FATHERS AND YOUTHS' DELINQUENT BEHAVIOR^{*}

by

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Abstract

This paper analyzes the relationship between having one or more father figures and the likelihood that young people engage in delinquent behavior. We pay particular attention to distinguishing the roles of residential and non-residential, biological fathers as well as stepfathers. Using data from the National Longitudinal Study of Adolescent Health, we find that adolescent boys engage in more delinquent behavior if there is no father figure in their lives. However, adolescent girls' behavior is largely independent of the presence (or absence) of their fathers. The strong effect of family structure is not explained by the lack of paternal involvement that generally comes with fathers' absence, even though adolescents, especially boys, who spend time doing things with their fathers usually have better outcomes. There is also a link between adult delinquent behavior and adolescent family structure that cannot be explained by fathers' involvement with their adolescent sons and is only partially explained by fathers' involvement with their adolescent daughters. Finally, the strong link between adolescent family structure and delinquent behavior is not accounted for by the income differentials associated with fathers' absence. Our results suggest that the presence of a father figure during adolescence is likely to have protective effects, particularly for males, in both adolescence and young adulthood.

JEL: J12, J13, K42

Keywords: fathers, adolescence, family structure, crime, delinquent behavior

1. Introduction

Modern families have been indelibly altered by dramatic increases in the prevalence of non-marital childbearing, divorce, and remarriage. In the United States, for example, nearly four in ten births are to unmarried women (Ventura 2009) and the fraction of children under age 18 living in mother-only families has risen from 8 percent in 1960 to 23 percent in 2010 (U.S. Census Bureau 2010). Overall, 30 percent of U.S. children are estimated to spend some time living in stepfamilies (Bumpass et al. 1995). This dramatic increase in father-absent families has focused policy makers' attention on the important role that fathers play in child and adolescent development.

Fathers' engagement with their children has been linked to higher academic achievement, improved social and emotional well-being, and lower rates of delinquency, risk taking, and other problem behaviors.¹ However, it is the quality--rather than the frequency--of fathers' interaction with their children that seems to matter, making it vital to study fathers' relationships with their children in depth (see Bronte-Tinkew et al. 2006).

Early research assessed the role of fathers in two-parent families (e.g. Harris and Marmer 1996; Harris et al. 1998; Hofferth 2006; and references cited therein), leaving many questions about the consequences of living with biological fathers versus stepfathers and the contributions of non-residential fathers unanswered. Since then, non-residential fathers and stepfathers have become the focus of substantial research effort (see White and Gilbreth 2001; King 2006; Yuan and Hamilton 2006), though the literature on each has developed somewhat separately. Research on stepfathers typically ignores children's relationships with their non-residential fathers, while research on non-residential fathers often does little more than simply account for the fact that mothers may have remarried (King 2006).² Importantly, the few studies which do account for the full complexity of children's family relationships

¹ For reviews see Harris and Marmer (1996), Amato and Rivera (1999), and Bronte-Tinkew et al. (2006).

² Much of the literature on non-residential fathers seems to be about the relationship between child support payments and access to children (e.g., Ermisch 2008; Del Boca and Ribero 2003).

paint a much more cautious picture about the benefits of fathers' engagement with their children. Yuan and Hamilton (2006), for example, conclude that close, non-conflictual relationships with stepfathers yield benefits, however "involvement with non-residential fathers provides little benefit for adolescents and may even be detrimental" (p. 1209).³ In their analysis, they use a single index of problem behavior constructed by averaging individual responses to various delinquency items. This approach implicitly assumes that the marginal effects of various types of delinquent behaviors are equal to each other.

We contribute to this emerging literature by using data from the National Longitudinal Survey of Adolescent Health (Add Health) to assess the impact of biological fathers, both residential and non-residential, and residential stepfathers on the likelihood that youth will engage in a range of delinquent behaviors (i.e. property crime, violent crime, selling drugs, and taking part in gang fighting). We allow fathers to influence youths' behavior through (i) the amount of time they spend doing things with and talking to young people; (ii) the contributions they make to household income; and (iii) simply being present in the household. We focus on the following questions: How does the incidence of delinquent behavior vary across family structures? Does spending time with or talking to fathers reduce the likelihood that youth will engage in delinquent behavior? Finally, does accounting for the extent to which fathers are involved with young people help us to understand the link between youths' delinquent behavior and the types of families they are growing up in?

In addressing these questions, we make a number of contributions to the literature. First, unlike previous researchers, we use panel data estimation to minimize concerns about reverse causality--i.e., the possibility that delinquent behavior may influence fathers' involvement. Second, we exploit detailed information about family structure, the nature of

³ Similarly, Kalil et al. (2010) find that living in closer proximity to one's biological father after divorce is associated with poorer outcomes in young adulthood. In contrast, King (2006) analyzes the same data source as Yan and Hamilton, but is somewhat more optimistic about the role of non-residential fathers. She finds that while close relationships with both non-residential and stepfathers are associated with better outcomes, it is the relationship with the stepfather that is more influential.

fathers' involvement with their children, and household income to simultaneously consider the multiple pathways through which fathers might matter. Third, we account for adolescents' family background, in particular, their relationships with their mothers, in order to minimize the potential for unobserved heterogeneity to bias our estimates. Finally, we consider delinquent behavior both in adolescence and early adulthood.

2. Estimation Strategy

We begin with a simple conceptual framework in which young adults' decisions to engage in delinquent behavior are driven by the anticipated costs and benefits of their actions. These costs and benefits are influenced in part by parental investments. We are particularly interested in the investments that fathers make in their children and assume that fathers influence their children through three primary channels. First, the financial resources they bring to the household are used to fund critical investments in children's development, health, education, psychosocial skills, and so on. These human capital investments raise the returns to productive market work and stable family structures when children reach adulthood, thus reducing the benefits and increasing the opportunity costs of delinquent behavior. Second, fathers spend time and effort in raising their children which has long-term consequences for children's intellectual and developmental well-being including the incidence of drinking, delinquency, and other problem behaviors.⁴ Finally, fathers may affect their children's life chances simply by being resident in the household while they are growing up. Fathers give children male role models and may influence children's preferences, values, and attitudes, sense of security, self-esteem, and ability to build positive relationships with others. Fathers also increase the degree of adult supervision in the household, which may lead to a direct reduction in delinquent behavior (Wilder and Watt 2002; Aizer 2004; Averett et al. 2009).

⁴ For evidence that fathers can influence adolescent drinking, delinquency, and other problem behaviors see Cooksey and Fondell (1996); Harris and Marmer (1996); Harris et al. (1998); Amato and Rivera (1999); Bronte-Tinkew et al. (2006); Hofferth (2006); Antecol and Bedard (2007); Coley and Medeiros (2007); Michael and Ben-Zur (2007). See Hofferth (2006) for a review of this literature more generally.

Much of the empirical estimates of the effect of children's family structure on later life outcomes confound these pathways.⁵ There is a voluminous literature, for example, which concludes that growing up in a single parent household is associated with increased risk taking (e.g. Antecol and Bedard 2007). However, unless researchers separately account for the many ways in which fathers affect their children, estimates of the effect of family structure--i.e. simple comparisons of outcomes when there is a father present and when there is not--confound all of them. This makes it impossible to identify the mechanism linking fathers to children's outcomes. Moreover, children often live in what are complex family structures and this complexity is often ignored (see Conway and Li 2012). It is particularly important to consider the nature of fathers' relationships with their children--i.e. whether residential or not, whether biological or step, etc.--and to account for the fact that many children have multiple father figures in their lives (see White and Gilbreth 2001).

The above conceptual framework is useful in clarifying reduced-form estimates of the link between family structure in adolescence (measured by fathers' presence) and young adults' participation in delinquent behavior (Y_{it}). We begin with a baseline model:

$$Y_{it} = \sum_{j=1}^5 F_{i0}^j \alpha_j + Y_{i0} \theta + \varepsilon_{it} \quad (1)$$

where i indexes individuals, period 0 coincides with wave 1 and $t = 1, 2$ indexes waves 2 and 4 respectively. The effect of fathers' presence in their adolescent children's lives is captured through a set of five mutually exclusive indicator variables reflecting family structure, F_{i0}^j $j = 1 \dots 5$, i.e. the specific configuration of father figures that each child had in wave 1 (see Section 3.2).⁶ We also account for the effect of delinquent behavior in adolescence (Y_{i0}) on the propensity to engage in subsequent delinquent behavior. The inclusion of a lagged dependent variable in equation (1) provides a simple proxy for any unobserved factors that are correlated both with adolescent family structure and subsequent delinquent behavior. Consequently, α_j captures the total effect of alternative adolescent family structures--characterized by differences in father figures--on post-adolescent delinquent behavior controlling for whether or not an individual engaged in delinquent behavior as an adolescent. Finally, ε_{it} is a normally distributed error term with mean zero and unit variance.

⁵ See Cobb-Clark and Tekin (2011) for a more formal treatment of this issue.

⁶ An alternative is to take advantage of the panel structure of Add Health data to exploit changes in family structure between waves 1 and 2. There is not enough variation to detect any meaningful effects, however.

Estimates from this baseline model are compared to those from a model in which we also account for the degree to which fathers are actively involved in their adolescent children's lives. Specifically,

$$Y_{it} = \sum_{j=1}^5 F_{i0}^j \alpha_t' + \sum_{j=1}^5 I_{i0} * F_{i0}^j \beta_t + Y_{i0} \theta_t + \varepsilon_{it} \quad (2)$$

where I_{i0} is a vector which includes measures of the time that fathers spend doing things with and talking to their adolescent children. In this case, α_t' captures the effect of fathers' presence in their adolescent children's lives--i.e., the effect of fathers who spend no time talking to or doing things with their children--while β_t reflects the additional effect of fathers' engagement with adolescents on post-adolescent delinquent behavior.

