomly selected as the study target. Data for the NSCAW II study were gathered through first-hand youth and caregiver interviews comprised of several questionnaires assessing caregiver and youth mental and physical health, emotional and behavioral problems, social support, household composition, demographic information, and criminal history. Trained field representatives conducted structured interviews with youth and caregivers via laptop computers, usually in families' homes. Mothers provided written consent for surveyed children, and youth aged 11 years and older gave written assent. Data quality was assured through extensive training and supervision. The current analyses used data collected at baseline and at the 18-month follow-up.

## 2.4. Analytic approach

A series of multiple regression analyses examined the direct and interactive effects of maternal justice involvement on youth delinquency over time while controlling for sociodemographic and contextual risk and protective factors. Iterative models regressed delinquency scores at 18 months on maternal justice involvement plus an increasingly comprehensive set of covariates. This approach allowed empirical examination of important contextual contributors to delinquency, as well as accounted for processes that lead to maternal justice involvement. Covariates were added to models based on proximity of influence on selection and behavioral outcomes. Delinquency at baseline assessment and maternal justice involvement were entered first (Model 1), followed by other caregiver characteristics (caregiver age, marital status, education, employment status, and level of substance abuse; Model 2). Then, Model 3 included youth characteristics (age, ethnicity, type of youth maltreatment, child welfare services received at baseline), and Model 4 added family and neighborhood functioning at baseline (parental monitoring, nonviolent discipline, and neighborhood quality). Model 5 included changes in maternal justice involvement status or out-of-home placement status (arrest between interviews and placement into foster care between interviews). Continuous covariates (baseline delinquency, parental monitoring, nonviolent discipline, and neighborhood problems) were grand-mean centered to improve interpretability and were used to create interaction terms with the maternal justice involvement history. A final model used to test hypothesized moderating effects of maternal justice involvement included covariates identified to predict delinquency in prior model

**Table 1**  
Summary of intercorrelations, means, and standard deviations for study variables.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
1. MJJ	1																					
2. Del1	0.03	1																				
3. Del2	0.07	0.46**	1																			
4. PMon	0.12**	-.11*	-0.04	1																		
5. NVDisc	0.01	0.27**	0.22**	0.00	1																	
6. MoAge	-0.06	-0.06	0.03	-0.05	-0.04	1																
7. MoMar	-0.12**	0.03	0.02	-0.11*	-0.00	0.02	1															
8. MoHS	0.01	0.06	0.01	0.02	0.07	0.15**	0.07	1														
9. MoUne	0.04	-0.08	-0.02	0.03	0.01	0.04	-0.00	-0.05	1													
10. MoSU	-0.00	0.08	0.11*	0.09*	0.06	0.04	0.05	0.01	0.07	1												
11. ChdAg	0.07	0.17**	0.09*	-0.05	0.04	0.31**	0.07	-0.06	0.08*	0.08	1											
12. ChdGe	-0.01	-0.02	-0.07	0.09*	-0.07	0.08	-0.10*	-0.07	0.02	0.03	-0.02	1										
13. ChdB	0.12**	-0.00	0.05	0.17**	-0.07	-0.07	-0.22**	0.08	-0.00	0.00	-0.07	0.06	1									
14. ChdH	-0.15**	0.06	-0.04	-0.07	0.04	-0.16**	0.04	-0.30**	-0.12**	-0.09*	-0.09*	-0.07	-0.29**	1								
15. ChdO	0.02	0.02	0.08	-0.09*	0.02	0.16**	0.05	0.14**	0.09*	0.12**	0.04	-0.01	-0.14**	-0.19**	1							
16. Phy	-0.02	-0.03	-0.02	-0.14**	0.01	0.03	0.07	0.06	-0.06	-0.06	-0.05	0.01	0.07	-0.08	0.09*	1						
17. Sex	-0.03	0.06	0.01	0.09	0.01	-0.01	0.02	0.04	-0.08	0.02	-0.02	-0.06	-0.04	-0.04	-0.05	-0.21**	1					
18. Neg	0.02	-0.08	0.00	-0.01	-0.04	-0.02	-0.14**	-0.02	0.08	0.07	-0.01	0.05	0.09*	0.00	-0.01	-0.36**	-0.21**	1				
19. Serv	-0.02	-0.04	0.05	0.05	-0.07	-0.05	0.13**	-0.03	-0.00	-0.10*	-0.02	-0.10*	0.10*	-0.10*	-0.02	0.10*	0.14**	-0.05	1			
20. Neigh	-0.02	-0.06	0.10*	-0.03	0.06	-0.06	-0.02	-0.09*	0.12**	-0.07	0.03	-0.10*	0.04	0.13**	0.04	0.14**	-0.06	-0.03	0.03	1		
21. ArBW	0.12*	0.13**	0.12	0.04	0.15**	-0.05	-0.02	0.10*	0.01	0.12*	-0.07	-0.06	0.09	-0.04	0.01	-0.03	-0.05	0.03	0.12*	-0.10*	1	
22. OOH	0.11*	-0.03	-0.01	-0.04	-0.04	0.07	-0.10*	0.02	-0.00	0.03	0.04	-0.02	-0.02	-0.05	-0.01	-0.05	-0.03	0.04	-0.14**	0.02	-0.07	1
Mean	(23)	1.18	0.99	40.61	12.20	37.67	(38)	(70)	(49)	-0.34	13.47	(38)	(17)	(29)	(8)	(27)	(11)	(27)	(69)	14.36	(12)	(7)
SD				7.70	16.28	5.95				4.31	1.83											

