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Father Absence and Youth Incarceration

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This study measured the likelihood of youth incarceration among adolescent males from father-absent households, using data from the National Longitudinal Survey of Youth ($N = 34{,}031$ person-years). At baseline, the adolescents ranged from 14 to 17 years, and the incarceration outcome measure spanned ages 15 to 30 years. This study tested whether risk factors concentrated in father-absent households explained the apparent effects of father absence. Results from longitudinal event-history analysis showed that although a sizable portion of the risk that appeared to be due to father absence could actually be attributed to other factors, such as teen motherhood, low parent education, racial inequalities, and poverty, adolescents in father-absent households still faced elevated incarceration risks. The adolescents who faced the highest incarceration risks, however, were those in stepparent families, including father–stepmother families. Coresidential grandparents may help attenuate this risk, although remarriage and residential instability increased it. Social policies to support children should broaden beyond an emphasis on marriage to address the risks faced by adolescents living in stepfamilies as well.

Criminal activities are generally initiated in the early teen years, and the age structure of crime peaks in the middle to late teens. As adulthood is reached, criminal activities slow (see Hirschi & Gottfredson, 1983; Shavit & Rattner, 1988 for age structure of crime). Psychosocial development

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from adolescence to young adulthood typically turns in the direction of greater conformity, but those who are at high risk in adolescence have a much lower chance of moving into successful adulthood (Jessor, Donovan, & Costa, 1991). In particular, illegal activities leading to incarceration can have a lasting mark on an adolescent's transition to adulthood. In this study we assessed the impact of father absence during adolescence on a male youth's incarceration risks to see how important it was relative to myriad other difficulties encountered by populations at risk of incarceration. We also explored several different aspects of growing up in a father-absent household to distinguish factors that contribute to elevated incarceration risks from those that may be problematical but unrelated to incarceration.

National statistics show that inmates are less likely than the general population to have grown up with only one parent, with 57% reporting they did not live with both parents most of the time while growing up (U.S. Department of Justice, 1994a). In the general population, 31% of children were not living with both parents during that time (U.S. Bureau of the Census, 1994). Children in disadvantaged populations are more likely to grow up in father-absent households, as marriage rates are lower and fertility is higher (U.S. Bureau of the Census, 1998). Incarceration and father absence have common socioeconomic antecedents, and it is possible that another formidable social factor is the driving force behind both patterns. Higher incarceration rates in recent years have had a particularly negative impact on male urban minority youths (DiIulio, 1996; U.S. Department of Justice, 1997; Western & Beckett, 1999). This same population is at greater risk for father absence as well; therefore, difficult circumstances, such as poverty or racial inequalities, may account for both problems. To inform public policy discussions of father absence, it is important to understand how family changes affect youth outcomes but also to separate the effects of family changes from those of concomitant factors. This analysis used empirical evidence from a national cohort of male youths, with an oversampling of disadvantaged groups, to assess the contribution of father absence during childhood and adolescence to the likelihood of incarceration.[1]

Background

Past research shows a link between father absence and delinquency or crime, both official and unofficial. Reviews have shown, however, that

[1] Men constitute more than 90% of the prison and jail populations (U.S. Department of Justice, 1997).

although studies are numerous, the research is incomplete and inconclusive, mainly because of sampling differences (Wells & Rankin, 1991). Much of the criminological research on the topic has relied on small and specially selected samples; therefore, although findings may apply to a particular group, they are not generalizable to the larger population. Many important studies are restricted to certain cities (Hirschi, 1969; Sampson & Laub, 1993), racial groups (Glueck & Glueck, 1950; Nye, 1958), students (who have a lower likelihood of incarceration than dropouts), or single time points (Dornbusch et al., 1985; Rankin & Kern, 1994; Steinberg, 1987). Few longitudinal studies following the life course have addressed this question dynamically, and those that have tested the association of father absence and delinquency showed a diminished impact, if any (Furstenberg & Teitler, 1994; Heimer & Matsueda, 1994). A review of longitudinal studies, however, does show a correlation between low parental supervision and delinquency (Loeber & Stouthamer-Loeber, 1986).

Furthermore, although research on father absence and delinquency has been conducted, it is far less common to find studies considering incarceration risks as well, which are important to characterize for the long-term prospects of youths. Most of the national repositories of criminal data do not have detailed family information, and the large national data sets with intricate family information do not include criminal justice system data. Even fewer national data sets track both family structure and incarceration over time so that the sequencing of events can be distinguished or the changing effects of family at different life stages can be measured.

To understand the interplay of father absence and socioeconomic factors, as well as the role of father absence alone, we used nationally representative panel data from the National Longitudinal Survey of Youth (NLSY79). The NLSY is a probability sample; therefore, statistical generalizations can be made from observations on these individuals to other young people in the United States. The survey over-samples economically disadvantaged populations, as well as out-of-school teenagers, who have a greater likelihood of both father absence and incarceration. Family structure measures are detailed each year from birth and provide us with many different scenarios that change over time. For example, we can construct the sequence of events for an adolescent whose father left when he was 14 and then lived with his mother until age 16 when a stepfather joined the household, measuring the incarceration risk each family situation may pose for this adolescent up to young adulthood. The survey covered one of the first youth cohorts to have experienced high levels of father absence during childhood and burgeoning prison populations during adolescence and young adulthood, and followed them through the peak ages of offending into their 30s when criminal behavior wanes.

The main research hypothesis of this study was that father absence increases the chances of incarceration for male children. In examining this question, we first considered socioeconomic confounders in the relationship between father absence and incarceration. Second, we sought to address questions about possible mediating factors in father-absent households that remain unanswered in previous incarceration research. We investigated aspects of father-absent households to see whether they contributed to the incarceration risks, including income, the timing of a father's departure, number of family disruptions, residential instability, or simply having insufficient number of adults in the household for adequate parenting.[2] We also investigated the potentially protective role of other adult family members, including stepparents or grandparents, in a father-absent household. The central question posed was whether father absence remains a predictor of incarceration even when accounting for these important confounding and mediating factors.