Finally, we also consider a specification which adds controls for i) total household income; ii) mothers' engagement with their adolescents; and iii) standard demographic controls (age, race and ethnicity, immigrant status, religion, number of siblings, birth order, and health status). These additional controls allow us to sharpen our understanding of the effects of fathers' presence and fathers' involvement in adolescents' lives. Accounting for total family income is particularly important as this allows us to separate the income effect of living with a father from the supervisory or role model effects of fathers.⁷ Moreover, previous research points to the importance of accounting for mothers' involvement with their children when assessing the effect of fathers on child outcomes as mothers may increase the time and effort they devote to children as a means of compensating for fathers' lack of engagement (Amato and Rivera 1999; Bronte-Tinkew et al. 2006). Finally, standard demographic controls are used to account for variation in the relative costs and benefits of delinquent behavior.

The panel structure of the Add Health data allows us to overcome some of the econometric challenges faced by previous researchers. In particular, our ability to estimate the effect of father figures during adolescence on delinquent behavior in young adulthood diminishes concerns about reverse causality and constitutes a valuable improvement over previous research, which attempts to estimate the effect of family structure on simultaneous

⁷ Unfortunately, Add Health data do not provide a measure of fathers' income separate from total household income.

outcomes using cross-sectional data. Yuan and Hamilton (2006), for example, find "few beneficial associations between non-residential-father involvement and adolescent well-being" (pg. 1205). Yet the interpretation of these cross-sectional associations are made difficult by the potential for family structure itself (for example, parental separation) or parental involvement (for example, parental supervision) to respond to adolescent behavior (for example, youth drug taking). Moreover, it is important to note that the direction of the bias that would be caused by failing to account for the potential endogeneity of father's involvement in children's lives is not obvious a priori. On the one hand, a dysfunctional relationship between spouses may both limit the extent to which a father is involved in his child's life and predispose children to delinquent behavior later in their lives, which would result in an underestimate of the actual effect of father's involvement. On the other hand, having a child with learning disabilities or behavioral problems may lead parents to make additional investments in that child in order to prevent these conditions from turning into delinquent behavior later, which would result in an overestimate of the effect of father's involvement. Fortunately, we are able to use lagged delinquent behavior as a proxy for the unobserved factors that are correlated with adolescent family structure, but continue to drive delinquent behavior in young adulthood.

3. Data

Our data come from the National Longitudinal Study of Adolescent Health (Add Health) which was administered by the Carolina Population Center at the University of North Carolina at Chapel Hill. The first wave of Add Health was administered between September 1994 and April 1995 to 20,745 nationally-representative adolescents in grades 7 through 12. An in-school questionnaire was given to every student who attended one of the 132 sampled U.S. schools. A random sample of approximately 200 adolescents from each high

school/feeder school pair was selected for in-home interviews. Three follow-up interviews have been conducted since the original Add Health data collection. The first follow-up interview (wave 2) was administered in 1996; wave 3 was conducted in 2001 when respondents were between the ages of 18 - 26; and wave 4 was administered in 2007 - 2008 to 15,701 of the original Add Health participants.⁸

Add Health is ideal for the purposes for a number of reasons. First, it was specifically designed to provide rich information on adolescents' health and risk behaviors. Therefore, a detailed set of questions revealing information about involvement in delinquent behaviors was asked of the respondents in each wave. Second, it is considered to be the largest and most comprehensive survey of adolescents ever conducted. Third, the longitudinal nature of the Add Health allows us to examine the long-term relationship between family structure and delinquent behavior. Finally, since we have information on delinquent behavior in all waves, we can account for baseline differences in these behaviors in our empirical analyses.

3.1. Estimation Sample

We use data from waves 1, 2 and 4 in this paper.⁹ We make a number of exclusion restrictions. Specifically, we delete children living alone or in a foster home in any of the waves. We also delete observations with missing information on the type of father figure or on fathers' involvement.¹⁰ We further limit our analysis sample to those adolescents living with biological mothers in wave 1. Following Add Health data user guidelines, we also drop observations with missing sample weights. Applying these criteria and merging wave 1 with waves 2 and 4 results in an analysis sample of 11,295 adolescents for the combined waves 1 and 2 sample and 11,731 adolescents for the combined waves 1 and 4 sample. The age range

⁸ See Harris et al (2009) for more on the Add Health research design.

⁹ We also conducted our analyses using wave 3 data. These results are largely consistent with those presented here. For brevity, these results are not presented here, but are available from the authors upon request.

¹⁰ Recoding observations with missing father figure information as having “no father” did not substantially affect our results.

of adolescents in our analysis sample is between 11 and 21.¹¹ Finally, we retain observations with missing data on control variables by creating indicators for missing data.

In our models, we control for a set of attributes that may influence individuals' propensity to engage in delinquent behavior. These include binary indicators of age, race, ethnicity, nativity status, health status, religious affiliation, number of siblings, and whether the person is the first child in the family. In some of our analysis, we also control for binary indicators of parental income and mothers' involvement with adolescents.¹²

3.2. Family Structure

As we have restricted our estimation sample to only those individuals living with their biological mother in wave 1, the variation in family structure comes from the various father figures present at wave 1. Thus, our five family structure indicators take on the following values: i) $F_{i0}^1 = 1$ residential, biological father only and 0 otherwise; ii) $F_{i0}^2 = 1$ non-residential, biological father only and 0 otherwise; iii) $F_{i0}^3 = 1$ no father figure and 0 otherwise; iv) $F_{i0}^4 = 1$ residential, step-father and non-residential, biological father and 0 otherwise; and v) $F_{i0}^5 = 1$ residential, step-father only and 0 otherwise. In our regressions, F_{i0}^3 is omitted and all effects of family structure are measured relative to this group. It is important to note that five indicators span the full set of possible family structures. One of the advantages of the Add Health data is that we have the capacity to take all of them into account. Previous researchers often focus only on a limited set of family structures, by combining outcomes across disparate family types and ignoring the interaction between non-residential, biological fathers and residential, stepfathers (see King 2006).

Information about the prevalence of specific family structures is presented in Table 1.

Of those adolescents living with their biological mothers, more than 61.6 percent also live with their biological fathers. Consistent with previous U.S. evidence (see Dahl and Moretti 2008; Lundberg 2005), we find that teenage boys are more likely to be living with their biological fathers than are teenage girls. More than one in four adolescents (28.5 percent) in our sample live with a single mother and have a non-residential, biological father in their lives. The likelihood of adolescents having two father figures in their lives (i.e., both a non-residential, biological father and a stepfather) (7.3 percent) is the same as having no father

¹¹ This is the age range in wave 1. However, it must be noted there are only 78 adolescents at ages 11, 19, 20, or 21 in wave 1, so the overwhelming majority of adolescents are between ages 12 and 18.

¹² Descriptive statistics for the independent variables of interest are consistent with those of the relevant literature and are available upon request.

figure at all (7.1 percent). Finally, a small proportion of young people (2.8 percent) lives with a stepfather only and do not have a relationship with their biological father.

3.3. *Delinquent Behavior*

The Add Health contains many questions related to delinquent and criminal activity in the previous 12 months. These questions are similar to those found in other surveys and to the official definitions of “crime” used by government sources such as the Bureau of Justice Statistics. We focus on a representative set of five types of delinquent behaviors in this analysis. The first four are (i) property crime, (ii) violent crime, (iii) selling drugs, and (iv) taking part in a gang fight in the past 12 months. These comprise most of the delinquent behaviors undertaken by young people. Finally, we also analyze a fifth measure which captures whether any of these four delinquent behaviors occurred in the past 12 months.¹³

More specifically, we define a binary indicator of property crime which equals one whenever an individual committed property damage, theft, or burglary in the past 12 months and zero otherwise. The property damage information is derived from the Add Health questionnaire item: “Did you deliberately damage property that didn’t belong to you in the past 12 months?” Theft is derived from two separate questions asking whether or not the respondent stole something worth more than \$50 dollars or worth less than \$50 dollars in the past 12 months. Burglary is based on the question: “In the past 12 months, did you go into a house or building to steal something?” We also create a binary indicator of whether or not the respondent committed a violent crime (i.e. either assault or robbery) in the past 12 months. Assault is derived from the survey questionnaire: “In the past 12 months, did you hurt someone badly enough to need bandages or care from a doctor or nurse?” Robbery is based on the question: “In the past 12 months, did you use or threaten to use a weapon to get something from someone?” Our indicator for selling drugs equals one whenever respondents

¹³ Mocan and Tekin (2005, 2006) show that the rates of delinquent behaviors reported in Add Health, e.g. crime and illicit drug use, are comparable to those in other national data sources.

report selling marijuana or other drugs in the past 12 months and zero otherwise. Our binary indicator of taking part in a gang fight equals one if the individual took part in a fight with a group of friends against another group in the past 12 months. Finally, we created an indicator for any delinquent behavior which takes the value of one if the respondent reports committing any of these acts in the past 12 months and zero otherwise.

