Published in final edited form as:

J Res Adolesc. 2012 December 1; 22(4): 597–603. doi:10.1111/j.1532-7795.2012.00810.x.

Father's Incarceration and Youth Delinquency and Depression: Examining Differences by Race and Ethnicity

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Abstract

This paper examines associations between biological father's incarceration and internalizing and externalizing outcomes of depression and serious delinquency, across White, Black, and Hispanic subsamples of youth in the National Longitudinal Study of Adolescent Health. Among respondents whose father was first incarcerated during childhood or adolescence, father's incarceration is found to be associated with increased depression and delinquency. On the whole, results indicate that associations between father's incarceration and depression and delinquency do not vary by race and ethnicity or gender. One exception is among Hispanic respondents, for whom having a biological father incarcerated is associated with an even higher propensity of delinquency than among White and Black respondents with incarcerated fathers.

Risks of incarceration have significantly increased in the United States. Between 1970 and 2010, the incarceration rate increased from 110 per 100,000 to over 500 per 100,000, raising the number of persons incarcerated from 250,000 to 2.3 million (Sabol & West, 2010). This dramatic increase has disproportionately affected Black men, particularly those without a high school diploma (Pettit & Western, 2004; Western & Wildeman, 2009). Pettit and Western (2004) estimated that nearly 60 percent of low education Black men had been incarcerated by their early 30s, compared to just 11.2 percent of Whites. As parental incarceration has increased, so has attention to its collateral consequences for affected families, children, and communities (Clear, Rose, Waring, & Scully, 2003; Hagan & Dinovitzer, 1999). As with incarceration in general, risk of having an incarcerated father is concentrated among minority youth and those whose parents have not finished high school (Wildeman, 2009).

In a recent review, Murray and Farrington (2008a) concluded that parental incarceration is a “strong risk factor (and possible cause) for a range of adverse outcomes for children, including antisocial behavior, offending, mental health problems, drug abuse, school failure, and unemployment” (p. 135). In research based in the U.K., Murray and Farrington (2005) found parental incarceration to predict antisocial behavior at ages 14, 18, and 23, controlling for parental criminality, childhood risk factors (e.g., IQ), and parental separation. These results were partly replicated in Sweden, though associations became non-significant when controlling for parental criminality (Murray, Janson, & Farrington, 2007). Within the United States, Huebner and Gustafson (2007) found a strong association between maternal incarceration and children's future offenses as adults, controlling for individual, parent (i.e., maternal delinquency, age, smoking during pregnancy), and family characteristics. Using data from the Fragile Families study, Wildeman (2010) reports that young children in the U.S. whose fathers were incarcerated were more likely to engage in problem behavior.

Studies also find father's incarceration to predict internalizing outcomes such as neuroticism, depression, and anxiety (Murray & Farrington, 2008a). Using the Cambridge Study, Murray and Farrington (2008b) found parental separation due to incarceration to be positively associated with anxiety, depression and other mental health problems well into adulthood, controlling for childhood risk factors and parental criminality. Using the PSID, Johnson (2009) found father's incarceration to be associated with childhood internalizing and externalizing outcomes.

CURRENT STUDY

Less is known about associations between father's incarceration and internalizing and externalizing behavior within adolescence, particularly within a large, nationally representative sample of the U.S. Examining these associations within adolescence is important on several grounds. From a developmental perspective, adolescence represents challenges of increasing autonomy and identity formation, renegotiation of parent-child relationships, and an increasing role of peers, schools, and neighborhoods (Crosnoe & Johnson, 2011). Associations between parental incarceration and adolescent outcomes thus may work through experiences at school and within peer networks, and through processes such as negative labeling, stigma, and social exclusion (Foster & Hagan, 2007). Adolescence is also a period during which risk taking behavior escalates and in which social inequalities in psychological well-being begin to emerge (Crosnoe & Johnson, 2011).