Hypotheses

Father absence hypothesis. There are several reasons children living in father-absent households may face increased incarceration risks. Research has shown that they receive less supervision or time with parents than children living in two-parent homes (McLanahan & Sandefur, 1994), which increases adolescent deviance (Dornbusch et al., 1985). Children also have lower attachment to their nonresidential fathers (Furstenberg & Cherlin, 1991; King, 1994; Seltzer, 1991), which can affect their emotional stability as well as their job opportunities, increasing their chances of incarceration (Sampson & Laub, 1993). One study found that adolescent boys from single-parent households have a greater chance of leaving home early (Cooney & Mortimer, 1999). Father absence may also increase associations with delinquent peers (Steinberg, 1987). The father absence hypothesis follows the social control theory of crime, which focuses on the importance of emotional attachments of parents and children, their time spent together, and supervision (Hirschi, 1969; Jensen 1972; Johnson 1987). Under a father absence hypothesis, we would expect the children who never had residential fathers (e.g., those born to single mothers) to have the highest chances of incarceration. Among the children with absent fathers, we would expect those who do not receive child support to have greater behavioral problems because nonpaying fathers

[2] Although patterns are changing, 90% of children living with one parent still lived with their mother in the early 1990s (U.S. Bureau of the Census, 1991).

are less likely to be connected to their children or especially interested in their welfare (Garfinkel & McLanahan, 1990; King, 1994).

Common background hypothesis. We investigated the possibility that father absence only appears to influence the chances of youth incarceration because it is closely connected to other predictors of incarceration. Factors confounded with single-mother households, such as teen motherhood, high unemployment rates, racial inequality, or isolation in poor urban communities, may put disadvantaged children at risk of other societal problems (Massey, 1995; Nagin, Pogarsky, & Farrington, 1997; U.S. Bureau of the Census, 1998; Wilson, 1987). Common background factors exist at the community, as well as individual, level. Following Shaw and McKay's (1942) theory of social disorganization, studies have investigated the role of community factors, using a wide variety of measures and have found that community poverty, residential segregation, and employment barriers are important factors in the concentration of crime in impoverished inner cities, as well as aggregate family structure (Alba, Logan, & Bellair, 1994; Jacobs & Helms, 1996; Massey & Shibuya, 1995). Under the common background hypothesis, once we take into account these shared antecedents of father absence and incarceration, apparent risks for youths from father-absent families should diminish.

Low income hypothesis. We investigated poverty separately from other background factors because poverty is not only a confounding factor but also a mediating factor: Father absence, whether caused by nonmarital fertility or divorce, substantially increases the likelihood of poverty (McLanahan & Casper, 1995; U.S. Bureau of the Census, 1998). According to opportunity theories of crime, poverty represents a structural impediment for youths in the pursuit of higher education or well-paid jobs, resulting in frustration and increased criminal behavior (Cloward & Ohlin, 1960; Merton, 1957). Studies have shown that children with absent fathers are not only poorer but also have fewer networks into the working world (Coleman, 1988). Additionally, during the period studied, low-income youths faced relatively worse job opportunities and higher incentives for crime (Freeman, 1996). Poverty can be especially harmful in single-mother families, who may need extra resources with one adult in charge to organize for the care and supervision of children.

Family instability hypothesis. In addition to the impact of low income, we tested several other ways that father absence might increase the chances of incarceration. Father absence could involve instability and

stress, either closely following a disruption or after repeated disruptions, which would increase the likelihood of incarceration. This hypothesis follows the modified strain theory that predicts crime when youths are unable to avoid stressful situations (Agnew, 1985). In the aftermath of a family disruption, problem behavior may intensify and, for adolescents with adjustment difficulties, may even entail illegal behavior. Research has not yet established a consensus on the impact of the timing of family disruptions (Mednick, Baker, & Carothers, 1990; see Wells & Rankin, 1991, for a meta-analysis or McLanahan & Bumpass, 1988; Chase-Lansdale, Cherlin, & Kiernan, 1995, for child well-being). However, we do know that in early adolescence children may have the most difficulty adjusting to remarriage (Hetherington, 1993), and continuing conflict after divorce can impede adolescent adjustment as well (Buchanan, Maccoby, & Dornbusch 1996). The residential instability that often accompanies family disruption and remarriage may also affect the likelihood of incarceration because residential moves can adversely affect opportunities of children because of broken ties with schools, lower access to community resources, or less cohesive neighborhood supervision (Astone & McLanahan, 1994; Speare & Goldscheider, 1987).

Additional caregivers hypothesis. If father-absence risks come from too few adults for adequate parenting, we would expect to see youths in single-parent households (father absent and mother absent alike) to have higher incarceration odds than those in stepparent households. Remarriage among women is associated with a higher income of the male partner (Hoffman & Duncan, 1988), and children in stepfather households may be protected by the higher average incomes, although any financial support from stepfathers can be voluntary and is not likely to continue after age 18, as with noncustodial fathers (Aquilino, 1994). Some studies have found that an additional adult in the household has beneficial effects for the child (Dornbusch et al., 1985; White, 1994). However, some studies have shown that youths living with stepparents have higher delinquency (Haurin, 1992; Johnson, 1986; Steinberg, 1987; Tygart, 1990), and it is not entirely clear whether remarriage helps reverse a child's difficulties (Wells & Rankin, 1991). Adolescents in single-parent households with extended family members to lend support and supervision, such as grandparents, may have protection from incarceration risks. This protective effect may occur more frequently in African American families, who are more likely to include grandparents (Ruiz & Carlton-LaNey, 1999; Szinovacz, 1996; U.S. Bureau of the Census, 1998).