Note. Means and standard deviations for the variables are presented in the horizontal rows; parentheses indicate percentages. Standard deviations are not included for count variables. MJJ = maternal justice involvement; Del1 = youth-reported delinquency wave 1; Del2 = youth-reported delinquency wave 2; PMon = parental monitoring; NVDisc = nonviolent discipline; MoAge = mother age; MoMar = mother marital status; MoHS = mother education; MoUne = mother unemployment; MoSU = mother substance use; ChdAg = child age; ChdB = African American; ChdO = ethnic Other category; Phy = physical abuse; Neg = neglect; Serv = services received; Neigh = neighborhood problems; ArBW = arrested between waves; OOH = out-of-home status.

\* p < .05.

\*\* p < .01.

iterations. This included interactive terms (i.e., parental monitoring and nonviolent discipline) and their main effects; variables that predicted maternal justice involvement; and other covariates that significantly predicted delinquency in any prior model.

The statistical package MPlus version 6 (Muthén & Muthén, 2011) was used to analyze the models. The complex survey function was employed to accommodate the features of the NSCAW sampling design including unequal selection probabilities into the sample as well as missing data at the 18 month follow-up (Dowd et al., 2010). Because the outcome variable was a count type, the data were modeled using a negative binomial distribution (Muthén & Muthén, 2011).

### 3. Results

#### 3.1. Descriptive statistics and study variable intercorrelations

Means, standard deviations, and zero-order correlations between all study variables are presented in Table 1. Of the 554 families in the sample, 151 had a history of maternal justice involvement with an average of 2.9 arrests (SD = 3.0). Maternal justice involvement was not significantly associated with youth reported levels of delinquency at either baseline or the 18-month follow-up. Parental monitoring had a negative association with baseline and follow-up levels of delinquency, however only the former was significant. There was a small but significant and positive association between parental monitoring and maternal justice involvement; youth with maternal justice involvement reported higher levels of parental monitoring. More nonviolent discipline related with more delinquency at both baseline and follow-up. Other potentially confounding variables that were significantly associated with delinquency were maternal justice involvement between waves, caregiver substance use, youth age, and neighborhood problems score.

As presented in Table 2, families with a history of maternal justice involvement were more likely to be single-parented households, have African American youth, and have higher levels of youth-reported parental monitoring. A series of logistic regression models compared demographic and contextual characteristics of families with and without a history of maternal justice involvement at baseline to investigate important differences.

#### 3.2. Predictors of youth delinquency: regression models

The parameter estimates of the six models predicting change in youth delinquency were presented as unstandardized beta coefficients (b) with their standard errors and significance tests in Table 3. Higher baseline levels of delinquency predicted subsequent problems at 18 months across all models. Maternal justice involvement did not significantly predict change in youth delinquency in Model 1. This indicated the average wave 2 delinquency scores of youth with mothers having an arrest history were similar to the youth whose mothers did not have an arrest history after controlling for prior levels of delinquency.