3.4. Family Structure and Parental Involvement with Adolescents

One of the advantages of the Add Health survey is the availability of detailed data about the extent to which parents are involved in various aspects of their adolescent children's lives. Information is separately available for mothers, biological fathers (both residential and non-residential), as well as the stepfather if there is one. We relied on factor analysis to reduce the dimensionality of the measures representing fathers' involvement.¹⁴ Based on this analysis, we grouped these various survey items into two categories: one involving doing things with the adolescent and the other involving talking with him or her about various issues. Specifically, the former comprises five activities that youths may undertake with their parents and is based on the following questionnaire items: In the past four weeks, (1) "Have you gone shopping?"; (2) "Have you played a sport?"; (3) "Have you gone to a religious service or church-related event?"; (4) "Have you gone to a movie, play, museum, or concert, or sports event?"; and (5) "Have you worked on a project for school?" Similarly, the activities involving talking with parents are based on the following four questionnaire items: (1) "Have you talked about someone you're dating, or a party you went to?"; (2) "Have you had a talk about a personal problem you were having?"; (3) "Have you talked about your school work or grades?"; and (4) "Have you talked about other things you're doing in school?" We created separate indexes for mothers, residential fathers, and non-residential fathers by summing up the five (four) binary indicators in the former (later) category. Thus,

¹⁴ Factor analysis has been frequently used by researchers to reduce the data to a smaller set of dimensions (e.g., Cobb-Clark and Schurer 2012 and Okumura and Usui 2010).

each index represents the number of activities that youths do with their parents or alternatively the range of issues that youths discuss with their parents.

4. Results

We consider three specifications increasing in controls in order to isolate the effects of fathers' presence from the effects of the time and income that fathers invest in their adolescents (see Section 2.1).¹⁵ As both the incidence and determinants of risky behavior vary with gender (see Michael and Ben-Zur 2007; Abbott-Chapman et al. 2008), results are presented separately for young men and young women.

4.1. Fathers' Influence on Delinquent Behavior in Adolescence

Table 2 presents the results from our baseline model (see equation 4) of adolescents' delinquent behavior measured in wave 2 when youth were aged 11 – 21. These results control only for initial (i.e. wave 1) family structure and delinquent behavior.

Not surprisingly, adolescents who have engaged in delinquent behavior in the past are much more likely to do so again. In particular, adolescent boys and girls who report participating in some form of delinquent behavior in wave 1 are approximately 38 percentage points more likely to also report engaging in some form of delinquent behavior in wave 2. The degree of persistence in behavior over time appears to be the lowest for violent behavior (i.e. assault or robbery) and the highest for selling drugs, especially for boys.

Adolescent boys who have a father figure in their lives are significantly less likely to engage in subsequent delinquent behavior than are their peers with no father in their lives. For example, the incidence of any form of delinquent behavior is 7.6 percentage points lower

¹⁵ Add Health relies on a school-based sample so we cluster standard errors at the school level to adjust for correlations within a school.

among boys living with their biological fathers and is 8.5 percentage points lower among boys who live with stepfathers and have no relationship with their biological fathers. Delinquent behavior is also somewhat less likely among boys with non-residential, biological fathers whether or not their mothers have remarried (4.0 and 5.0 percentage points, respectively), though the former effect is not significant. Fathers are associated with a particularly large reduction in the incidence of violent behavior and gang fighting among adolescent boys. These effects are quite sizeable given that we are also controlling for whether or not adolescents were engaged in delinquent behavior at the baseline.

The presence or absence of father figures, on the other hand, appears to have little relationship with the chances that adolescent girls will engage in delinquent behavior. Controlling for initial (wave 1) delinquent behavior, girls with non-residential, biological fathers and/or stepfathers in wave 1 are as likely as girls with no fathers to engage in delinquent behavior in wave 2. We find no significant difference in delinquent behavior across these four family structures whether we consider delinquent behaviors separately or as a whole. Only residential, biological fathers appear to be related to a modest reduction in delinquent behavior among adolescent girls. Girls living with their biological fathers are less likely to engage in violent behavior (3.0 percentage points), selling drugs (1.9 percentage points), and gang fighting (4.1 percentage points) than are girls with no fathers. Overall, adolescent girls living with their biological fathers are 3.6 percentage points less likely than girls with no fathers to engage in some form of delinquent behavior though this difference is not statistically significant.

Next we turn our focus to the results of our augmented model which allows us to assess the relative importance of fathers' presence versus fathers' involvement in understanding delinquent behavior among adolescents. We consider two alternative specifications. The first adds interactions between family structure and fathers' involvement

with their adolescent children to the baseline model (see equation 5), while the second also incorporates a number of important controls for i) mothers' involvement with adolescents; ii) family income; and iii) demographic characteristics.¹⁶ Results are reported in Tables 3A and 3B for boys and girls, respectively.

Adolescent boys living with a biological father who does not participate in joint activities or talk about any issues are 5.5 percentage points less likely to engage in any delinquent behavior in wave 2. By way of comparison, the total effect of living with a residential, biological father (as opposed to having no father figure at all) is associated with a 7.6 percentage points lower likelihood of engaging in in delinquent behavior compared to the baseline model. Similarly, the reduction in delinquent behaviors associated with living with one's biological father falls moderately from 6.2 to 4.3 percentage points for violent behavior and only slightly from 7.4 to 7.1 percentage points for gang fighting, when we control for the extent of residential, biological fathers' involvement with their adolescent sons. Moreover, the effect of having a non-residential, biological father only (relative to having no father figure) on any form of delinquent behavior remains unchanged once we control for fathers' involvement, while the effect of having both a non-residential, biological father and a stepfather actually increases suggesting that in these households fathers' involvement with their sons is associated with increased delinquent behavior.¹⁷ Finally, controlling for mothers' involvement in their adolescent sons' lives and differences in household income across family structures as well as exogenous determinants of delinquent behavior do not cause any appreciable changes to these results (see the even numbered columns in Table 3A).

¹⁶ Note that the independent effects of father's involvement on delinquent variable are captured by the interaction terms between family structure and fathers' involvement.

¹⁷ We conducted F-tests to assess the joint significance of the family structure and involvement interactions. Results from these tests indicate that most of these interactions are jointly insignificant for both adolescent boys and girls. The only exceptions are the family structure interactions associated with activities involving doing things together with boys in the models of any delinquent behaviour and violent crime. For girls, all the interactions are imprecisely estimated.

Results for adolescent girls are reported in Table 3B. Results from our baseline specification (see Table 2) indicate that the delinquent behavior of adolescent girls is generally unrelated to the presence or absence of father figures in their lives. One exception is biological, residential fathers who appear to have some modest protective effect in reducing delinquent behavior among adolescent girls. This result also holds once we account for the extent to which fathers are involved in doing things with and talking to their adolescent daughters. Unlike the case for adolescent boys, the incidence of delinquent behavior among adolescent girls in wave 2 is not significantly related to wave 1 family structure once we control for fathers' level of involvement and for delinquent behavior in wave 1. The single exception is that adolescent girls living with uninvolved, biological fathers are 2.2 percentage points less likely to engage in selling drugs than are girls who have no father figure in their lives. Again, if anything, it is fathers' presence -- as opposed to fathers' involvement -- that appears to be relatively more important for girls.

Overall, our results strongly suggest that much of the overall (baseline) impact of fathers on their adolescent sons' delinquent behavior reflects the effect of fathers' presence rather than their involvement with their sons or the financial contribution they make to household income.¹⁸ Although in most cases there is no link between family structure and the propensity for adolescent girls to engage in delinquent behavior, where we do find an effect, in particular with respect to selling drugs and gang fighting, it is again the case that it is fathers' presence rather than the degree of their involvement that appears relatively more important. In other words, although there are some significant differences in the effect of fathers' involvement in different family structures, these differences contribute little to our understanding of why adolescents' delinquent behavior is so strongly linked to their family structure. This is consistent with Cooksey and Fondell (1996) and Painter and Levine (2004)

¹⁸ Yuan and Hamilton (2006) analyze cross-sectional data from wave 1 of Add Health and find that fathers' involvement with their adolescents has no effect on depression and problem behavior.

who also conclude that although the time fathers spend with their children has positive effects on academic performance and high school completion rates, it does little to mediate the effects of family structure. In other words, any negative consequences of fathers' absence do not appear to be explained by a lack of fathers' time per se. Moreover, we have also controlled for household income implying that the effect of fathers' absence on adolescents' delinquent behavior is also not explained by the lack of fathers' income.¹⁹

4.2. Fathers' Influence on Delinquent Behavior in Adulthood

One of the great advantages of the Add Health data is that -- unlike previous researchers -- we have the opportunity to study the effects of adolescent family structure on delinquent behavior in adulthood. The criminological literature establishes that criminal behavior itself is passed from one generation to the next implying that many children simply follow their fathers and mothers into crime (see for example Goodwin and Davis 2011). We know much less, however, about the way that fathers' parenting styles, level of engagement, and relationships with their adolescent children influence their children's criminal activity a decade or more later. Addressing this issue is important given ongoing concerns about crime more generally and the change in the propensity to commit a crime as people age.

Table 4 presents the results from our baseline model (see equation 4) of young adults' delinquent behavior measured in wave 4 when youth were aged 25 - 32. This model controls only for initial (wave 1) family structure and delinquent behavior when young adults were adolescents aged 11 to 20.

The results demonstrate the enduring link between living with one's biological father and a reduced tendency for men to engage in delinquent behavior even in adulthood. Specifically, men who lived with their biological fathers while they were adolescents are 5.1

¹⁹ We have been unable to account for any income transfers that nonresidential, biological fathers may be making to biological mothers. To the extent that higher income is associated with a reduction in delinquent behavior, this would lead us to understate the reduction in delinquent behavior associated with having a nonresidential, biological father as opposed to no father figure.

percentage points less likely than those with no father figure to engage in any delinquent behavior as adults even after accounting for their delinquent behavior in adolescence. Moreover, living with a residential, biological father -- rather than having no father figure -- while growing up is associated with lower incidence of a broad range of delinquent behaviors later in life including violent crime (4.1 percentage points), selling drugs (3.5 percentage points), and taking part in a gang fight (2.9 percentage points). Finally, the incidence of violence among adult men is also lower among those who lived with stepfathers irrespective of whether their biological fathers were present in their lives (3.1 percentage points) or not (4.0 percentage points).