METHOD

Data

To test these hypotheses on father absence and incarceration, we used data from the NLSY79, one of the few longitudinal data sets with individual-level information on both family life and incarceration (Center for Human Resource Research, 1994). The panel survey commenced in 1979 with a sample of 14- to 22-year- olds (6,403 of whom are males) and has continued to reinterview the same group each year, covering the critical ages during the life course when the risk of incarceration emerges and then drops off. We used data from the youths who were under age 18 at the initial year of the survey ($n = 2,846$) so that the explanatory variables characterized minors still under the care of their families or guardians.[3] The NLSY79 has notably low attrition, with a follow-up rate of close to 98% or higher each year. The variables used in this study are shown in Table 1.

Measures

Incarceration. The longitudinal outcome measure is a time-varying yearly indicator (0 = no, 1 = yes) of who is incarcerated at the time of the survey. The survey item records place of residence as a correctional institution. During the study, 7.5% of the sample was ever incarcerated. The overall advantage of the incarceration measure is it can be used longitudinally, with events placed sequentially in the life path. It also describes a significant event marking the lives of the adolescents and young adults. However, the measure does have restrictions. First, it is more likely to capture spells lasting longer than 1 year than the short spells, thereby focusing more heavily on serious or repeat offenders. Second, it cannot discern recidivism patterns because the data are from one time point each year; examining recidivism may show a slightly different picture. An incarceration measure in general gives information on those who are more likely to be caught and indicted by the criminal justice system, which includes the more serious and violent offenders, particularly repeat offenders and those with long sentences (Canala-Cacho, Blumstein, & Cohen, 1996). Violent crimes are more likely to be reported to the police than property crimes and are more than twice as

[3] We compared the sample under age 18 at baseline with the sample age 18 or over. The two groups are similar on family type at birth, but by adolescence the younger sample is more likely to live in single-mother households. We estimated a model of family effects on incarceration and found that the interaction for the family variable and the older cohort is not significant.

TABLE 1
Descriptive Statistics of NLSY Adolescent Sample (Ages 14–17): Means and Proportions

	% or M	*Measurement of Variables*
Ever Incarcerated, ages 15–30	7.5%	Time varying[a]
Serious delinquency, past year	60.1%	Year following baseline (1980)
Stopped by the police, past year	25.1%	Year following baseline (1980)
Charged, past year	9.6%	Year following baseline (1980)
Convicted, past year	5.2%	Year following baseline (1980)
Childhood family structure variables		
Family type in adolescence		Time varying[b]
Mother-father	61.6%	
Mother	24.5%	
Father	3.3%	
Mother-stepfather	5.1%	
Father-stepmother	1.6%	
Relatives/other	3.9%	
Father absence (timing of departure)		Retrospective item, 1988
From birth	9.6%	
Infancy to age 4	5.3%	
Ages 5 to 9	8.2%	
Ages 10 to 14	7.3%	
Age 15 to 17	8.7%	
Number of family disruptions	1.6	Retrospective item, 1988
Residential instability (1 or more moves in past year)	22.0%	Time varying
Receipt of child support[c]	15%	Time varying
Grandparent in household	6.2%	Time varying
Common background variables		
Mother's education (years)	10.8	Baseline
Teenage mother (under 18 at first birth)	10.1%	Baseline
Race/ethnicity		Baseline
White (non-Black, non-Hispanic)	55.8%	
Black	26.9%	
Hispanic	17.3%	
Urban residence	76.5%	Time varying
Region		Time varying
Northeast	20.1%	
North central	25.6%	
South	35.8%	
West	18.5%	
Unemployment rate (county)	7.2%	Time varying
Female-headed households (county)	11.3%	Time varying
Median family income ($ 1990 county)	32,765	Time varying

Median age population, years (county)	28.2	Time varying
Income		
Median family income ($ 1990)	23,404	Time varying
Family size (no. of siblings)	3.8	Baseline
Individual controls		
Test scores (Armed Forces Qualification Test)	34.2	1980
Age	21.2	Time varying[c]
Number of observations (person-years)	34,031	

Note. NLSY = National Longitudinal Survey of Youth.

[a]Outcome variable for longitudinal analysis: first incarceration at each age, varying from ages 15 to 30 ($M = 0.7\%$).

[b]Time-varying explanatory variables vary from ages 14 to 17.

[c]The mean age on the explanatory variables is 15.8 years. Both explanatory and outcome variables are organized by age; therefore, age ranges from 14 to 30 years.

likely to end in arrest (U.S. Department of Justice, 1994b). Incarceration is the endpoint of a process in the criminal justice system, and certain individuals are more likely to reach that point than others. We therefore analyzed self-reported data on illegal activities to ensure consistency with the incarceration results.

Self-reported measures of delinquency are available from a special unit, administered the year after baseline in 1980; the information is limited to a single year. A previous study used data from this unit of the NLSY to show that childhood family structure was significantly associated with self-reported delinquency (Haurin, 1992). We created a standardized summated rating scale from 11 items measuring illegal activities (scored as number of times in the past year),[4] which has a high reliability coefficient (Cronbach's alpha) of 0.86. A high percentage of the sample, 60%, reported one of these activities in the past year. We used the top quartile of the delinquency scale to create an outcome variable for more serious offenders. We also used the delinquency variable to predict incarceration.