In Model 2 that added maternal characteristics, maternal substance use had a positive significant association with change in youth delinquency. Mothers who had higher levels of substance use were more likely to have youth exhibiting elevations in delinquency scores. In the third model that added youth characteristics, older youth and youth who identified as “Other” (compared to whites) exhibited significant increases in delinquency at the 18-month follow-up. After the addition of the youth level variables, maternal substance use was no longer significant, whereas maternal unemployment reached significance. Adolescents with unemployed mothers at baseline exhibited decreases in delinquency 18 months later controlling for other variables. Youth age dropped from significance after the addition of family level variables in Model 4, while maternal unemployment at baseline and youth other race continued to be significant. A similar pattern of effects

**Table 2**  
Comparison of baseline characteristics among child welfare-involved families with and without maternal justice histories.

	Maternal justice involvement		Referent category	odds ratio
	Yes (n = 154)	No (n = 400)		
<b>Maternal demographics</b>				
Age	36.58 (5.89)	37.47 (5.84)		0.98
Substance abuse	0.92 (2.21)	0.76 (1.51)		1.00
Unemployment %	53.2	49.0	Employed	1.13
Marital status %	26.6	37.3	Unmarried	0.71*
High school grad %	77.9	73.4		1.01
<b>Child demographics</b>				
W1 delinquency	4.14 (7.21)	3.44 (8.27)		1.01
Child age	13.70 (1.82)	14.44 (1.84)		1.06
Child gender %	41.6	41.8	Female	0.99
Child Hispanic %	16.2	27.3	White	0.59*
Child AA %	27.9	20.3	White	1.51*
Child other %	13.0	8.8	White	1.09
Physical abuse %	18.8	22.8	Other abuse	0.99
Sexual abuse %	7.8	11.8	Other abuse	1.06
Neglect %	24.7	19.8	Other abuse	1.12
Welfare services %	59.7	46.5	None received	0.94
<b>Family characteristics</b>				
Monitoring	41.49 (7.80)	40.72 (7.84)		1.02*
NV discipline	13.42 (17.04)	12.68 (16.14)		1.00
Neighborhood	14.12 (4.55)	14.09 (4.47)		1.01
OOH W2%	12.0	6.2	In home	1.66

Note. Child AA = African American; Child Other = ethnic Other category; OOH W2 = out-of-home at wave 2. \*p < .05, \*\*p < .01.

emerged in Model 5, which included the between wave variables of subsequent maternal justice involvement and youth out-of-home placement.

Based on the results of Models 1 through 5, a final model was selected to test hypotheses regarding moderation effects. Model 6 in Table 3 presents the results of the moderation model. A significant interactive effect was found between maternal justice involvement and parental monitoring (see Fig. 1). As expected, low parental monitoring was associated with more delinquency than high parental monitoring but only for the comparison group. For the maternal justice-involved group, low parental monitoring was associated with less delinquency than high parental monitoring. At high levels of parental monitoring, the differences in delinquency between the two groups diminished. The interaction between nonviolent discipline and maternal justice involvement was not significant, indicating nonviolent discipline did not attenuate the relationship between maternal justice involvement and youth delinquency. The main effect of maternal justice involvement was significant and negative in the presence of the interaction terms, indicating that delinquency decreased more among the maternal justice-involved youth at average levels of nonviolent discipline and parental monitoring.

### 4. Discussion

The present study investigates the relations between maternal justice involvement and changes in youth delinquency among families involved in the child welfare system. Results suggest youth with maternal justice involvement exhibit similar levels of delinquency over time compared to other adolescents who were the subject of child protective services investigations. Although maternal justice youth report more parental monitoring, the level of monitoring mattered most for the non-maternal justice youth with regard to delinquency.

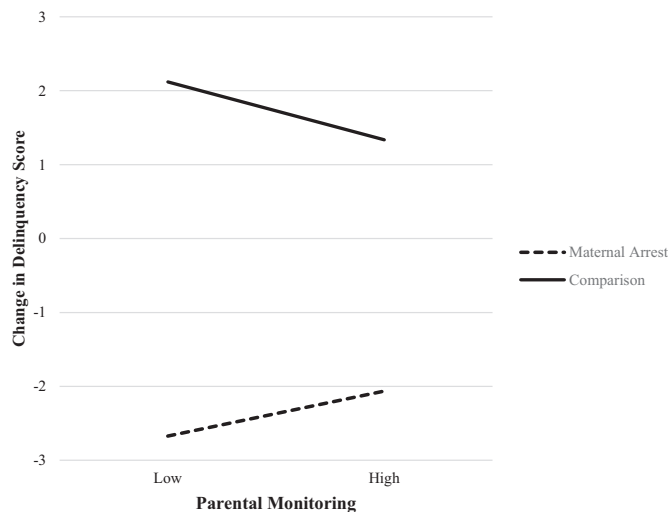
**Table 3**  
Multiple regression models predicting youth delinquency.

