Article

Exploring Intergenerational Discontinuity in Problem Behavior: Bad Parents With Good Children

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Abstract

Using data from the Rochester Youth Development Study, a series of regression models are estimated on offspring problem behavior with a focus on the interaction between parental history of delinquency and the parent–child relationship. Good parenting practices significantly interact with the particular shape of parental propensity of offending over time, functioning as protective factors to protect against problematic behaviors among those who are most at risk. The moderation effects vary slightly by the age of our subjects. Accordingly, it is important to distinguish the effect of not only the level of parental delinquency at one point in time but also the shape of the delinquency trajectory on outcomes for their children. Good parenting holds the hope of breaking the vicious cycle of intergenerational transmission of delinquency.

Introduction

There is a well-established literature indicating that antisocial behaviors recur in the same families over the course of multiple generations (e.g., Farrington, 2011; Moffitt & Caspi, 2003; Thornberry, 2009). Existing studies, however, have also demonstrated that estimates of the strength of the relationship between parents' and children's delinquency, although significant, are not particularly large in magnitude. Methodologically rigorous studies typically find a significant correlation of around .30 in problem behavior across generations (e.g., Bailey, Hill, Oesterle, & Hawkins, 2009; Kaplan & Liu, 1999; Thornberry, Krohn, & Freeman-Gallant, 2006). This implies that, in addition to intergenerational continuity of delinquency, there exists a substantial degree of intergenerational discontinuity. The phenomenon of "bad[1] parents with good children" needs to be explored as well.

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To date, a study of intergenerational discontinuity has little precedent in criminological literature. Few efforts have been made to trace the life course of adjacent generations to explore how the "vicious cycle" of antisocial behaviors within families might be broken. In order to uncover the principle processes by which discontinuity occurs, this study draws from two major lines of prior research. The major conceptual components are derived from existing studies on intergenerational continuity of problem behavior. Through understanding how problem behaviors are transmitted across generations, we obtain insights on potential factors and mechanisms that may buffer preexisting risk, which are central to intergenerational discontinuity study. The current study also relies upon within-generation studies of nondelinquents who live in high-risk circumstances. It is hoped that this study broadens the applicability of the notion of "resilience" into an intergenerational framework (Luthar, Cicchetti, & Becker, 2000).

The current study thus aims to add to the small literature that investigates intergenerational discontinuity of problem behavior, identifying factors and associated mechanisms that moderate the negative effects of having parents with delinquent histories. Using prospective longitudinal data from the Rochester Youth Development Study (RYDS), and its follow-up, the Rochester Intergenerational Study (RIGS), this article addresses three main research questions.

The first is the impact of a parent's own delinquent career on the likelihood that their children will also be involved in problem behavior at similar life stages. Trajectories of parental propensity of offending over time are used as the primary risk factor of interest. Following a couple of studies that have used the same approach, this study describes how different shapes of offending trajectories may differentially impact the transmission of delinquency to their offspring. From a policy perspective, individuals who are low or already declining in their risk level might not respond to or need intervention, whereas others who are still increasing in their risk level or deeply involved in criminal offending may respond to intense multifaceted programs that would be largely wasted on less entrenched individuals. It is thus inefficient and costly to intervene with everyone regardless of his or her risk level (Andrews, Bonta, & Wormith, 2006; Krohn, Lizotte, Bushway, Schmidt, and Phillips, 2014; Laub, Nagin, & Sampson, 1998).

Second and most importantly, this study examines whether a good parent–child relationship may buffer or moderate the impact of the risk that parental history of delinquency represents. In other words, we seek to discover factors embedded in the parent–child relationship that protect the children in the face of the risk that parental involvement in adolescent delinquency represents. Most parents with a delinquent history do not want their children to follow in their footsteps (Farrington, Jolliffe, Loeber, Stouthamer-Loeber, & Kalb, 2001; Giordano, Cernkovich, & Rudolph, 2002). It is entirely possible for delinquent adolescents who eventually become parents to develop positive features as adults that protect their offspring from antisocial behavior. Children can obtain protection against antisocial behavior from a healthy relationship with their parents even if their parents used to be juvenile delinquents (Hirschi, 1969). From a "general prevention" mind-set, efforts have been made to identify possible factors and mechanisms that mediate intergenerational transmission of delinquency. Beyond that, the current investigation specifically examines the interaction or moderation effect of a good parent–child relationship on the probability of their children engaging in antisocial behavior for those whose parents have participated in delinquent behavior.