Also not adequately examined are differences in the potential consequences of parental incarceration by race and ethnicity (Murray & Farrington, 2008a). In addition to being few in number, previous studies of race and ethnic differences have been mixed, with some reporting a stronger association (or “accentuated mark”) between incarceration and negative outcomes for Blacks (Pager, 2003), while others suggest a weaker relationship, perhaps due to the normativeness of incarceration within disadvantaged minority groups (Swisher & Waller, 2008). Other studies (Braman, 2004; Giordano 2010) suggest few differences across race and ethnicity, or that the consequences of incarceration are related to negative parental behavior and other adversities such as family instability, family poverty, poor parenting practices, and child abuse and neglect.

The present study examines associations between father's incarceration and adolescent depression and serious delinquency. By controlling for a wide range of socioeconomic, demographic, and individual characteristics associated with both risk of incarceration and the outcomes, it also seeks to better isolate the role of parental incarceration, relative to other risk factors that tend to co-exist among disadvantaged families (Giordano, 2010). Nevertheless, the possibility of unobserved heterogeneity remains. Finally, this study compares associations between paternal incarceration and these outcomes by race and ethnicity.

METHOD

Dataset

Data were taken from the in-home portion of the National Longitudinal Study of Adolescent Health (Add Health). The initial sample consisted of 20,748 respondents enrolled in grades 7–12 in 1995 (Wave I). Three follow-up interviews were conducted: one year later ($n = 14,738$ at Wave II), in 2001–2002 ($n = 15,197$ at Wave III), and in 2007–2008 ($n = 15,701$ at Wave IV). High school seniors at Wave I were not re-interviewed at Wave II, but were included at Waves III and IV. Overall response rates for the core sample at each wave were 78.9%, 88.2%, 75.6%, and 80.3%, respectively (Harris et al. 2009). Interviews were

conducted in-home, with responses to sensitive questions gathered using computer and Audio-CASI methods.

The analysis included all White, Black, and Hispanic respondents who participated at Waves I and IV. Wave IV participation was necessary due to its inclusion of information regarding the timing of father's incarceration. Respondent's self-identifying as Native American, Asian, and of "Other race" were excluded due to insufficient sample sizes. Of those participating at Waves I and IV, the longitudinal models used all available data at Waves I, II, and III, resulting in an analytical sample of 14,186 respondents, or 36,576 observations. For a small percentage of cases the STATA "ice" procedure was used to impute missing data. Generally, missing values were limited to less than 30 cases. Three exceptions were family socioeconomic status (missing for 4.3% of observations), age of father's incarceration (9.3% of cases), and child temperament issue (13.8% of cases).

Dependent Variables

Depression—Depression was assessed using a five-item scale, found to be reliable and consistent across racial and ethnic groups in Add Health (Perreria, Deeb-Sossa, Harris, & Bollen, 2005). Items assessed respondents' frequency of particular emotions during the past week, including: being satisfied with life, feeling depressed, being unable to shake off the blues, being happy, and feeling sad. At Wave III, the item "During the last seven day's... you've enjoyed life?" was not asked. To be consistent with Perreria et. Al's (2005) five-item approach, the question "Do you currently feel satisfied with your life?" was substituted at Wave III. Cronbach's alpha was 0.80 at Wave I, 0.79 at Wave II, and 0.87 at Wave III. Psychiatric diagnoses are not available in Add Health.

Serious delinquency—Following Guo, Roettger, and Cai (2008), serious delinquency was assessed by a scale of twelve items referring to engagement in aggressive behaviors during the past 12 months, including: serious physical fighting resulting in injuries requiring medical treatment, using a weapon to get something, group fighting, shooting or stabbing someone, deliberately damaging property, pulling a knife or gun on someone, stealing something worth less than \$50, stealing something worth more than \$50, breaking and entering, selling drugs, and holding stolen property. Cronbach's alpha was 0.81 at Wave I, 0.79 at Wave II, and 0.76 at Wave III.