Predictor	Model 1 b (SE)	Model 2 b (SE)	Model 3 b (SE)	Model 4 b (SE)	Model 5 b (SE)	Model 6 b (SE)
Maternal justice involvement	0.40 (0.52)	0.64 (0.52)	0.02 (0.31)	0.13 (0.32)	0.20 (0.34)	-4.06 (1.44)**
Delinquency wave 1	0.09 (0.02)**	0.10 (0.02)**	0.10 (0.02)**	0.10 (0.02)**	0.10 (0.02)**	0.10 (0.02)**
Mother unemployment		-0.52 (0.29)	-0.85 (0.30)**	-0.91 (0.32)**	-0.87 (0.34)*	-0.90 (0.27)**
Mother age		-0.02 (0.03)	-0.01 (0.03)	-0.02 (0.30)	-0.02 (0.03)	
Mother substance use		0.18 (0.09)*	0.16 (0.09)	0.16 (0.92)	0.03 (0.10)	
Mother marital status		0.03 (0.30)	0.15 (0.25)	0.10 (0.26)	0.15 (0.28)	
Mother high school grad		-0.02 (0.31)	-0.30 (0.34)	-0.29 (0.36)	-0.11 (0.39)	
Child age			0.17 (0.07)*	0.12 (0.07)	0.12 (0.09)	
Child gender			0.10 (0.36)	0.20 (0.36)	0.26 (0.39)	
Child ethnicity						
Hispanic			0.28 (0.39)	0.19 (0.39)	0.18 (0.43)	-0.01 (0.38)
AA			0.02 (0.32)	-0.08 (0.31)	-0.09 (0.34)	0.36 (0.32)
Other			0.95 (0.36)**	0.90 (0.35)*	1.06 (0.37)**	0.83 (0.27)**
Abuse type						
Physical abuse			0.28 (0.29)	0.12 (0.32)	0.35 (0.36)	
Sexual abuse			-0.19 (0.34)	-0.31 (0.34)	-0.15 (0.35)	
Neglect			0.09 (0.27)	-0.05 (0.30)	0.23 (0.35)	
CW services			-0.02 (0.24)	0.03 (0.24)	-0.04 (0.27)	
Monitoring				-0.02 (0.02)	-0.01 (0.02)	-0.05 (0.03)*
NV discipline				0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Neighborhood				0.04 (0.03)	0.06 (0.04)	
Maternal justice involvement b/w waves					0.38 (0.41)	
Out of home wave 2					-0.60 (0.43)	
Maternal justice involvement × monitor						0.09 (0.04)*
Maternal justice involvement × NV Disc						0.06 (0.03)

Note. Each model included additional covariates; Model 6 represented the final model. Child AA = African American; Child Other = ethnic other category; CW Services = services received through child welfare at baseline; NV = Nonviolent discipline; OOH W2 = out-of-home at wave 2.

\*\* p < .01.

\* p < .05.



**Fig. 1.** Parental monitoring and youth delinquency. Low parental monitoring had a more detrimental effect on the youth without maternal justice involvement history. At high levels of parental monitoring, the differences in delinquency change between the two groups diminished.

Nonviolent discipline did not have an impact on delinquency for either group.

The study findings show support for the cumulative risk model, which posits the type of risk is not as important as the number of risks in predicting youth maladjustment (Rutter, 1987; Sameroff et al., 1998). Most youth in the child welfare system are contending with multiple forms of adversity, so it would be expected that they exhibit elevated delinquency. Indeed, many studies have observed a link between child maltreatment and youth delinquency (Currie & Tekin, 2012; Harlow, 1999; Smith & Thornberry, 1995; Wiebush, Freitag, & Baird, 2001). In our study, the group without maternal justice

involvement demonstrates many indicators of risk similar to the maternal justice group, which may account for the lack of main effect within this sample. In a lower risk sample, however, maternal justice involvement may have the profound impact on delinquency that has been observed in other studies.