In all other cases, we find no significant differences in the incidence of delinquent behavior among adult men growing up in alternative family circumstances. It is also the case that, with one minor exception, the presence or absence of father figures in adolescence is unrelated to the incidence of delinquent behavior among adult women.

As before, we estimate two augmented models of delinquent behavior that allow us to assess the relative importance of fathers' presence versus fathers' involvement during adolescence in understanding delinquent behavior among adults. The first adds interactions between family structure and fathers' involvement with their adolescent children to our baseline model of adult delinquent behavior (see equation 5), while the second also controls for i) mothers' involvement with their children; ii) family income; and iii) demographic characteristics all measured during adolescence. Results are reported in Tables 5A and 5B for men and women respectively.

Comparing results from our baseline and augmented models indicates that accounting for fathers' involvement with their adolescent sons has no appreciable effect on the relationship between adolescents' family structure and their delinquent behavior in adulthood. In particular, adult men who lived with their biological fathers while adolescents and who, as

adolescents, reported that their fathers were not involved in doing things or talking with them, are 5.2 percentage points less likely to engage in any delinquent behavior relative to men with no father figures in adolescence (see Table 5A). In other words, the presence in the household of biological fathers who are uninvolved with their adolescent sons (as measured by our two indices) is associated with a 5.2 percentage point reduction in the incidence of delinquent behavior once those sons reach adulthood. This is virtually identical to the estimated 5.1 percentage point total effect of residential, biological fathers on any form of delinquent behavior obtained in our baseline model (see Table 4). Overall, that there is no evidence that fathers' involvement in their adolescent sons' lives mitigates the effects of adolescent family structure on any of the specific forms of delinquent behavior we consider. The effect of living with a non-involved, biological father during adolescence on adult delinquent behavior is reduced somewhat once we also control for mothers' involvement, household income, and demographic characteristics during adolescence. In particular, the effect of living with a non-involved, biological father -- relative to having no father figure -- in reducing the delinquent behavior of adult men overall falls from 5.2 percentage points to 4.0 percentage points and becomes statistically insignificant. The reduction in the effect of living with biological fathers on the chances of adult men engaging in other forms of delinquent behavior is similar. At the same time, accounting for the interaction that men had with their mothers, household income, and demographic characteristics while these men were growing up leaves the effect of other types of family structures on adult crime rates nearly unchanged.

Fathers appear to have a very different effect on the outcomes of their adult daughters. Most importantly, there is no effect of simply growing up with a father figure on the likelihood that adult women engage in delinquent behavior. Women growing up with fathers who are not involved in talking to or doing things with them are as likely to engage in a range of criminal activities in adulthood as women who grew up with no fathers (see Table 5B).

Living with a biological father, on the other hand, who is involved in taking his daughter shopping, to soccer games, to church or to movies, etc. does reduce the chances that his adolescent daughter will be involved in delinquent activities once she reaches adulthood. Specifically, each additional activity that a residential, biological father participates in with his adolescent daughter results in between a 0.8 and 1.0 percentage point reduction in her chances of engaging in any form of criminal activity. The involvement of residential, stepfathers in their adolescent stepdaughters' activities also reduces somewhat the incidence of adult delinquent behavior in some cases.²⁰ These results are in sharp contrast to those for adult men who largely benefit from simply having a father figure present during adolescence.

It is also important to note that growing up with only a non-residential, biological father who spent time talking with his adolescent daughter appears to be associated with slight increases in her delinquent behavior as measured by any type of crime, violent crime, and selling drugs once she reaches adulthood. This surprising result may be due to the possibility that these verbal interactions between the non-residential father and the adolescent is an indication of a problematic relationship between the two, which might have manifested itself as delinquent behavior later in life.²¹

Finally, note that the incidence of criminal behavior is significantly lower among adult men and women whose mothers spent time doing things with them as adolescents. Specifically, each additional activity that mothers are engaged in with their adolescent sons results in a 1.1 (0.7) percentage point fall in the likelihood that their sons (daughters) are engaged in any form of delinquent behavior as adults. This suggests that the positive effects

²⁰ Specifically, the incidence of property crime and gang fighting is reduced as stepfathers' involvement increases for women with both residential stepfathers and non-residential, biological fathers in adolescence.

²¹ The F-tests revealed that the estimates on the interaction between involvement and family structure are jointly insignificant in almost all cases. The exceptions are that the interactions between family structure and talking are significantly different from zero in the any delinquent behavior model for men and in the violent crime model for women.

of mothers' involvement on child and adolescent outcomes (e.g. Amato and Rivera 1999; Bronte-Tinkew et al. 2006) may continue well into adulthood.

5. Conclusions

This paper uses Add Health data to assess the impact of having a father figure on the likelihood that youths will engage in a range of delinquent behaviors later in life. Unlike previous researchers, we consider the full range of possible father figures including residential and non-residential, biological fathers and residential stepfathers. The richness of our data also allows us to simultaneously consider mothers' relationships with their children as well as the multiple pathways through which fathers might matter. Finally, we consider delinquent behavior both in adolescence and early adulthood.

We find that while adolescent girls' behavior is largely independent of the presence (or absence) of their fathers, adolescent boys engage in more delinquent behavior if there is no father figure in their lives. This latter effect cannot be explained by the lack of fathers' active involvement in their sons' lives per se, however, despite the fact that the time boys spend doing things with their fathers often does have beneficial effects. We also find a link between adult delinquent behavior and adolescent family structure that cannot be explained by fathers' involvement in doing things with their adolescent sons and is only partially explained by fathers' involvement with their adolescent daughters. Finally, the strong link between adolescent family structure and delinquent behavior is not accounted for by the income disparities associated with fathers' absence.

These results underscore the complexities of designing public policies to reduce youths' delinquent behavior by strengthening their family ties.²² Increasing the time that fathers spend being actively engaged with their children would almost surely be beneficial --

²² Cooksey and Fondell (1996) and Painter and Levine (2004) also find that the time that fathers spend with their children does not mitigate the effect of family structure. Yuan and Hamilton (2006) conclude that adolescent outcomes may be improved by a close relationship with stepfathers, but are not benefited and may be harmed by involvement with nonresidential fathers. Other researchers find small, but positive, effects of paternal involvement (e.g. Amato and Rivera 1999; Bronte-Tinkew et al 2006).

especially for boys -- but it seems unlikely to eliminate the disparity in delinquency rates among those who do and do not grow up with fathers. Fathers who spend very little time doing things with or talking to their children have a protective effect in reducing the chances their children will engage in delinquent behavior. This may suggest that the sense of security generated by the presence of a male role model in a child's life has protective effects for the child irrespective of the degree of interaction between the child and the father. At the same time, Bronte-Tinkew et al. (2006) argue it is the quality not the quantity of fathers' interaction with their children that matters, while Harris and Marmer (1996) conclude that it is fathers' emotional rather than behavioral involvement which reduces delinquency in poor families. Thus, it is also possible that the measures available to us in the Add health data are simply not refined enough to pick up these distinctions.

It also seems clear that what works for adolescent boys will not work equally well for adolescent girls. This is perhaps not surprising given that both the incidence and determinants of risk taking vary with gender (see Abbott-Chapman et al. 2008; Michael and Ben-Zur 2007), and that parental investments in their children are dependent on the sex of the child (e.g. Gugl and Welling 2012). On the one hand, adolescent girls' decisions to engage in delinquent criminal behavior are less closely linked to whether or not there is a father present in their lives. Thus, they may be less sensitive to the increasing trends towards non-marital childbearing, divorce, and remarriage. On the other hand, the weakness of this relationship effectively eliminates one of the levers that policy makers might use in reducing delinquent behavior among girls.

Finally, while income maintenance programs are typically the backbone of any social assistance system, we find little evidence that higher family incomes, in and of themselves, are a panacea for solving the problems associated with youths' delinquent behavior. This is broadly consistent with Painter and Levine (2004) who find that lower income explains the

disadvantage associated with growing up in a single-parent home, but that neither gaps in income nor in parental involvement explain the disadvantages associated with stepfamilies. At the same time, Walker and Zhou (2007) find that the negative effects of parental separation on children's education is largely explained by the reduction in income associated with parents separating. Thus, it may be the case that the income shocks associated with changes in family structure, i.e. parental separation, have negative effects which dissipate over time as families stabilize. Still, Add Health data do not permit us to separately identify the portion of total household income that comes from residential and non-residential fathers. Nor are we able to measure the direct expenditures that non-residential fathers make on their children. Previous researchers have found that financial support from noncustodial fathers is often a predictor of positive outcomes for children (see White and Gilbreth 2001 for a review). Thus, there is some possibility that income from fathers -- particularly non-residential, biological fathers -- may have some additional effect in reducing delinquent behavior which we are not capturing.