Independent Variables

Father's incarceration—Father's incarceration was measured by respondent's retrospective reports at Wave IV. Respondents were first asked "Has your biological father ever spent time in jail or prison?" If "yes", they were asked "How old were you when your biological father went to jail or prison (the first time)?" and "How old were you when your biological father was released from jail or prison (most recently)?" From these questions, five mutually-exclusive categories were created: (1) biological father's first incarceration and last release both occurred prior to birth, (2) first incarceration occurred before birth, last release after birth, (3) first incarceration between birth and Wave I, last release some time later, (4) first incarceration after Wave I, last release some time later, and (5) a reference category of respondents whose biological fathers were never incarcerated. Respondents who either refused to answer these questions, or indicated no knowledge of their father's incarceration, were coded as missing. Alternative coding schemes (e.g., incarceration before or after age 10) yielded substantively similar patterns of results.

Other controls—Gender was coded as female = 1, and male = 0. Both age and age-squared were used to account for the typical age-delinquency curve. Race and ethnicity was assessed by self-reports of primary racial identification and Hispanic origin. Three mutually

exclusive categories of non-Hispanic White, non-Hispanic Black, and Hispanic were used. These groups are hereafter referred to as White, Black, and Hispanic. Household structure at Wave I was classified into categories representing adolescents living with: 1) both biological parents; 2) any other two parents; 3) a single mother; 4) a single father; and 5) in some other family type. Socioeconomic status was measured by a scale combining mothers' and fathers' education and employment status at Wave I (Ford, Bearman, & Moody, 1999). Parent reports that the respondent had a difficult temperament as a child were included as a proxy of low self-control. Respondent retrospective reports of repeated physical abuse before the age of 10 were included as a partial control for other early risk factors.

Means and standard deviations for study variables are presented in Table 1, by the biological father's incarceration status and timing. Overall, 2128 (17.8%) of respondents reported a biological father's incarceration, with the vast majority (72.4%) occurring between birth and Wave I.

RESULTS

Depression

Depression is modeled using linear random effects models that account for repeated measurements of individuals over time (Rabe-Hesketh & Skrondal, 2008). These results are presented in Table 2. In Model 1, demographic, family background, and other control variables are included to establish baseline associations with depression. All associations are in the expected directions. In Model 2, variables representing biological father's incarceration status are added. Of most interest is the coefficient representing a biological father's first incarceration between birth and Wave I (i.e., during childhood). This coefficient is statistically significant and indicates that having a father incarcerated during childhood is associated with higher depression scores, controlling for other factors. Coefficients associated with father's incarceration at other times are of the same sign and of similar magnitudes, but are not statistically significant.

In Model 3, interactions between incarceration statuses and race and ethnicity are introduced. The non-interacted term for childhood incarceration indicates that White youth (i.e., the excluded category) whose biological fathers were incarcerated between birth and Wave I score higher on depression than do White youth whose parents were never incarcerated. None of the interaction terms are statistically significant, suggesting that the association of father's incarceration during childhood with depression is similar across racial and ethnic groups. A further comparison of Black and Hispanic respondents (not shown) produced no statistically significant differences.

Serious Delinquency

Serious delinquency is analyzed with Tobit models, including an individual-level random effect. Results are presented in Table 3. Nearly all coefficients in Model 1 are statistically significant and associated with delinquency in expected directions. In Model 2, incarceration of a biological father between birth and Wave I is associated with an increased propensity for delinquency. Interestingly, incarcerations of a biological father before birth that continue after birth are also associated with increased propensity for delinquency, though their interpretation is somewhat unclear. In some cases, these may represent re-integrations of an incarcerated father with the family, though that would depend on the residential situations of the parent and child at the time of a father's release. Incarceration of a biological father after Wave I is also associated with an increased propensity for delinquency. Due to some uncertainty regarding the temporal ordering of father's incarcerations occurring after Wave I,

and delinquency which is measured at all three waves, no specific interpretations are suggested.

In Model 3, the non-interacted coefficient associated with fathers' incarcerations during childhood indicates that among white youth, father's incarceration increases their propensity for delinquency. Incarcerations first occurring before birth that extend beyond birth are also associated with a significantly higher propensity for violence among white respondents. The non-significance of the interactions of Black with incarceration statuses indicates no differences in associations between White and Black respondents. Among Hispanic respondents, incarcerations of the biological father during childhood are associated with a significantly higher propensity for delinquency. In an additional comparison (not shown), the association of father's incarceration during childhood was significantly higher for Hispanic respondents than for Blacks.