Family structure. Father absence, the main explanatory variable, encompasses several household configurations, including single mother, mother and stepfather, or no parents (i.e., relatives, other). To avoid confusion and measure family structure risks more precisely, we specified exactly what the parental configuration was, as follows: mother-father

[4] The items in our scale include stealing items worth less than $50, stealing items worth more than $50, shoplifting, selling marijuana/hashish, selling hard drugs, stealing a car, breaking into a place, damaging property, attacking someone with the intent to injure them, aiding a gambling operation, holding stolen goods, and making income from these illegal activities.

households, mother only, father only, mother-stepfather, father-stepmother, and relatives/other (see Table 1). Marital status was used to determine these configurations. Respondent reports of household configuration (each member in relation to the respondent) were used to measure family structure during adolescence in each survey round until the respondent reached age 18.

To test for elevated risks in father-absent households, we compared the incarceration risks of youths in each of the family configurations. We also measured the length of time the father has been absent from the household (from birth, infancy to age 4, ages 5 to 9, ages 10 to 14, ages 15 to 17). The father's departure variable was measured retrospectively from birth to age 14 because the survey began with 14-year-olds, and yearly data were used up until age 17. We measured the receipt of child support as an indicator of father involvement. The child support measure is time varying and captures income received by the household each year, including alimony. In the models for child support, the mother-father households were coded separately, and we compared the remaining (nonintact) households receiving child support with those that did not. The measure is limited because it misses in-kind support and cannot be distinguished from alimony income. Table 1 shows that 90% of the youth cohort was born into mother-father households, but by the time they reached adolescence, only 62% were still living with both parents. The large majority of those adolescents not living with both parents resided in father-absent households (87%).

Common background. We included variables in the models for race (Black, Hispanic, and non-Black/non-Hispanic, which is largely White because Black and Hispanic are the only minority groups over-sampled), mother's educational level, and teenage mother. Yearly measures for urban residence and region of residence were included because father absence and crime rates are higher in metropolitan areas and in the West and South. Aggregate measures of socioeconomic conditions surrounding the youths and their families were included as well: percentage of female-headed families, unemployment rates, median family income, and median age of the population, which are all measured yearly on the county level (as the NLSY does not release data at the zip code or block level for confidentiality reasons).

Low income. Yearly measures of family income provided updated records of the financial means of the adolescents' families. Real income was used, with a base year of 1990. Along with the family income, we controlled for number of children as an indicator of how many dependents the family income covers.

Family instability. For family instability, we also examined the timing of father's departure during adolescence and the number of disruptions. A disruption was defined as a change; therefore, a child born to a single-mother household has not experienced any disruption, per se, until another adult enters the household or the child goes to live elsewhere. The number of disruptions was measured retrospectively from birth to age 14, and yearly data were used up until age 17. To distinguish the effect of an early departure from that of a higher number of disruptions, we included both variables in the same model. We also measured the impact of residential moves in the past year.

Additional caregivers. We investigated the impact of an additional adult in the household by comparing single-mother and mother-stepfather families, as well as single-father and father-stepmother families. We also compared single-parent households together versus stepparent households, and examined households with grandparents.

In a final series of models, we included test scores (from the Armed Forces Qualification Test) to assess the predictive power of family structure variables once the individual cognitive ability of the child is taken into account, although test scores relate to income as well (Carlson & Corcoran, 2001). In all of the models, a time-varying variable for age was included.

Analysis

The principal methodology used was an age-based event-history analysis to follow the dynamic life course of adolescents and incorporate changing characteristics (see Table 1 for time-varying covariates). A longitudinal approach makes it possible to provide estimates of a causal process that originates in the family and motivates the youth behavior, maintaining a temporal sequencing of predictors and outcomes. To follow the life course, we converted the survey data from year- to age-based data, and then used discrete-time logistic models to measure the effects of father absence on the probability of first incarceration at older ages (see Allison, 1995). Logistic analysis was used for these data because the time of entry or exit from an incarceration spell was not available, simply an indicator of whether the respondent was incarcerated at the time of the survey. At baseline, the youngest individuals of the cohort were 14 years old; therefore, time-varying explanatory variables ranged from ages 14 to 17. For sequencing reasons, the incarceration measure was lagged 1 year and followed individuals until they were censored or the survey ended, covering ages 15 to 30. At each successive age, only the individuals who were at risk of experiencing

first incarceration were included, so that incarceration was modeled as a nonrepeatable event, thereby avoiding problems with reverse causation or dependence of standard errors (see Allison, 1995). The coefficients estimate incarceration risks at each age out of the pool of individuals who have not yet been incarcerated. No one in the baseline sample of 14- to 17- year-olds was incarcerated before age 14. Observations were pooled into person-years for the regression analysis ($N = 34{,}031$ person-years). Time-invariant items were measured at baseline or in retrospective questions.[5]

To model delinquency, simple logistic regression was used ($N = 2{,}702$). The explanatory variables were the same as those in the longitudinal analysis and were measured at baseline; for sequencing, the outcome variable was measured in the following year. For family type in adolescence, family type at age 14, as recorded in the baseline survey, was used.

RESULTS

Common Background Factors

According to the common background hypothesis, the concentration of socioeconomic disadvantage among father-absent families explains the higher risks of incarceration. We therefore measured the importance of co-occurring background factors before investigating different aspects of father absence. Although youths from father-absent families did have higher incarceration risks ($p < .001$), bivariate analyses showed that they were also significantly more likely to contend with a series of other disadvantages, including low parent education, teen motherhood, minority race/ethnicity, residence in urban areas, regional residence and residence in counties with a high percentage of female-headed households, high unemployment rate, and low median family income. All of these other variables were also significantly associated with a higher likelihood of incarceration, except for unemployment rate and median family income, which may be due to the measurement unit in these data, the county.