References

- Abbot-Chapman, J, Denholm, C, and Wyld, C (2008) "Gender Differences in Adolescent Risk Taking: Are They Diminishing?: An Australian Intergenerational Study", *Youth & Society*, 40(1), 131-154.
- Aizer, A (2004) "Home Alone: Supervision after School and Child Behavior", *Journal of Public Economics*, Vol. 88, pp. 1835 - 1848.
- Amato, PR and Rivera, F (1999) "Paternal Involvement and Children's Behavior Problems" *Journal of Marriage and Family*, Vol. 61 (2), May, pp. 375 - 384.
- Antecol, H and Bedard, K (2007) "Does Single Parenthood Increase the Probability of Teenage Promiscuity, Substance Abuse, and Crime? *Journal of Population Economics* Vol. 20, pp. 55 - 71.
- Averett, SL, Argys LM, and Rees, DI (2009) "Older Siblings and Adolescent Risky Behavior: Does Parenting Play a Role?" *Journal of Population Economics* DOI 10.1007/s00148-009-0276-1.
- Becker, GS (1968) "Crime and Punishment: An Economic Approach", *Journal of Political Economy*, Vol. 76, pp. 169 - 217.
- Bronte-Tinkew, J, Moore, KA, Capps, RC, and Zaff, J (2006) "The Influence of Father Involvement on Youth Risk Behaviors Among Adolescents: A Comparison of Native-Born and Immigrant Families" *Social Science Research*, Vol. 35, pp. 181 - 209.
- Bumpass, LL, Raley, RK, and Sweet, JA (1995) "The Changing Character of Stepfamilies: Implications of Cohabitation and Nonmarital Childbearing" *Demography*, 32(3), pg. 425 - 436.
- Cobb-Clark, DA and Schurer S (2011) "The Stability of Big-Five Personality Traits," *Economics Letters*, Vol. 115(1), April, pp. 11 – 15.
- Cobb-Clark, DA and Tekin, E (2011) "Fathers and Youths' Delinquent Behavior" IZA Discussion Paper 6042, October.
- Coley, RL, and Mederios, BL (2007) "Reciprocal Longitudinal Relations Between Nonresident Father Involvement and Adolescent Delinquency" *Child Development*, Vol. 78(1), January/February, pp. 132-147.
- Conway, KS and Li, M (2012) "Family Structure and Child Outcomes: A High Definition Wide Angle "Snapshot"", *Review of Economics of the Household*, Vol. 10, pp. 345-374.
- Cooksey, EC and Fondell, MM (1996) "Spending Time with His Kids: Effects of Family Structure on Fathers' and Children's Lives", *Journal of Marriage and the Family*, Vol. 58(3), August, pp. 693 - 707.

- Dahl, GB and Moretti, E (2008) "The Demand for Sons." *Review of Economic Studies* 75 (4): 1085-1120.
- Del Boca, D and Ribero, R (2003) "Visitations and Transfers After Divorce" *Review of Economics of the Household*, Vol. 1, pp. 187 - 204.
- Ermisch, J (2008) "Child Support and Non-Resident Fathers' Contact with their Children" *Journal of Population Economics*, Vol. 21(4), pp. 827 - 853.
- Goodwin, V, and Davis, B (2011) "Crime Families: Gender and the Intergenerational Transfer of Criminal Tendencies" *Trends & Issues in Crime and Criminal Justice*, No. 414, May, pg. 1 - 6, available: <http://www.aic.gov.au>.
- Gugl, E and Welling, L (2012) "Time with Sons and Daughters" *Review of Economics of the Household*, Vol. 10, pp. 277-298.
- Harris, K.M., C.T. Halpern, E. Whitsel, J. Hussey, J. Tabor, P. Entzel, and J.R. Udry. 2009. The National Longitudinal Study of Adolescent Health: Research Design [WWW document]. URL: <http://www.cpc.unc.edu/projects/addhealth/design>.
- Harris, KM, Furstenberg FF, Jr. and Marmer, JK (1998) "Paternal Involvement with Adolescents in Intact Families: The Influence of Fathers over the Life Course", *Demography*, Vol. 35 (2), May, pp. 201 - 216.
- Harris, KM and Marmer, JK (1996) "Poverty, Paternal Involvement, and Adolescent Well-being" *Journal of Family Issues*, Vol. 17 (5), September, pp. 614 - 640.
- Hofferth, SL (2006) "Residential Father Family Type and Child Well-Being: Investment Versus Selection" *Demography*, Vol. 43 (1), February, pp. 53 - 77.
- Kalil, A, Mogstad, M, Rege, M, and Votruba, M (2010) "Divorced Fathers' Proximity and Children's Long Run Outcomes: Evidence from Norwegian Registry Data" Institute for the Study of Labor (IZA) discussion paper no. 4715, January.
- King, V (2006) "The Antecedents and Consequences of Adolescents' Relationships with Stepfathers and Nonresident Fathers" *Journal of Marriage and Family*, Vol. 68(4), November, pp. 910 - 928.
- Lundberg, S (2005) "Sons, Daughters, and Parental Behaviour" *Oxford Review of Economic Policy*, Vol. 21(3), pp. 340 - 356.
- Michael, K, and Ben-Zur, H (2007) "Risk-taking Among Adolescents: Associations with Social & Affective Factors", *Journal of Adolescence*, 30, 17-31.
- Mocan, HN, and Tekin E (2005) "Drugs and Juvenile Crime: Evidence from a Panel of Siblings and Twins," in Substance Use: Individual Behavior, Social Interactions, Markets, and Politics, Bjorn Lindgren and Michael Grossman (eds.), Amsterdam: Elsevier, 2005; pp. 91-120.

- Mocan, HN, and Tekin E (2006) "Guns and Juvenile Crime," *Journal of Law and Economics*, 49:2, pp. 507-532, October 2006.
- Painter, G and Levine, DI (2004) "Daddies, Devotion, and Dollars: How do They Matter for Youth?" *The American Journal of Economics and Sociology*, Vol. 63 (4), October, pp. 813 - 850.
- Okumura T and Usui E (2010) "Do Parents' Social Skills Influence Their Children's Sociability?" IZA Discussion Paper No. 5324, November.
- Rees, D, and Sabia, J (2011). "Forced Intercourse, Mental Health and Human Capital" Working Paper, Department of Economics, University of Colorado – Denver.
- U.S. Census Bureau (2010) Current Population Survey 2009, Annual Social and Economic Supplement, Release date January 2010, Available www.census.gov.
- Ventura, SJ (2009) "Changing Patterns of Nonmarital Childbearing in the United States" NCHS Data Brief No. 18, May, Available www.ndc.gov.
- Walker, I and Zhu, Y (2007) "Do Dads Matter? Or is it Just their Money that Matters? Unpicking the Effects of Separation on Educational Outcomes" UCD Geary Institute Discussion Paper Series, June 2007.
- Wilder, EI and Watt (2002) "Risky Parental Behavior and Adolescent Sexual Activity at First Coitus", *Milbank Quarterly*, Vol. 80(3), pp. 481 - 524.
- White, L and Gilbreth, JG (2001) "When Children Have Two Fathers: Effects of Relationships with Stepfathers and Noncustodial Fathers on Adolescent Outcomes" *Journal of Marriage and Family*, Vol. 63(1), February, pp. 155 - 167.
- Wooldridge, JM (2003) *Introductory Econometrics: A Modern Approach*, 2nd Edition, 2003. Thomson Southwestern: Mason, Ohio.
- Yuan, AS Vogt, and Hamilton, HA (2006) "Stepfather Involvement and Adolescent Well-Being: Do Mothers and Nonresidential Fathers Matter?" *Journal of Family Issues*, Vol. 27, pp. 1191 - 1213.

Table 1: Percentage of Adolescents in Various Family Structures at Wave 1

Family Structure	Percentage (Total)	Percentage (Boys)	Percentage (Girls)
Residential Biological Father	61.60	62.82	60.47
Non-residential Biological Father Only	21.29	19.81	22.68
No Father	7.07	6.82	7.29
Non-residential Biological Father & Residential Stepfather	7.25	7.36	7.15
Residential Stepfather Only	2.79	3.19	2.41
Total Sample	11,295	5,452	5,813

Note: These results pertain to those adolescents also living with their biological mothers.

Source: Add Health data from Wave 1.

Table 2: The Relationship between Father Involvement and Delinquent Behavior among Adolescents – Baseline Model at Wave 2

	<i>Boys</i>					<i>Girls</i>				
	Any	Property Crime	Violent Crime	Selling Drugs	Gang Fighting	Any	Property Crime	Violent Crime	Selling Drugs	Gang Fighting
RB Father	-0.076*** (0.024)	-0.013 (0.023)	0.062** * (0.021)	-0.013 (0.016)	0.074** * (0.027)	-0.036 (0.024)	0.008 (0.022)	-0.030** (0.013)	-0.019* (0.011)	-0.041** (0.018)
NB Father Only	-0.050* (0.027)	-0.029 (0.025)	-0.049** (0.022)	0.010 (0.017)	-0.038 (0.030)	0.006 (0.025)	0.008 (0.022)	-0.002 (0.015)	-0.004 (0.011)	-0.021 (0.021)
NB Father & Stepfather	0.040 (0.030)	0.045 (0.033)	-0.016 (0.027)	0.025 (0.022)	-0.041 (0.031)	0.003 (0.028)	0.017 (0.025)	-0.018 (0.018)	-0.003 (0.015)	-0.015 (0.022)
Stepfather Only	0.085** (0.040)	-0.046 (0.037)	-0.059* (0.033)	0.003 (0.025)	-0.050 (0.038)	0.009 (0.041)	0.018 (0.034)	-0.003 (0.030)	-0.021 (0.021)	-0.003 (0.036)
Any (Wave 1)	0.386*** (0.011)	---	---	---	---	0.384*** (0.015)	---	---	---	---
Property Crime (Wave 1)	---	0.354*** (0.012)	---	---	---	---	0.355*** (0.016)	---	---	---
Violent Crime (Wave 1)	---	---	0.244** * (0.015)	---	---	---	---	0.187** * (0.015)	---	---
Selling Drugs (Wave 1)	---	---	---	0.435*** (0.021)	---	---	---	---	0.338** * (0.032)	---
Gang Fighting (Wave 1)	---	---	---	---	0.355** * (0.015)	---	---	---	---	0.327** * (0.016)
Observations	5,419	5,398	5,414	5,375	5,385	5,823	5,811	5,821	5,801	5,801
R-squared	0.15	0.14	0.11	0.18	0.14	0.17	0.15	0.08	0.12	0.13

Standard errors are clustered at the school level are shown in parentheses. A *, **, or *** indicates significance at the 95%, 99%, or 99.9% levels, respectively.