The results of our study failed to support our hypothesis that positive parenting behaviors would buffer the negative effects associated with maternal justice involvement. Higher parental monitoring does not appear to be a deterrent to delinquency in the maternal justice-involved group, and higher levels of nonviolent discipline do not impact delinquency for either group. These findings are inconsistent with the parenting literature that parenting behaviors, including monitoring and nonviolent discipline correlate with less youth delinquency (Dishion & McMahon, 1998; Wilson, 1980). Furthermore, the findings that the maternal justice-involved group had higher parental monitoring scores than the comparison group appears counterintuitive. However, it may be possible that the mothers with a history of justice involvement were attempting to prevent their children from engaging in delinquent activities that could result in criminal justice system.

The research examining the intersection between parenting practices and culture may provide additional insights into our unexpected findings. Parenting has differential effects on youth behavior depending on cultural context (Baumrind, 1972; Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Iyengar & Lepper, 1999). Within this framework, the impact of parent practice is due in large part to youth interpretation of what the parenting behavior symbolizes, which is shaped by cultural values and norms (Feldman & Masalha, 2007). Attempts to control and regulate behavior may be discounted by youth who have knowledge of previous or current parental criminal involvement. Alternatively, positive parenting techniques may lose their effectiveness within the context of harsh parenting practices or inconsistent discipline. Research has consistently linked parental justice involvement and ineffective parenting (Kjellstrand & Eddy, 2011; Phillips et al., 2010). It is likely that the presence of parental monitoring and nonviolent discipline makes little difference if other ineffective

parenting strategies are also being employed. Another possibility may be that the parenting measures used in this study were not broad enough to adequately capture the constructs.

This study aims to elucidate the findings of previous research on parental justice involvement and youth delinquency using an ecological framework, while focusing on an at-risk group vulnerable to parental justice involvement. Key strengths include: the complex sampling design, which enables the findings to be generalized to families with dual justice and child welfare involvement across the United States; longitudinal data allow examination of delinquency over time; models account for both proximal and distal factors that contribute to correlations between maternal justice involvement and youth delinquency; examination of potential protective factors. Nonetheless, findings should be interpreted in light of the study limitations. Despite the longitudinal design of the study, causal inferences cannot be made due to the inability to determine level of risk prior to maternal justice involvement. Sampling characteristics limit generalizability of study findings to families with both criminal justice and child welfare involvement. It bears mentioning that given the disproportionate representation of African Americans in the criminal justice system, they appear to be underrepresented in the sample, which may impact study findings. Another limitation of our study is that it does not account for the broad range of criminal justice involvement represented by these families in terms of frequency and current point of contact, both of which likely contribute to differential youth outcomes. However, research has shown youth with parental arrest encounter a greater volume of risks compared to the general population and other high-risk groups (Kinner, Alati, Najman, & Williams, 2007; Murray & Farrington, 2005; Phillips et al., 2004), thus warranting further investigation. Data on the status of paternal justice involvement were unavailable, so families that were in the nonmaternal justice group may also be dual-system families, albeit paternal justice involvement tends to have less of an impact on family reorientation. Measures of maternal justice history and youth delinquency were self-report, which may subject to under-report.

Regarding dual-system families, parental monitoring does not appear to mitigate youth delinquency as expected. Future research should examine the impact of established parenting techniques in high-risk populations to inform the development of culturally-modified interventions. Special attention should be given to dual-system families who have shown a differential response to at least one dimension of parenting compared to the broader child welfare population. More research is also needed to determine whether these families differ from the broad child welfare population on other factors influencing youth outcomes. However, identification of these families remains a challenge; neither system routinely gathers information about involvement with the other. Developing a systematic infrastructure to allow for the routine exchange of information across agencies would facilitate the identification of families involved within both systems and provide a more accurate estimation of the prevalence of dual-system involved families.

The major study findings also provide practical implications for interventions and policy aimed at crime prevention. Results revealed that families in the child welfare system face a multitude of adversity that puts youth at risk of delinquency on par with youth who have maternal justice involvement. Thus, in addition to investigating allegations of maltreatment or neglect, child protective service agencies should also attempt to use this opportunity to provide interventions and additional resources to families in need. Although this is already done to some extent, the child welfare system may not be fully equipped to handle the intensive case management that more comprehensive assessments and supportive services would entail. Establishing connections with community agencies that provide supportive services, such as those that specialize in finding employment or substance abuse recovery groups, may ease some of the burden from the child welfare system.

## Declaration of interest

None.

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