We used longitudinal multivariate models to test whether these common background factors were responsible for the higher incarceration among youths in father-absent families (Table 2). The first model showed that before any of the markers of socioeconomic disadvantage were separated out, the bivariate association between family type and incarceration was highly significant, with youths in single-mother and mother-stepfather

[5] The following model was estimated: logit $(\pi_{ia}) = x_i'\beta + x_{ia}'\beta$, where π_{ia} is the probability of incarceration for those aged a from the age interval $a+1$ to $a+14$; $i = i, \ldots, n$ individuals; and $a = 14, \ldots, 17$ years old.

households, as well as those who did not live with their parents, facing incarceration odds at least 3 times as high as youths in mother-father households. The small number of youths in father-only households unexpectedly showed no difference in odds of incarceration than did those in mother-father households; these single fathers may represent special situations, in which the fathers are particularly suited to caring for their children. Youths in father-stepmother households, on the other hand, had high incarceration odds. When common background factors were included in Model 2, the overall explanatory power of the model improved significantly— the difference in the model chi-square gives a goodness-of-fit test, $\chi^2(15) = 77.4$, $p < .001$—showing the importance of socioeconomic background for chances of incarceration. We tested interaction terms to see whether the background effects varied for certain family groups and found background and family effects to be largely additive, other than for White, nonintact families, who had a significant interaction for the odds of incarceration (the odds on the interaction term is 2.02, $p < .05$). Nevertheless, the family structure coefficients remained highly significant after including common background variables.

Low Household Income

According to the low income hypothesis, poverty would explain the higher incarceration odds for father-absent youths still apparent after controlling for common background factors. The median family income was only $12,602 in single-mother households and $13,884 in relatives/other households as opposed to $30,605 in mother-father households. The other households types fell between these extremes ($24,048 in single-father, $25,379 in mother-stepfather, and $30,137 in father-stepmother). Large income differentials existed by race as well, and lower income for Blacks was likely to account for much of the racial differences in family patterns. The third model in Table 2 shows that the lower income in certain family types accounted for a significant component of the higher incarceration odds—a comparison of Models 2 and 3 shows an overall improvement in the model fit as well, $\chi^2(3) = 24.7$, $p < .001$—but did not explain all of the family effects, which were still highly significant and consistent with the estimates in the previous models. [6] Mother's education

[6] Respondents typically reported income with imprecision; therefore, these estimates may have greater error than estimates of other variables. McLanahan and Sandefur (1994) found that in the NLSY, income did not explain as much of the effects of childhood family structure on outcomes as it did in the Panel Survey of Income Dynamics (PSID), which has more detailed income information.

TABLE 2
Father Absence and Incarceration: Testing the Common Background and Low Income Hypotheses

	Family Type		*Common Background*		*Low Income (Full Model)*	
	Odds	*(z)*	*Odds*	*(z)*	*Odds*	*(z)*
Family type in Adolescence						
Mother-father[b]	—	—	—	—	—	—
Mother only	3.029***	(7.61)	2.537***	(5.91)	2.168***	(4.67)
Father only	1.266	(0.56)	1.221	(0.47)	1.123	(0.27)
Mother-stepfather	3.141***	(4.69)	3.076***	(4.51)	2.692***	(4.35)
Father-stepmother	3.802***	(3.59)	4.002**	(3.64)	3.851**	(3.52)
Relatives/other	4.605***	(6.69)	3.593***	(5.24)	3.121***	(4.58)
Common background factors						
Mother's education			0.942*	(− 2.59)	0.977	(− 0.96)
Teenage mother (<18 at first birth)			1.504*	(2.04)	1.367	(1.56)
Race						
White[b]			—	—	—	—
Black			2.248***	(4.65)	1.783**	(3.17)
Hispanic			1.145	(0.61)	1.058	(0.20)
Urban residence			1.002	(1.70)	1.452	(1.69)
Region						
Northeast[b]			—	—	—	—
North central			1.128	(0.51)	1.127	(0.51)
South			1.230	(0.81)	1.275	(0.95)
West			1.891***	(2.68)	1.959**	(2.83)

Unemployment rate (county)			0.986	(− 0.55)	0.988	(− 0.45)
Percent female-headed households (county)			1.002	(0.75)	1.002	(1.00)
Median family income (county)			1.002	(0.17)	1.010	(0.68)
Median age population (county)			1.002	(0.70)	3.660	(1.63)
Economic deprivation						
Family income (in 000s)					0.987**	(− 2.83)
Family size (no. of siblings)					1.081**	(3.29)
Age	1.002	(0.12)	1.002	(0.13)	1.001	(0.06)
Model $\chi^2(df)$	$\chi^2(6) = 86.70$***		$\chi^2(21) = 164.18$***		$\chi^2(24) = 188.93$***	
Area under ROC curve	0.65		0.73		0.74	
Observations[c] (person-years)	34,031		33,107		33,063	

Note. Incarceration figures are for first time incarcerated. Incarceration odds ratios are from logistic regression analysis. Receiver Operating Characteristic (ROC).

[a]Missing observations for explanatory variables set to a constant and flags included in regressions. Missing observations that do not vary on the incarceration outcome (i.e., urban, region, family size) drop out of regressions; therefore, samples sizes vary slightly.

[b]Reference category.

*$p < .05$; **$p < .01$; ***$p < .001$.

and teenage mother were no longer significant when income and family size were added to the model. Income was interacted with family structure variables, but results showed only additive income effects.

Family Instability

We specified childhood family several ways in Table 3 to explore the family instability and father absence hypotheses; to focus on the many different specifications of the family structure variables, we presented only the family coefficients, although all control variables (mother's education, teenage mother, race, urban residence, region, unemployment rate, percentage of female-headed households, median family income, median age population, family income, family size, and age) were included in all models. The first incarceration model for the instability hypothesis measured the timing of father's departure and repeated disruptions (Table 3, Model 1). According to the instability hypothesis, repeated disruptions or a disruption closer to the adolescent ages would be a stronger predictor of incarceration than a disruption during early childhood. However, contrary to this hypothesis, results from this model show that departures occurring just before or during adolescence did not have any greater impact than departures in early childhood. The number of family disruptions during childhood did not account for the higher incarceration odds of youths born to single mothers (Table 3, Model 1).