Note: RB father indicates residential, biological father; NB father indicates non-residential, biological father; and all stepfathers are residential.

Table 3A: The Relationship between Father Involvement and Delinquent Behavior among Adolescent Boys – Augmented Model at Wave 2

	Any	Any	Property Crime	Property Crime	Violent Crime	Violent Crime	Selling Drugs	Selling Drugs	Gang Fighting	Gang Fighting
RB Father	0.055** (0.026)	0.061** (0.030)	0.004 (0.025)	-0.006 (0.029)	-0.043* (0.024)	-0.044* (0.026)	-0.009 (0.017)	-0.012 (0.018)	-0.071** (0.028)	-0.070** (0.031)
NB Father Only	-0.050* (0.030)	-0.052* (0.031)	-0.033 (0.028)	-0.039 (0.027)	-0.029 (0.028)	-0.027 (0.027)	0.003 (0.021)	0.004 (0.021)	-0.030 (0.035)	-0.026 (0.036)
NB Father & Stepfather	0.093** (0.044)	0.104** (0.044)	-0.011 (0.043)	-0.025 (0.044)	-0.077** (0.036)	-0.076** (0.035)	0.013 (0.029)	0.003 (0.030)	-0.075* (0.042)	-0.065 (0.042)
Stepfather Only	-0.017 (0.059)	-0.032 (0.058)	-0.015 (0.053)	-0.033 (0.052)	-0.027 (0.048)	-0.030 (0.046)	0.024 (0.037)	0.014 (0.037)	-0.037 (0.046)	-0.036 (0.046)
RB Father*Do	-0.013* (0.007)	-0.011 (0.008)	-0.000 (0.006)	-0.008 (0.007)	-0.011** (0.005)	-0.004 (0.006)	-0.010*** (0.004)	-0.001 (0.005)	0.001 (0.005)	0.003 (0.007)
NB Father Only * Do	0.026** (0.012)	0.026** (0.012)	-0.008 (0.010)	-0.013 (0.010)	-0.005 (0.009)	-0.003 (0.009)	-0.015* (0.008)	-0.012 (0.008)	-0.018* (0.010)	-0.019* (0.010)
Stepfather* Do (Dual)	0.009 (0.021)	0.015 (0.021)	0.015 (0.021)	0.016 (0.021)	0.034** (0.014)	0.039*** (0.014)	0.012 (0.014)	0.020 (0.014)	0.025 (0.019)	0.025 (0.019)
NB Father* Do (Dual)	0.032 (0.023)	0.029 (0.024)	0.039* (0.022)	0.030 (0.022)	0.019 (0.020)	0.021 (0.021)	-0.003 (0.012)	-0.002 (0.012)	0.006 (0.019)	0.005 (0.019)
Stepfather Only *Do	-0.049 (0.035)	-0.040 (0.034)	-0.004 (0.027)	-0.004 (0.026)	-0.028 (0.025)	-0.020 (0.024)	0.000 (0.018)	0.012 (0.018)	-0.018 (0.023)	-0.015 (0.023)
RB Father*Talk	-0.002 (0.006)	-0.004 (0.007)	-0.012* (0.007)	-0.011 (0.007)	-0.002 (0.004)	-0.002 (0.005)	0.008** (0.004)	0.008 (0.005)	-0.003 (0.006)	-0.001 (0.007)
NB Father Only *Talk	0.017 (0.012)	0.016 (0.012)	0.008 (0.010)	0.012 (0.010)	-0.010 (0.008)	-0.011 (0.008)	0.015** (0.008)	0.015* (0.008)	0.007 (0.012)	0.008 (0.012)
Stepfather*Talk (Dual)	0.022 (0.017)	0.021 (0.017)	0.021 (0.019)	0.022 (0.018)	0.001 (0.012)	0.001 (0.012)	0.013 (0.013)	0.014 (0.014)	-0.026* (0.016)	-0.025 (0.016)
NB Father*Talk (Dual)	-0.012 (0.020)	-0.009 (0.020)	-0.018 (0.018)	-0.011 (0.018)	0.003 (0.015)	0.004 (0.015)	-0.011 (0.012)	-0.011 (0.012)	0.027* (0.015)	0.029* (0.015)
Stepfather Only	-0.012	-0.015	-0.021	-0.020	-0.002	-0.002	-0.021	-0.020	0.006	0.006

*Talk	(0.029) 0.383**	(0.029) 0.377**	(0.023)	(0.023)	(0.017)	(0.017)	(0.014)	(0.014)	(0.023)	(0.023)
Any	*	*								
(Wave 1)	(0.011)	(0.012)								
Property Crime			0.354***	0.345***						
(Wave 1)			(0.012)	(0.012)						
Violent Crime					0.244***	0.240***				
(Wave 1)					(0.015)	(0.015)				
Selling Drugs							0.432***	0.418***		
(Wave 1)							(0.021)	(0.021)		
Gang Fighting									0.355***	0.346***
(Wave 1)									(0.015)	(0.015)
Doing things		-0.011		-0.002		-0.008*		-0.013***		-0.006
with mother		(0.007)		(0.007)		(0.005)		(0.004)		(0.006)
Talking to		0.007		0.003		0.003		-0.000		-0.001
Mother		(0.006)		(0.006)		(0.004)		(0.005)		(0.005)
10k≤Inc<25k		-0.004		-0.007		-0.009		-0.027		0.013
		(0.029)		(0.025)		(0.025)		(0.021)		(0.026)
25k≤Inc<50k		0.037		0.021		0.006		-0.026		0.024
		(0.030)		(0.025)		(0.023)		(0.021)		(0.024)
50k≤Inc<75k		0.027		0.033		-0.011		-0.025		0.010
		(0.029)		(0.025)		(0.024)		(0.022)		(0.026)
Inc≥75k		0.024		0.034		-0.022		-0.008		0.010
		(0.034)		(0.029)		(0.025)		(0.024)		(0.028)
Demographic controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Observations	5,419	5,419	5,398	5,398	5,414	5,414	5,375	5,375	5,385	5,385
R-squared	0.16	0.16	0.15	0.16	0.11	0.12	0.18	0.19	0.14	0.15

Standard errors are clustered at the school level are shown in parentheses. A *, **, or *** indicates significance at the 95%, 99%, or 99.9% levels, respectively.

Note: RB father indicates residential, biological father; NB father indicates non-residential, biological father; and all stepfathers are residential. Dual indicates the presence of both a NB father and a stepfather. “Do” and “Talk” indicate doing things with and talking to adolescents, respectively.

Table 3B: The Relationship between Father Involvement and Delinquent Behavior among Adolescent Girls – Augmented Model at Wave 2

Augmented Model at Wave 2											
	Any	Any	Property Crime	Property Crime	Violent Crime	Violent Crime	Selling Drugs	Selling Drugs	Gang Fighting	Gang Fighting	
RB Father	-0.024 (0.028)	-0.041 (0.031)	0.006 (0.026)	-0.014 (0.027)	-0.014 (0.014)	-0.010 (0.014)	-0.015 (0.012)	-0.022* (0.013)	-0.037* (0.021)	-0.033 (0.022)	
	NB Father	-0.004 (0.028)	-0.011 (0.029)	0.015 (0.023)	0.008 (0.024)	-0.005 (0.016)	-0.005 (0.017)	-0.009 (0.013)	-0.012 (0.012)	-0.035 (0.024)	-0.036 (0.025)
		Only NB Father & Stepfather Only	0.051 (0.038)	0.040 (0.039)	0.058 (0.040)	0.042 (0.041)	0.010 (0.025)	0.011 (0.025)	-0.003 (0.020)	-0.009 (0.020)	-0.003 (0.027)
Stepfather Only			0.032 (0.049)	0.026 (0.049)	0.027 (0.045)	0.016 (0.046)	-0.007 (0.032)	-0.008 (0.033)	0.015 (0.039)	0.010 (0.038)	0.031 (0.045)
	RB Father*Do		-0.007 (0.006)	-0.005 (0.007)	0.002 (0.006)	0.001 (0.006)	-0.007** (0.002)	-0.004 (0.003)	-0.002 (0.002)	-0.002 (0.002)	-0.000 (0.004)
		NB Father Only	0.006 (0.014)	0.001 (0.014)	0.001 (0.011)	-0.003 (0.011)	-0.000 (0.007)	-0.000 (0.007)	-0.007 (0.005)	-0.007 (0.005)	0.008 (0.010)
* Do			-0.013 (0.019)	-0.004 (0.020)	-0.020 (0.017)	-0.018 (0.019)	-0.009 (0.009)	-0.004 (0.009)	-0.008 (0.008)	-0.006 (0.008)	-0.012 (0.013)
	(Dual) NB Father*Do		0.026 (0.024)	0.021 (0.024)	0.023 (0.018)	0.019 (0.018)	0.012 (0.015)	0.012 (0.015)	0.004 (0.008)	0.004 (0.008)	0.016 (0.020)
		(Dual) Stepfather Only	0.065* (0.034)	0.078** (0.035)	0.044 (0.031)	0.050 (0.030)	0.009 (0.027)	0.017 (0.027)	-0.015 (0.011)	-0.012 (0.011)	0.019 (0.032)
Do			-0.003 (0.005)	-0.003 (0.007)	0.000 (0.005)	0.006 (0.006)	-0.006 (0.003)	-0.005* (0.003)	-0.001 (0.002)	0.000 (0.003)	-0.003 (0.004)
	NB Father Only		-0.004 (0.011)	-0.001 (0.011)	-0.005 (0.009)	-0.000 (0.010)	0.002 (0.006)	0.003 (0.006)	0.007* (0.004)	0.008* (0.004)	0.005 (0.007)
		Talk	-0.031 (0.018)	-0.027 (0.019)	-0.005 (0.015)	-0.000 (0.016)	-0.014 (0.008)	-0.015* (0.008)	-0.004 (0.008)	-0.003 (0.008)	-0.023* (0.012)