The third research objective is to examine whether protection effects from a good parent–child relationship vary by the age of the child. We investigate these relationships for children when they were in childhood versus when they were in their adolescent years. Existing literature has largely suggested that the influence of family, particularly parents, decreases with the aging of the next generation (e.g., Farrington, Loeber, Jolliffe, & Pardini, 2008; Gottfredson & Hirschi, 1990; Thornberry & Krohn, 2005).

Intergenerational Continuity in Problem Behavior

To explain intergenerational continuity in problem behavior, it is important to uncover the multifaceted processes involved in the transmission of risk. The full explanation of how parent's involvement in antisocial behavior influences children's involvement is obviously complex. Explanations range from genetic models in which the transmission of risk is direct from parent to child, to shared environment models in which the continuity is produced by each generation responding in similar ways to similar environmental stimuli. Elaborating on all possible influences in the transmission of risk is beyond the scope of this article. The current study relies on Thornberry's (2005) intergenerational model of problem behavior to address this issue. Not only is Thornberry's model useful for understanding intergenerational continuity, it is also possible to apply it when explaining how cases of discontinuity might develop.

Thornberry's (2005) intergenerational model of continuity begins with the hypothesis that Generation 1 (G1) family characteristics, including structural adversity, weak bonding to and involvement with the family, ineffective parenting and drug use, increase the likelihood of Generation 2 (G2) antisocial behavior, and place G2 on a high-risk trajectory that strongly predicts later developmental problems and unsuccessful transitions to adult statues.[2] Of particular importance is the transition to parenthood. Adolescent drug use and antisocial behavior increase the likelihood of G2 becoming a teen parent. In turn, early parenthood and other disorderly life-course transitions translate into structural adversity, adverse life events, and emergent adulthood antisocial behavior of G2, which further lessens G2 emergent adulthood prosocial bonds.

As Thornberry (2005) suggested, the developmental processes discussed up to this point have intergenerational consequences for Generation 3 (G3) children. That is, antisocial G2 subjects follow a life path that increases the likelihood of G3 delinquency. G2 antisocial behavior, for instance, may directly affect G3 antisocial behavior through G3's imitation of antisocial behavior after exposure to G2's delinquent acts and values. Although these effects can affect the G3 child directly, Thornberry (2005) emphasized that "the dominant pathway is indirect, mediated by family processes like family conflict, hostility, and especially by the quality of parenting" (p. 183). Low affective ties and involvement with a child, and inconsistent monitoring and standard setting are likely to be the most powerful and proximate influence, mediating the effects of many of the precursor variables identified in Thornberry's model.

In a similar vein, Farrington and colleagues also suggest that the effect of a criminal parent on a child's offending is mediated by family environment, especially parenting techniques. In the Cambridge study, West and Farrington (1977) found that poor parental supervision was an important link in the causal chain between criminal fathers and delinquent sons. Farrington, Jolliffe, Loeber, Stouthamer-Loeber, and Kalb (2001) explicated that "arrested fathers tended to have delinquent boys because they tended to impregnate young women, to live in bad neighborhoods, and to use child-rearing methods that did not develop a strong conscience in their children" (p. 594). Accordingly, enhancing family environment, particularly improving the quality of parenting, holds the hope of breaking the "vicious cycle" of intergenerational continuity of problem behavior.

Existing empirical studies have largely confirmed the importance of family processes in the transmission of problem behavior. With a sample of 126 African American and Hispanic at-risk boys who had an older brother with a recent juvenile court conviction, Ehrensaft with colleagues (2003) found that early onset conduct disorder (before age 15) in mothers was predictive of children's antisocial behavior. High level of parent–child conflict and lack of parental involvement and monitoring mediated the intergenerational link. Kaplan and Liu (1999) examined problem behaviors of parents and children at ages 9–11 and 12–14, respectively, and reported a strong intergenerational link. In particular, parents' child-rearing style mediated the estimate of intergenerational continuity. Capaldi, Pears, Patterson, and Owen (2003) found that parents' adolescent antisocial behavior is

both directly and indirectly, via poor parenting, linked to their children's difficult temperament during toddlerhood.