Residential mobility in the past year was high on average in stepparent families (34% in mother-stepfather families, 36% in father-stepmother families) and for youths who did not live with parents (28%), compared with single-mother and single-father families (both were 23%) and mother-father families (18%). Results showed that residential moves in the past year were associated with a higher likelihood of incarceration. The effects of residential instability, however, were additive for youths from all family types, as shown by the significant main effect term and the insignificant interaction term (Table 3, Model 2).

Father Absence

The results from the full model in Table 2 (column 3) show that, controlling for income and all other factors, youths in father-absent families (mother only, mother-stepfather, and relatives/other) still had significantly higher odds of incarceration than those from mother-father families. The results from the timing of departure model (Table 3, Model 1) were also consistent with the father absence hypothesis: Youths who never had a father in the

TABLE 3
Father Absence and Incarceration: Testing the Instability and Father Absence Hypotheses

	Odds	*(z)*	*Model χ2(df)*	*Area Under ROC Curve*
Model 1: Timing of departure and no. of disruptions[a]			$\chi^2(25) = 186.51$***	0.75
Timing of departure				
No departure[b]	—	—		
From birth	3.061***	(4.97)		
Infancy to age 4	2.017*	(2.00)		
Ages 5 to 9	2.274**	(2.82)		
Ages 10 to 14	2.396**	(3.09)		
Ages 15 to 17	2.468***	(4.42)		
Number of family disruptions	1.123	(1.09)		
Model 2: Residential instability[a]			$\chi^2(24) = 187.81$***	0.74
Family structure in adolescence				
Mother-father[b]	—	—		
Mother only	2.113***	(4.53)		
Father only	1.103	(0.23)		
Mother-stepfather	3.786***	(4.84)		
Father-stepmother	3.899***	(3.55)		
Relatives/other	2.882***	(4.25)		
Residential moves (past year)				
0 moves[b]	—	—		
1 or more moves	1.412*	(2.12)		
Residential moves in mother and stepfather families (interaction)	0.350	(−1.80)		
Model 3: Child Support[a]			$\chi^2(25) = 188.93$***	0.74
Family type in adolescence				
Mother-father[b]	—	—		
Mother only	1.932	(1.53)		
Father only[c]	NA	NA		
Mother-stepfather	2.639***	(2.06)		
Father-stepmother	3.430*	(2.25)		
Relatives/other	2.780*	(2.21)		
Receipt of child support (in nonintact families)				
Yes	1.119	(0.22)		
No	1.123	(0.27)		
Test of difference for receipt of child support	$p = 0.99$			

Note. Incarceration figures are for first time incarcerated. Incarceration odds ratios are from multivariate logistic regression analysis. Receiver Operating Characteristic (ROC).

[a]Control variables: mother's education, teen mother, race, urban, region, unemployment, percentage of female-headed household, median family income, median age population, family income, family size, and age.

[b]Reference category.

[c]The estimation dropped the father-only category from the model because there was almost no receipt of child support.

*$p < .05$; **$p < .01$; ***$p < .001$.

household had the highest incarceration odds. We measured the receipt (or absence) of child support as an indicator of father involvement but did not find an association with incarceration (Table 3, Model 3).

Additional Caregivers

Results from the full model in Table 2 showed that the entry of a stepfather into the household did not compensate for an absent father, as hypothesized through greater supervision or parental resources. In fact, the odds of incarceration were high for both youths in mother-stepfather households (2.7) and those in mother-stepfather households (3.9). We investigated this finding further by measuring the risk of stepparent families, as compared with single parent families, and found that youths living in stepparent families faced odds of incarceration 3.2 times as high as those in mother-father households, compared with the incarceration odds of 2.0 of youths in single-parent families (Table 4, Model 1). The incarceration odds of youths in stepparent families were significantly higher than those in single-parent families ($p = .04$). The odds for youths from stepparent families were similar to those for youths who do not live with any parents.

Coresidence with grandparents varied significantly by family type, with the highest proportion in single-parent household and the lowest in stepparent households: 7.2% in single-mother households, 7.9% in single-father households, 4.6% in mother-father households, 2.2% in father-stepmother households, and only 0.2% in mother-stepfather households. The model with an interaction term for a grandparent residing in nonintact households showed a protective effect in the youth's chances of incarceration, with the coefficient close to significance ($p = .052$; Table 4, Model 2). When the family structure variables were specified in greater detail, the results were consistent but not as significant, as there are fewer observations in the category tested. For example, with a single-step differentiation, the interaction of a grandparent in a single-parent home reached a significance level of $p = .066$, and in a single-mother home in particular, $p = .092$.

Additional Analyses

Test scores. In the series of family models we added a control for the individual cognitive ability of the youth, as an additional check on the estimates of father absence. Test scores served as a control for individual differences in that they captured innate abilities, though they also varied significantly by socioeconomic differences. The race and income variables

TABLE 4
Father Absence and Incarceration: Testing the Additional Caregivers Hypothesis

Possible Protective Factors	*Odds*	*(z)*	*Model $\chi^2(df)$*	*Area Under ROC Curve*
Model 1: Stepparents[a]			$\chi^2(22) = 185.69$***	0.74
Family structure in adolescence				
Mother-father[b]	—	—		
Single parent	2.043***	(4.41)		
Stepparent	3.166***	(5.21)		
Relatives/other	3.113***	(4.57)		
Test of difference for single and stepparents:	$p = 0.04$*			
Model 2: Grandparents[a]			$\chi^2(22) = 183.41$***	0.74
Grandparents (main effect)	2.064	(1.90)		
Grandparents in nonintact families (interaction)	0.384	(– 1.94)		
Family structure in adolescence (main effect)				
Mother-father[b]	—	—		
Relatives/other	2.511*	(5.96)		

Note. Incarceration figures are for first time incarcerated. Incarceration odds ratios are from multivariate logistic regression analysis. Receiver Operating Characteristic (ROC).