NB	-									
Father*Talk	0.01	-								
(Dual)	0	0.010	-0.023	-0.024	-0.006	-0.005	0.007	0.006	0.012	0.013
	(0.0	(0.01	(0.014)	(0.015)	(0.010)	(0.009)	(0.008)	(0.008)	(0.016)	(0.016)
Stepfather	-	-								
Only	0.06	0.066								
*Talk	5**	**	-0.038*	-0.040*	-0.003	-0.001	-0.021	-0.021	-0.043*	-0.043*
Any	(0.0	(0.02	(0.022)	(0.022)	(0.018)	(0.018)	(0.014)	(0.014)	(0.024)	(0.024)
(Wave 1)	0.38	0.368								
Property	3***	***								
Crime	(0.0	(0.01								
(Wave 1)	15)	5)								
Violent			0.356**	0.343**						
Crime			*	*						
(Wave 1)			(0.016)	(0.016)						
Selling					0.187*	0.178*				
Drugs					**	**				
(Wave 1)					(0.015)	(0.015)				
Gang							0.337*	0.332*		
Fighting							**	**		
(Wave 1)							(0.033)	(0.032)		
Doing									0.327*	0.312*
things									**	**
with										
mother										
Talking to										
Mother										
10k≤Inc<25										
k										
25k≤Inc<50										
k										
50k≤Inc<75										
k										
Inc≥75k										
Demograph										
ic controls										
Observation										
s										
R-squared										

Standard errors are clustered at the school level are shown in parentheses. A *, **, or *** indicates significance at the 95%, 99%, or 99.9% levels, respectively.

Note: RB father indicates residential, biological father; NB father indicates non-residential, biological father; and all stepfathers are residential. Dual indicates the presence of both a NB father and a stepfather. “Do” and “Talk” indicate doing things with and talking to adolescents, respectively.

Table 4: The Relationship between Father Involvement and Delinquent Behavior among Young Adults – Baseline Model at Wave 4

	<i>Men</i>					<i>Women</i>				
	Any	Property Crime	Violent Crime	Selling Drugs	Gang Fighting	Any Crime	Property Crime	Violent Crime	Selling Drugs	Gang Fighting
RB Father	- 0.051 ** (0.022)	-0.022 (0.018)	- 0.041*** (0.014)	- 0.035*** (0.012)	- 0.029** (0.013)	- 0.018 (0.013)	-0.009 (0.011)	-0.006 (0.005)	-0.005 (0.006)	- 0.004 (0.005)
NB Father Only	- 0.025 (0.025)	-0.027 (0.019)	-0.021 (0.015)	-0.006 (0.015)	0.001 (0.016)	0.011 (0.014)	0.011 (0.012)	-0.004 (0.005)	0.000 (0.007)	0.003 (0.006)
NB Father & Stepfather	- 0.007 (0.028)	-0.022 (0.024)	-0.031** (0.014)	0.002 (0.018)	0.002 (0.017)	0.012 (0.018)	-0.008 (0.015)	0.001 (0.007)	0.001 (0.009)	0.010 (0.008)
Stepfather Only	- 0.001 (0.038)	0.002 (0.033)	-0.040** (0.020)	0.042 (0.030)	0.011 (0.023)	- 0.002 (0.026)	0.010 (0.022)	-0.012** (0.005)	-0.009 (0.010)	- 0.000 (0.010)
Any (Wave 1)	0.105*** (0.010)					0.060*** (0.007)				
Property Crime (Wave 1)		0.077*** (0.009)					0.055*** (0.007)			
Violent Crime (Wave 1)			0.046*** (0.006)					0.011** (0.005)		
Selling Drugs (Wave 1)				0.093*** (0.019)					0.056** *	
Gang Fight (Wave 1)					0.058*** (0.007)					0.021*** (0.005)
Observations	5,866	5,865	5,857	5,846	5,851	6,741	6,741	6,736	6,732	6,731
R-squared	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.00	0.01	0.01

Standard errors are clustered at the school level are shown in parentheses. A *, **, or *** indicates significance at the 90%, 95%, or 99% levels, respectively.

Note: RB father indicates residential, biological father; NB father indicates non-residential, biological father; and all stepfathers are residential. Dual indicates the presence of both a NB father and a stepfather.

Table 5A: The Relationship between Father Involvement and Delinquent Behavior among Young Men – Augmented Model at Wave 4

	Any	Any	Property Crime	Property Crime	Violent Crime	Violent Crime	Selling Drugs	Selling Drugs	Gang Fightin g	Gang Fightin g
RB Father	- 0.05 2** (0.02 3)	- 0.04 0 (0.02 4)	-0.030 (0.020)	-0.024 (0.020)	- 0.043* ** (0.015)	- 0.035* * (0.017)	- 0.030* * (0.014)	-0.021 (0.014)	- 0.028* * (0.014)	-0.022 (0.015)
NB Father Only	- 0.04 8* (0.02 8)	- 0.04 9* (0.02 9)	-0.037* (0.021)	-0.037* (0.021)	-0.023 (0.017)	-0.023 (0.017)	-0.023 (0.017)	-0.025 (0.017)	-0.004 (0.018)	-0.004 (0.018)
NB Father & Stepfather	- 0.00 5 (0.04 2)	- 0.00 1 (0.04 3)	-0.010 (0.032)	-0.007 (0.033)	-0.031 (0.023)	-0.023 (0.024)	-0.026 (0.026)	-0.023 (0.028)	-0.013 (0.024)	-0.006 (0.025)
Stepfather Only	- 0.02 8 (0.04 7)	- 0.02 9 (0.04 6)	-0.018 (0.035)	-0.020 (0.034)	- 0.056* * (0.022)	- 0.054* * (0.023)	0.020 (0.038)	0.021 (0.039)	-0.030 (0.027)	-0.030 (0.026)
RB Father*Do	- 0.00 3 (0.00 5)	- 0.00 0 (0.00 6)	0.005 (0.004)	0.003 (0.005)	0.001 (0.003)	-0.000 (0.003)	-0.000 (0.003)	-0.003 (0.004)	-0.001 (0.003)	-0.001 (0.003)
NB Father Only * Do Stepfather* Do (Dual)	- 0.00 3 (0.01 0) 0.03 8* (0.02 1)	- 0.00 8 (0.01 0) 0.03 8* (0.02 1)	-0.000 (0.008) -0.003 (0.013)	-0.004 (0.008) -0.004 (0.013)	-0.006 (0.006) 0.003 (0.012)	-0.007 (0.006) 0.001 (0.012)	0.001 (0.007) 0.015 (0.015)	-0.002 (0.007) 0.014 (0.015)	-0.004 (0.007) 0.043* ** (0.016)	-0.005 (0.007) 0.044* ** (0.016)
NB Father* Do (Dual)	- 0.00 5 (0.01 6)	- 0.01 0 (0.01 7)	-0.017 (0.012)	-0.020 (0.012)	0.007 (0.009)	0.007 (0.009)	-0.000 (0.014)	-0.003 (0.014)	-0.005 (0.010)	-0.005 (0.010)
Stepfather Only *Do	- 0.02 0 (0.02 7)	- 0.01 7 (0.02 7)	-0.022 (0.017)	-0.021 (0.017)	-0.010 (0.009)	-0.012 (0.009)	-0.005 (0.024)	-0.007 (0.025)	-0.001 (0.016)	0.001 (0.016)
RB Father*Talk	- 0.00 2 (0.00 6)	- 0.00 3 (0.00 6)	0.000 (0.004)	0.003 (0.005)	-0.001 (0.002)	0.001 (0.003)	-0.003 (0.003)	0.001 (0.004)	0.000 (0.003)	0.002 (0.003)
NB Father Only *Talk Stepfather* Talk	- 0.01 6* (0.00 9) 0.00 1	- 0.02 2** (0.00 9) 0.00 4	0.007 (0.006) 0.005 (0.009)	0.011* (0.006) 0.009 (0.009)	0.005 (0.006) 0.009 (0.010)	0.006 (0.006) 0.010 (0.011)	0.010 (0.007) 0.011 (0.013)	0.010 (0.007) 0.013 (0.013)	0.005 (0.007) -0.006 (0.007)	0.006 (0.007) -0.005 (0.007)