More recently, using data from the RYDS and the RIGS, Thornberry with his research team conducted a series of studies on the mediating effects of parenting and related factors on intergenerational transmission of antisocial behavior. Thornberry, Freeman-Gallant, Lizotte, Krohn, and Smith (2003) reported that fathers' (G2) antisocial behavior during adolescence is significantly and positively related to the level of offspring's (G3) antisocial behavior during childhood. As expected, fathers' (G2) adolescent involvement in delinquency is related to a less effective parenting style, which is, in turn, negatively associated with G3's problem behavior. For G2 mothers, their adolescent involvement in delinquency is not directly associated with the level of G3's antisocial behavior during childhood. Instead, the effect is entirely indirect, operating through G2's negative parenting style. Similarly, Thornberry (2005) found that when G2 mothers fail to provide warm, nurturing parenting to their children (G3), those children are significantly more likely to be delinquents as reported by their teachers. For G2 supervisory fathers, however, it is the negative, hostile aspects of parenting that are significantly related to G3 delinquency. The style of parenting for both G2 mothers and fathers is produced in part by the style of parenting they received from their parents (G1) and by their earlier behavioral patterns, such as G2 adolescent delinquency and drug use. Moreover, Thornberry, Freeman-Gallant, and Lovegrove (2009a) examined the impact of parental stressors on intergenerational transmission of antisocial behavior. Again, for G2 mothers, there is a significant correlation between their own engagement in drug use and delinquency during adolescence and the rate of her child's externalizing problems at age 9. The same conclusion can be drawn for G2 supervisory fathers. For both G2 mothers and G2 supervisory fathers, adolescent antisocial behavior and a younger age at first birth significantly increase the level of depressive symptoms, which, in turn, reduce parental attachment to the child and increase the child's externalizing behavior.

Trajectories as Latent Propensities for Offending

Previous studies on intergenerational transmission of risk have typically used point estimates or cumulative incidence scores to summarize the parent's delinquent history. This research assumes that the parent's level of offending at some arbitrary point, or over time, predicts the child's delinquency. While informative, this approach ignores the dynamics of individual criminal career. In other words, point estimates or cumulative incident scores cannot account for what really happened longitudinally (Piquero et al., 2001). To better understand how parental delinquent history would impact their children's delinquency, we conceptualize risk through an empirical assessment of an individual's developmental trajectories of delinquency (Nagin, 2005).

There is some debate on how to truly understand and take advantage of distinct developmental trajectories of delinquency (e.g., Bauer & Curran, 2003; Raudenbush, 2005; Sampson, Laub, & Eggleston, 2004). An important criticism, for example, is that "seemingly distinct groups can be found in samples in which no groups at all are present" (Skardhamar, 2010, p. 311). Nagin and Tremblay (2005), however, suggested not viewing trajectory groups as literal depictions of reality but as approximations to the population distribution of individual-level propensity for offending over time (see also Brame, Paternoster, & Piquero, 2012). Categories of offenders uncovered by the semiparametric, group-based approach thus can be viewed as clusters of individuals with a similar developmental path. Trajectories of parental general delinquency have a beginning level and an ending level. Most importantly, between them, the shape of trajectories captures the heterogeneity of offending.

Existing literature on criminal careers has identified distinct patterns of offending (e.g., Bushway, Thornberry, & Krohn, 2003; Haviland & Nagin, 2005; Piquero, 2008). For example, one group of

people may start high on offending and decline dramatically (desistors), whereas another group of individuals start at a relatively low level and increase sharply on offending (late bloomers). Whether or how their offspring would be differentially affected by such heterogeneity in parental criminality is an interesting question. By combining all offenders into the general category of "delinquents," we would have muted the impacts of different shapes of trajectories on intergenerational transmission of risk, thus underestimating the impact of the heterogeneity of parental offending history on their children's behavior.

To our knowledge, there has been limited research using developmental trajectory groups to investigate intergenerational transmission of risk. Using official conviction data in the Netherland, Van de Rakt, Nieuwbeerta, and De Graaf (2008) related group membership of parental convictions to the official delinquency of their children. They found that children of high-rate, chronic criminals tend to commit more delinquent acts and start their delinquent behavior at an earlier stage than children of fathers belonging to other trajectory groups. Using data from the Cambridge Study in Delinquent Development, Besemer and Farrington (2012) found that fathers in chronic and sporadic conviction trajectories are more likely to have children with significantly more convictions than nonoffending fathers. Lizotte et al. (In press) made one step further to examine how parents' age at first birth may interact with their own violence trajectories on offspring antisocial behaviors. They concluded that delaying child rearing indeed protects children at most risk.