In sensitivity analyses, we ran additional models (available upon request) of delinquency and depression by gender. Though men and women have different mean levels across outcomes, associations among the dependent and independent variables did not significantly vary.

DISCUSSION

This study provides one of the first assessments, within a representative U.S. sample, of associations between father's incarceration and depression and delinquency in adolescence and the transition to adulthood. This study is also among the first to consider differences in these associations by race and ethnicity. On the whole, a biological father's incarceration during childhood is found to be associated with higher depression and delinquency for all youth. These findings are consistent with previous studies outside the United States (e.g., Murray & Farrington, 2005, 2008a). Differences across White, Black, and Hispanic subgroups were not pronounced.

An exception was observed among Hispanic respondents, for whom having a biological father incarcerated during childhood was found to be most strongly associated with delinquency. Future research should further explore this finding. Is it related to stronger “familism” (Zinn, 1982) among Hispanics? Perhaps Hispanic youth with incarcerated fathers are more likely to live with their biological fathers before or following incarceration. Or is this stronger association due to pressures associated with immigration and assimilation processes. Future examination of these questions across Mexican, Cuban, Puerto Rican and other Latino subgroups, and by immigrant generational status, may help to untangle these and other possible explanations.

This analysis is not without its limitations. One is lack of information about the biological father's criminality. Thus it is not possible to differentiate the effects of fathers' incarceration from those of fathers' criminality, violence, or other deviance. We explored two variables within the Add Health sample – retrospective reports of physical abuse during childhood and difficult temperament – that might partly tap into otherwise unobserved characteristics of fathers, but these measures are not ideal. Additional information about the timing, duration, and sequencing of criminal justice system contacts would also be useful. The retrospective nature of reports of father's incarceration, and that some youth may not have reliable knowledge of their father's, are also limitations. Finally, though the Add Health sample is nationally representative of youth in school, the school based sampling design does not include youth who have already dropped out of the school system and who are likely at higher risk of having an incarcerated father.

Acknowledgments

This research uses data from Add Health, a program project designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris, and funded by a grant P01-HD31921 from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, with cooperative funding from 23 other federal agencies and foundations. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Persons interested in obtaining data files from Add Health should contact Add Health, Carolina Population Center, 123 W. Franklin Street, Chapel Hill, NC 27516-2524 (addhealth@unc.edu). No direct support was received from grant P01-HD31921 for this analysis. This project was supported in part by a grant to the National Center for Family & Marriage Research from the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, grant number 1 U01 AE000001-01. The opinions and conclusions expressed herein are solely those of the author(s) and should not be construed as representing the opinions or policy of any agency of the Federal government.