(Dual)	(0.01 6)	(0.01 6)	(0.012)	(0.013)	(0.010)	(0.010)	(0.011)	(0.010)	(0.012)	(0.012)
NB	0.02	0.02			0.016*	0.015*				
Father*Talk	8	4	-0.002	0.000	*	*	-0.002	0.000	-0.014	-0.013
(Dual)	(0.01 8)	(0.01 8)	(0.013)	(0.012)	(0.007)	(0.007)	(0.013)	(0.012)	(0.010)	(0.010)
Stepfather	0.04	0.04								
Only	0	3	0.035*	0.039*	0.022	0.024*	0.022	0.025	0.015	0.016
*Talk	(0.02 8)	(0.02 7)	(0.020)	(0.020)	(0.014)	(0.014)	(0.023)	(0.022)	(0.017)	(0.017)
Any	0.10 4***	0.09 8***								
(Wave 1)	(0.01 0)	(0.01 0)								
Property			0.077**	0.073**						
Crime			*	*						
(Wave 1)			(0.009)	(0.009)						
Violent					0.045*	0.043*				
Crime					**	**				
(Wave 1)					(0.006)	(0.006)				
Selling							0.092*	0.095*		
Drugs							**	**		
(Wave 1)							(0.019)	(0.019)		
Gang									0.057*	0.053*
Fighting									**	**
(Wave 1)									(0.007)	(0.007)
Doing		-								-
things		0.01								0.007*
with		1*		-0.004		-0.000		-0.003		*
mother		(0.00 6)		(0.005)		(0.003)		(0.003)		(0.003)
Talking to		-								
		0.00		-0.001		-0.001		-0.003		0.001
Mother		(0.00 5)		(0.004)		(0.003)		(0.003)		(0.003)
10k≤Inc<25		-								
k		0.00		-0.007		-0.014		-0.008		0.002
		2		(0.020)		(0.017)		(0.019)		(0.016)
		(0.03 3)								
25k≤Inc<50		-								
k		0.01		-0.012		-0.015		-0.000		0.008
		2		(0.021)		(0.015)		(0.019)		(0.017)
		(0.03 2)								
50k≤Inc<75		-								
k		0.01		-0.014		-0.012		-0.006		-0.005
		4		(0.021)		(0.016)		(0.020)		(0.016)
		(0.03 1)								
Inc≥75k		-								
		0.01		-0.004		-0.028*		-0.006		-0.012
		4		(0.023)		(0.016)		(0.020)		(0.015)
Demograph	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
ic controls										

Observations	5,866	5,866	5,865	5,865	5,857	5,857	5,846	5,846	5,851	5,851
R-squared	0.02	0.04	0.02	0.03	0.02	0.02	0.02	0.04	0.02	0.03

Standard errors are clustered at the school level are shown in parentheses. A *, **, or *** indicates significance at the 90%, 95%, or 99% levels, respectively.

Note: RB father indicates residential, biological father; NB father indicates non-residential, biological father; and all stepfathers are residential. Dual indicates the presence of both a NB father and a stepfather. “Do” and “Talk” indicate doing things with and talking to adolescents, respectively.

Table 5B: The Relationship between Father Involvement and Delinquent Behavior among Young Women – Augmented Model at Wave 4

	Any	Any	Property Crime	Property Crime	Violent Crime	Violent Crime	Selling Drugs	Selling Drugs	Gang Fighting	Gang Fighting
	-									
RB Father	0.00 0 (0.01 4)	0.01 1 (0.0 16)	0.002 (0.013)	0.011 (0.014)	-0.001 (0.006)	0.001 (0.006)	0.002 (0.007)	0.004 (0.007)	-0.001 (0.006)	0.000 (0.006)
NB Father	0.00 3 (0.01 7)	0.00 0 (0.0 16)	-0.001 (0.014)	-0.003 (0.014)	-0.003 (0.005)	-0.003 (0.005)	0.004 (0.008)	0.001 (0.008)	0.001 (0.007)	0.002 (0.007)
Only NB Father & Stepfather	0.00 6 (0.02 3)	0.00 8 (0.0 23)	0.003 (0.019)	0.004 (0.019)	-0.007 (0.008)	-0.006 (0.008)	0.001 (0.013)	-0.000 (0.013)	0.017 (0.011)	0.020* (0.011)
Stepfather Only	0.01 3 (0.03 9)	0.01 7 (0.0 39)	0.009 (0.035)	0.010 (0.035)	0.012* * (0.005)	- 0.010* (0.005)	-0.001 (0.015)	-0.002 (0.014)	0.017 (0.021)	0.018 (0.020)
RB Father*Do	0.01 0*** (0.00 3)	0.00 8*** (0.0 04)	- 0.006** (0.003)	-0.005 (0.003)	0.002* ** (0.001)	- 0.002* (0.001)	0.004* * (0.002)	0.004* * (0.002)	-0.001 (0.001)	-0.000 (0.001)
NB Father Only	0.01 2* (0.00 7)	0.01 1* (0.0 07)	0.011* (0.006)	0.011* (0.006)	0.001 (0.003)	0.001 (0.003)	0.001 (0.003)	0.001 (0.003)	0.003 (0.003)	0.003 (0.003)
* Do	-	-							-	-
Stepfather* Do	0.01 2 (0.00 8)	0.00 9 (0.0 09)	-0.009* (0.005)	-0.006 (0.006)	0.001 (0.004)	0.001 (0.005)	0.001 (0.007)	0.002 (0.007)	0.010* * (0.005)	0.010* * (0.005)
(Dual) NB Father* Do	0.00 5 (0.00 9)	0.00 5 (0.0 10)	0.004 (0.007)	0.005 (0.007)	0.003 (0.006)	0.003 (0.006)	-0.001 (0.007)	-0.001 (0.007)	0.008 (0.006)	0.007 (0.006)
(Dual)	-	-								
Stepfather Only	0.01 0 (0.02 0)	0.00 7 (0.0 21)	0.004 (0.019)	0.006 (0.019)	-0.000 (0.000)	-0.000 (0.001)	-0.012 (0.008)	-0.011 (0.008)	-0.008 (0.005)	-0.007 (0.006)
*Do	-	-								
RB Father*Talk	0.00 5 (0.00 3)	0.00 4 (0.0 04)	-0.002 (0.003)	-0.001 (0.003)	0.002* ** (0.001)	- 0.001* (0.001)	-0.002 (0.002)	-0.002 (0.002)	-0.001 (0.001)	-0.000 (0.001)
NB Father Only	0.00 0 (0.00 5)	0.00 1 (0.0 05)	0.003 (0.004)	0.004 (0.004)	-0.001 (0.001)	-0.000 (0.002)	-0.003 (0.003)	-0.002 (0.003)	-0.001 (0.003)	-0.000 (0.003)
*Talk	-	-								
Stepfather* Talk	0.00 3	0.00 3	0.002	0.003	0.000	0.001	-0.005	-0.005	-0.001	0.000

	(0.009)	(0.009)	(0.006)	(0.006)	(0.003)	(0.003)	(0.005)	(0.005)	(0.007)	(0.007)
(Dual) NB	-	-								
Father*Talk	0.004	0.004	-0.006	-0.006	0.004	0.004	0.004	0.004	-0.003	-0.002
	(0.009)	(0.009)	(0.007)	(0.007)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)
(Dual) Stepfather Only	-	-								
	0.006	0.007	-0.002	-0.002	0.000	0.001	0.001	-0.000	-0.009	-0.009
	(0.018)	(0.018)	(0.015)	(0.016)	(0.000)	(0.001)	(0.007)	(0.007)	(0.006)	(0.006)
*Talk	0.059***	0.053***								
Any	(0.007)	(0.007)								
(Wave 1) Property Crime			0.054**	0.052**						
			*	*						
(Wave 1) Violent Crime			(0.007)	(0.008)	0.011*	0.010*				
					*	*				
(Wave 1) Selling Drugs					(0.005)	(0.005)	0.055**	0.052**		
							**	**		
(Wave 1) Gang Fighting							(0.015)	(0.015)	0.021**	0.020**
									**	**
(Wave 1)									(0.005)	(0.005)
Doing things with mother	-	-								
	0.007**	-	0.006**		0.000		-0.002		-0.001	
	(0.003)		(0.003)		(0.001)		(0.002)		(0.001)	
Talking to Mother	0.002		0.000		-0.000		0.002		-0.001	
	(0.003)		(0.003)		(0.001)		(0.002)		(0.001)	
10k≤Inc<25k	0.029**		0.015		0.007		0.011		-0.001	
	(0.014)		(0.012)		(0.005)		(0.007)		(0.006)	
25k≤Inc<50k	0.012		0.007		0.006		0.002		-0.001	
	(0.015)		(0.013)		(0.005)		(0.006)		(0.006)	
50k≤Inc<75k	-									
	0.001		-0.004		0.000		0.003		-0.003	
	(0.014)		(0.012)		(0.004)		(0.008)		(0.006)	
Inc≥75k	0.015		-0.001		0.004		0.013		0.000	
	(0.017)		(0.015)		(0.005)		(0.008)		(0.006)	
Demographic controls	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Observations	6,741	6,741	6,741	6,741	6,736	6,736	6,732	6,732	6,731	6,731
R-squared	0.02	0.03	0.02	0.02	0.01	0.01	0.01	0.02	0.01	0.01

Standard errors are clustered at the school level are shown in parentheses. A *, **, or *** indicates significance at the 90%, 95%, or 99% levels, respectively.

Note: RB father indicates residential, biological father; NB father indicates non-residential, biological father; and all stepfathers are residential. Dual indicates the presence of both a NB father and a stepfather. “Do” and “Talk” indicate doing things with and talking to adolescents, respectively.

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