[a]Control variables: mother's education, teen mother, race, urban, region, unemployment, percentage of female-headed household, median family income, median age population, family income, family size, and age.

[b]Reference category.

*$p < .05$; ***$p < .001$.

had weaker direct effects and were not consistently significant when test scores were added to the model (the correlation between income and test scores was relatively high, at 0.4, as was the correlation between race and test scores). In contrast, the family structure variables remained virtually the same and were highly significant predictors of incarceration after controlling for individual test scores. An interesting difference we did see, however, after controlling for test scores is that grandparents residing in households where a parent is absent showed a significant protective effect against youth incarceration ($p = .026$). In addition, the number of disruptions during childhood became significant ($p = .016$).

Delinquency. The multivariate results in Table 5 show that controlling for all of the factors included in the incarceration analyses, adolescents from father-absent families reported significantly higher levels of serious

delinquency than did those in mother-father households. Furthermore, the delinquency scale had an odds ratio of 9.8 ($p = .000$) in predicting incarceration in the 1980 round and an odds ratio of 2.8 ($p = .000$) in predicting ever incarcerated throughout the survey years. The second model in Table 5 showed that the results for the youths from father-absent households were similar when the delinquency variable was included in a regression of ever incarcerated.

DISCUSSION

These results showed that youth incarceration risks in a national male cohort were elevated for adolescents in father-absent households. Much of the apparent risk, however, could be attributed to the disadvantage that tends to accompany both father absence and incarceration. Father absence is more common among disadvantaged populations who contend with myriad socioeconomic difficulties such as teen motherhood, low education, and racial disparities. Although these conditions frequently co-occurred and contributed to higher risks of incarceration, they did not fully explain the higher risks. This study measured several aspects of father absence that might explain incarceration risks. The first aspect was the poverty experienced by adolescents in father-absent households. We found family income levels of single-mother households to be half that of two-parent households, and as we expected, the poverty of these households did play a sizable role in the likelihood of incarceration. However, taking into account poverty did not explain all of the association of father absence with incarceration, and we explored other explanations of the elevated risks.

We measured the contribution of family instability and the timing of the father's departure. We found that the father's departure at different stages in childhood had a relatively stable association with incarceration odds, contrary to our hypothesis that a departure during adolescence might present adjustment problems resulting in increased incarceration odds. We did identify, however, an association between residential moves, especially common among stepfamilies, and incarceration odds. Research had not previously established an association between residential moves and increased risks of incarceration, although it has been linked with family disruption, poverty, and school dropout (Astone & McLanahan, 1994; Long, 1992; Speare & Goldscheider, 1987). It is possible that residential mobility, particularly from family disruptions, hinders the creation of social capital that has been shown to be so important for positive life opportunities, including education (Teachman, Paasch, Day, & Carver, 1997).

TABLE 5
Father Absence and Serious Delinquency, Self-Reported

	Serious Delinquency[a] *Model 1*	
	Odds	*(z)*
Family type in adolescence		
Mother-father[b]	—	—
Mother only	1.423**	(2.84)
Father only	1.313	(0.81)
Mother-stepfather	1.780**	(3.48)
Father-stepmother	1.247	(0.68)
Relatives/other	1.239	(0.87)
Observations	2,702	
	Ever Incarcerated[a] *Model 2*	
	Odds	*(z)*
Family type in adolescence		
Mother-father[b]	—	—
Mother only	1.733**	(2.98)
Father only	1.624	(0.92)
Mother-stepfather	2.258**	(3.38)
Father-stepmother	2.246	(1.78)
Relatives/other	2.300**	(2.59)
Serious delinquency	2.77***	(6.61)
Observations	2,660	

Note. Odds ratios are from multivariate logistic regression analysis.
[a]Control variables: mother's education, teen mother, race, urban, region, unemployment, percentage of female-headed household, median family income, median age population, family income, family size, and age.
[b]Reference category.
**$p < .01$; ***$p < .001$.

Results showed that children born to single mothers, who never had a father in the household, faced relatively higher incarceration odds than children who experienced disruptions later in childhood or adolescence. Although risks for these children were likely to be reinforced by adverse selection effects because never-married mothers come from a more disadvantaged population than divorced mothers, the results were also consistent with the father absence hypothesis. It is possible that a father's distance from his adolescent son's development presents a risk for

negative expressions of the adolescent's autonomy. Research has shown the importance of parents, and the problems in high-risk families, in the development of healthy adolescent autonomy and positive social functioning (Boykin McElhaney & Allen, 2001; Furstenberg, Cook, Eccles, Elder, & Sameroff, 1999; Steinberg, 2001).

National survey data show that children born outside of marriage have relatively little contact with their fathers and that greater contact with nonresidential fathers does not significantly improve child well-being outcomes (Amato & Gilbreth, 1999; King, 1994; Seltzer, 1991). In our results, receipt of child support did not appear to make a significant difference for incarceration odds either, although these estimates should be seen as preliminary, given the limitations of the child support information and the fact that child support legislation has been rapidly changing over the period studied. However, it may be that a higher level of involvement, such as parental monitoring and supervision, is necessary for positive adolescent adjustment in many areas, including delinquency (Furstenberg et al., 1999; Jacobson & Crockett, 2000).

We expected that in a father-absent household, remarriage of the custodial parent might help a child by providing household income and adult supervision or a role model of the opposite sex, but youths in stepparent households faced incarceration odds almost 3 times as high as those in mother-father families, and significantly higher than those in single-parent households, even though stepfamilies were relatively well off on average. Youths in both mother-stepfather households and father-stepmother households showed elevated risks, although we had relatively little information on these households because they constituted only 1.6% of the sample.