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TABLE 1

Means and Standard Deviations by Father's Incarceration Status

	Father Never Incarcerated	Incarcerated Before Birth Only	Incarcerated Before and after Birth	First Incarcerated Between Birth & Wave I	First Incarcerated After Wave I
<i>Dependent Variables</i>					
<i>Depression</i>					
Wave I	3.12 (2.79)	3.04 (3.00)	3.40 (3.00)	3.55 (2.93)	3.57 (2.94)
Wave II	3.03 (2.74)	3.30 (2.96)	2.72 (2.22)	3.69 (2.92)	3.40 (2.82)
Wave III	2.27 (2.63)	3.02 (3.20)	2.81 (2.93)	2.80 (2.99)	2.81 (2.93)
<i>Delinquency</i>					
Wave I	1.67 (3.27)	2.19 (3.57)	2.72 (4.37)	2.69 (4.36)	2.03 (4.29)
Wave II	1.21 (2.79)	1.37 (2.56)	2.21 (4.00)	1.92 (3.69)	1.99 (3.53)
Wave III	0.72 (1.88)	1.14 (2.55)	1.36 (2.66)	0.91 (2.30)	1.09 (2.36)
<i>Independent Variables</i>					
<i>Race and Ethnicity</i>					
White	0.60 (0.50)	0.67 (0.47)	0.61 (0.48)	0.49 (0.50)	0.51 (0.50)
Black	0.23 (0.42)	0.19 (0.39)	0.22 (0.42)	0.33 (0.47)	0.31 (0.46)
Hispanic	0.17 (0.38)	0.14 (0.35)	0.17 (0.38)	0.18 (0.40)	0.18 (0.38)
Age at Wave I	15.61 (1.74)	15.46 (1.65)	15.80 (1.66)	15.49 (1.70)	15.20 (1.78)
Female	0.53 (0.50)	0.53 (0.50)	0.42 (0.50)	0.55 (0.50)	0.50 (0.50)
<i>Family Structure</i>					
Two biological parents	0.56 (0.50)	0.49 (0.49)	0.35 (0.48)	0.21 (0.41)	0.28 (0.49)
Two parents, one biological	0.14 (0.35)	0.15 (0.41)	0.28 (0.44)	0.25 (0.44)	0.17 (0.38)
Single-mother	0.22 (0.40)	0.26 (0.44)	0.26 (0.44)	0.39 (0.49)	0.28 (0.45)
Single-father	0.03 (0.18)	0.03 (0.16)	0.02 (0.15)	0.04 (0.19)	0.02 (0.14)
Other family structure	0.05 (0.21)	0.07 (0.26)	0.08 (0.28)	0.11 (0.30)	0.10 (0.30)
Family socioeconomic status	6.32 (2.57)	5.69 (2.43)	5.58 (2.66)	5.19 (2.51)	5.46 (2.43)
Biological father unknown	0.05 (0.21)	0.04 (0.19)	0.09 (0.31)	0.11 (0.28)	0.08 (0.30)
Child temperament	0.26 (0.44)	0.36 (0.49)	0.29 (0.46)	0.37 (0.48)	0.36 (0.47)
Repeated physical abuse	0.07 (0.26)	0.11 (0.31)	0.15 (0.36)	0.15 (0.36)	0.16 (0.37)
Number of observations	30779	298	225	3970	1002
Number of respondents	11937	112	86	1541	389

TABLE 2

Depression Regressed on Father's Incarceration and Other Variables (Multi-Level Models With Individual-Level Random Effects)

Variables	(1)	(2)	(3)
Father Incarcerated			
<i>FI before birth only</i>		0.13 (0.215)	0.12 (0.252)
<i>FI before birth & after birth</i>		0.10 (0.229)	0.28 (0.279)
<i>FI between birth & Wave I</i>		0.16* (0.064)	0.18* (0.082)
<i>FI after Wave I</i>		0.20+ (0.116)	0.20 (0.161)
Father Incarcerated X Black			
<i>Black X FI before birth only</i>			0.19 (0.549)
<i>Black X FI before & after birth</i>			−0.11 (0.628)
<i>Black X FI between birth & Wave I</i>			−0.06 (0.144)
<i>Black X FI after Wave I</i>			0.08 (0.256)
Father Incarcerated X Hispanic			
<i>Hispanic X FI before birth only</i>			−0.03 (0.652)
<i>Hispanic X FI before & after birth</i>			−0.81 (0.571)
<i>Hispanic X FI between birth & Wave I</i>			0.02 (0.168)
<i>Hispanic X FI after Wave I</i>			−0.15 (0.323)
Race and Ethnicity			
White [reference]			
Black	0.23*** (0.045)	0.23*** (0.045)	0.24*** (0.050)
Hispanic	0.41*** (0.051)	0.41*** (0.051)	0.42*** (0.057)
Age	0.67*** (0.041)	0.67*** (0.041)	0.67*** (0.041)
Age-square	−0.02*** (0.001)	−0.02*** (0.001)	−0.02*** (0.001)
Female	0.62*** (0.035)	0.62*** (0.035)	0.62*** (0.035)
Family SES at Wave I	−0.09*** (0.007)	−0.09*** (0.007)	−0.09*** (0.007)
Family Structure			
Two biological parents [ref]			
Two-parents, one-biological	0.32*** (0.055)	0.29*** (0.056)	0.28*** (0.056)
Single mother	0.26*** (0.047)	0.23*** (0.048)	0.23*** (0.048)
Single father	0.60*** (0.110)	0.59*** (0.110)	0.58*** (0.111)
Other family structure	0.68*** (0.089)	0.65*** (0.089)	0.65*** (0.089)
Biological father unknown	0.09 (0.071)	0.07 (0.071)	0.09 (0.071)
Child temperament	0.57*** (0.043)	0.57*** (0.043)	0.57*** (0.043)
Repeated physical abuse	0.44*** (0.072)	0.43*** (0.072)	0.43*** (0.072)
Constant	−2.55*** (0.379)	−2.59*** (0.379)	−2.60*** (0.379)
Individual-level standard error	1.509	1.507	1.508
R-Squared	0.0665	0.0672	0.0673
Number of respondents	14180	14180	14180

Variables	(1)	(2)	(3)
Number of observations	36562	36562	36562

p<.001,

**
p<.01,

*
p<.05 (two-tailed tests).

TABLE 3

Delinquency Regressed on Father's Incarceration and Other Variables (Tobit Models With Individual-Level Random Effects)

Variables	(1)	(2)	(3)
Father Incarcerated			
<i>FI before birth only</i>		0.39 (0.461)	0.55 (0.560)
<i>FI before birth & after birth</i>		1.29 ** (0.518)	1.68 * (0.661)
<i>FI between birth & Wave I</i>		1.04 *** (0.135)	0.98 *** (0.189)
<i>FI after Wave I</i>		0.44 (0.251)	0.28 (0.348)
Father Incarcerated X Black			
<i>Black X FI before birth</i>			-1.69 (1.233)
<i>Black X FI before & after birth</i>			-0.83 (1.315)
<i>Black X FI between birth & Wave I</i>			-0.37 (0.298)
<i>Black X FI after Wave I</i>			0.12 (0.574)
Father Incarcerated X Hispanic			
<i>Hispanic X FI before birth</i>			109 (1.343)
<i>Hispanic X FI before & after birth</i>			-1.20 (1.384)
<i>Hispanic X FI between birth & Wave I</i>			0.94 ** (0.352)
<i>Hispanic X FI after Wave I</i>			0.64 (0.675)
Race and Ethnicity			
White [reference]			
Black	0.43 *** (0.105)	0.40 *** (0.105)	0.47 *** (0.120)
Hispanic	0.61 *** (0.117)	0.61 *** (0.117)	0.48 *** (0.132)
Age	0.65 *** (0.106)	0.66 *** (0.106)	0.66 *** (0.106)
Age-square	-0.03 *** (0.003)	-0.03 *** (0.003)	-0.03 *** (0.003)
Female	-3.14 *** (0.085)	-3.14 *** (0.085)	-3.14 *** (0.085)
Family SES at Wave I	-0.00 (0.017)	0.01 (0.017)	0.01 (0.017)
Family Structure			
Two biological parents [ref]			
Two-parents, one-biological	0.62 *** (0.126)	0.46 *** (0.128)	0.46 *** (0.127)
Single mother	0.78 *** (0.110)	0.60 *** (0.112)	0.63 *** (0.112)
Single father	1.28 *** (0.234)	1.21 *** (0.233)	1.19 *** (0.233)
Other family structure	1.18 *** (0.189)	0.96 *** (0.190)	1.01 *** (0.190)
Biological father unknown	0.05 (0.155)	-0.12 (0.156)	-0.12 (0.156)
Child temperament	1.65 *** (0.092)	1.62 *** (0.092)	1.60 *** (0.092)
Repeated physical abuse	1.11 *** (0.148)	1.04 *** (0.148)	1.05 *** (0.148)
Constant	-3.56 *** (0.969)	-3.77 *** (0.969)	-3.79 *** (0.969)
Individual-level standard error	3.47 *** (0.048)	3.45 *** (0.048)	3.45 *** (0.048)
Overall standard error	4.21 *** (0.033)	4.21 *** (0.033)	4.21 *** (0.033)

Variables	(1)	(2)	(3)
Number of respondents	14180	14180	14180
Number of observations	36562	36562	36562

p<.001,

**
p<.01,

*
p<.05 (two-tailed tests).