These stepparent results indicate that certain processes within a stepparent family such as conflict or divided loyalties, rather than a father-absent family per se, might present greater difficulties for adolescents. Although conflict in the home environment was an omitted variable in our analysis and would clearly be an important predictor of family disruption, any additional conflict in stepparent families was likely to be a result of the reconfiguration rather than a predictor of who chooses to remarry. Spousal conflict, family violence, and child abuse are more common in stepparent families than in mother-father families (see Daly & Wilson, 1988). Conflict is problematic for adolescent adjustment regardless of living arrangement postdivorce (Buchanan et al., 1996). Several studies have shown that adolescent adjustment, in particular, suffers from incoherent relations in stepfamilies and that children within stepfamilies receiving differential treatment are at higher risk of problem behavior. Parent–child conflict is also higher in complex stepfamilies (Hetherington & Clingempeel,

1992; Hetherington et al., 1999; O'Connor, Hetherington, & Clingempeel, 1997).

In contrast to the situation with stepparent households, residential grandparents —who would be less likely to have conflicting interests over a child's welfare —may help protect against incarceration. It is interesting that grandparents living in mother-father households did not show a protective effect, but only those in households where at least one of the parents was absent showed the protective effect. Perhaps grandparents in nonintact households have a greater caretaking role, whereas those living in mother-father households may be more likely to require care themselves. Recent research on the role of grandparents has begun to explore the different reasons for coresidence (Pebley & Rudkin, 1999; Szinovacz, 1996). However, little has been written on the role of grandparents and problem behavior of children (Harrison, Richman, & Vittimberga 2000). Given the covariance in risk behaviors among adolescents (Jessor et al., 1991), research on other areas of adolescent risks that have found strong family structure effects, such as sexual risk behavior, should also explore the possible role of grandparents and stepparents.

We investigated the possibility that the criminal justice system may have unobservables affecting incarceration outcomes, including bias against father-absent youths (see Chilton & Markle, 1972; Cicourel, 1968) or targeting of minority populations. The findings on delinquency did not point to a noticeable bias in the system against father-absent youths. Adolescents themselves in father-absent families reported higher levels of delinquency, and although delinquency was a strong and significant predictor of incarceration, it did not take away the significance of the father absence variable. In addition, the stepparent finding on incarceration odds, which includes father-stepmother families, cannot be explained by bias in the criminal justice system against father-absent youths. Although parent criminality is likely to contribute youth incarceration (Brennan & Mednick, 1993; Mednick, Gabrielli, & Hutchings, 1984; Moffit, 1987), the stepparent finding also shows that the association between father absence and incarceration cannot be wholly attributed to that missing variable because the effects would not be higher in stepparent families.

Past studies have examined racial differences in family and crime, but results are contradictory (Gray-Ray & Ray, 1990; Matsueda & Heimer, 1987; Wells & Rankin, 1991). If minorities are targeted by the police or during another stage of the criminal justice process, incarcerated minorities may show a relatively weaker association between father absence and incarceration than Whites. The incarceration analysis did show stronger family structure effects for Whites. However, this effect could also be explained if the relatively few Whites in nonintact households had

particularly difficult family circumstances. It is also possible that, aside from any preexisting difficulties leading to a family type, certain patterns characteristic of Whites in these family types exacerbate difficulties for children, such as the greater frequency of remarriage or the lower likelihood of grandparents in the household.

This study adds to our knowledge on adolescence by showing a series of factors that can either magnify or attenuate the risks of incarceration for father-absent youths, including residential instability, remarriage, or coresidence with grandparents. Although some of these factors (e.g., stepparenting) have received attention in the literature on adolescent adjustment, there has been little research on delinquency and even less on incarceration risks. Research is needed to understand how residential instability, remarriage, or coresidence with grandparents may affect the supervision and effective discipline, or positive support for autonomy because we know these processes are important for avoidance of problem behavior (Furstenberg et al., 1999).

A limitation of these data is that they do not directly measure the family processes, including conflict, parent supervision, or adolescent adjustment and autonomy. These processes are important to investigate in future research to explore the ways father absence might increase incarceration risks, as instability and lack of resources did not explain all of the risk. Studies on certain samples have shown many process variables to be important in the case of parents, including discipline and monitoring (Larzelere & Patterson, 1990). Future research that includes these important process variables may also help explain the grandparent findings. In addition, data with better neighborhood measures, rather than county-level data, would also be necessary to understand community effects. This study, however, provides a starting point, giving us new directions for future research and policies to encourage healthy adolescent development in families at risk.

Programs that lend support in parenting, for example, may be more beneficial to single mothers than incentives to remarry. Marriage is frequently held as a preferred state for children in father-absent households, and policies to promote marriage are currently held as a solution. This study showed, however, that although children in father-absent households should be an important policy focus, marriage is not necessarily the answer to prevent incarceration unless it is between the two parents of the child; otherwise, children in single-parent households fare relatively better than those in stepparent households. After-school programs, with close mentoring and supervision from adult males, may be a more practical public policy solution for male adolescents to develop in an arena without conflict or divided loyalties.

Policy efforts to insure the well-being of children during and after family transitions should consider the potential impact of residential moves in this realm as well. Although stabilization in a family with a recent disruption is likely to be helpful, for children growing up in father-absent households, support in a more ongoing channel, such as connection to community and institutions, may have a greater impact. The integration of families into support systems in their communities can protect youth (Furstenberg et al., 1999). With the variety of existing family configurations, it is important to extend policy on adolescents to the many different adults in their lives. Youth risk-reduction programs that have been shown to work through increasing parent monitoring and communication (Stanton et al., 2000) may be effectively geared toward other adults in the household as well.

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