Intergenerational Resilience and Parental Protection

According to Thornberry (2005), the phenomenon of "bad parents with good children" can be understood under the notion of "intergenerational resilience." Luthar, Cicchetti, and Becker (2000) defined resilience as "a dynamic process encompassing positive adaptation within the context of significant adversity" (p. 543). Implied in this concept are two essential components. There must be a substantial degree of exposure to threat or adversity. In our case, parental history of delinquency is the "risk" factor that increases the probability of antisocial behavior among offspring. The other component is given such challenging or threatening circumstances, positive adaptation is still achievable due to certain protective factors and mechanisms. In other words, protective factors are more than just the absence of risk factors but distinct factors that interact with risk to reduce their influence on delinquency. In statistical language, protective factors represent interaction or moderation effects (Rutter, 1985; Kurlychek et al., 2012).

As evidenced previously, parenting behaviors have been identified as mediators in the transmission of delinquency. Relatively little empirical attention, however, has been paid to uncover how parenting behaviors may interact with a full history of preexisting risk, and function as protective factors in protecting high-risk youth against delinquency. From a classical social control perspective, Hirschi (1969) argued that it is the fact of attachment to other people, not the characteristics of people to whom one is attached, that determined conformity or violation of conventional rules. Various dimensions of parenting, including parental involvement, monitoring and consistent discipline, are all protecting at-risk child from delinquency (Loeber & Stouthamer-Loeber, 1986; Patterson, Reid, & Dishion, 1992; Sampson & Laub, 1993). Thus, it is possible to observe a negative interaction term between histories or trajectories of parental delinquency and a good parent–child relationship on offspring delinquency.

Previous research has demonstrated that having a good relationship with at least one parent protects offspring from problem behaviors (Farrington, Loeber, & Ttofi, 2012), although a dynamic history of parental delinquency is not treated as a primary risk factor. For instance, McCord (1997) reported that parental warmth acts as a protective factor against the negative effects of physical punishment. She found that 51% of boys with cold physically punishing mothers were convicted in her study, but only 21% of boys with warm physically punishing mothers were convicted. The father's

warmth was also a protective factor against the father's physical punishment. Gorman-Smith, Henry, and Tolan (2004) examined the impact of exceptionally functioning families (a composite of emotionally enriching family environment and positive parenting practices) on violence exposure and violent behaviors among inner-city minority boys during their mid-adolescence. They found that exceptionally functioning families do not insulate youth from exposure to violence but do have a moderating (protective) effect on youth violence perpetration following exposure. Kolvin, Miller, Scott, Gatzanis, and Fleeting (1990) studied deprived children who were nondelinquents in the Newcastle Thousand Family Study. They concluded that the nondelinquent children tend to receive better parental supervision and discipline. Additionally, Smith, Lizotte, Thornberry, and Krohn (1994) found that high-risk children who were resilient tend to have good attachment to parents as well as good parental supervision.

Just as Giordano, Cernkovich, and Rudolph (2002) contended, delinquent parents might "embrace wholeheartedly the good parent role but managed to disassociate their experiences as a good parent from their own deviant behavior" (p. 1039). It follows that for those parents who, in spite of their delinquent history, maintain a positive relationship with their child, the probability of the reproduction of antisocial behavior within the same family would be lessened. That is, a warm, supportive, and consistent relationship with parents is expected to increase the resilience of youth and protect them in the face of the risk represented by their parent's involvement in delinquency.

Summary

Existing intergenerational studies on problem behavior have typically focused on continuity and the mediating processes across generations. Intergenerational research, however, should be concerned with explaining nonconcordance as well as concordance. Previous studies have indicated that individuals with delinquent histories can actually be effective parents (Farrington, 2011; Giordano et al., 2002). If this view is correct, the various endogenous variables identified in the mediation process may actually serve as protective factors in intergenerational association between parental criminality and offspring delinquency. Moving beyond prior research on mediating effects, this study specifically examines moderating effects or statistical interaction terms.

One unique aspect of recent longitudinal, intergenerational studies is that they often permit developmentally appropriate comparisons between generations at comparable stages of life (Serbin & Karp, 2004). We now go beyond traditional, concurrent relationships between parents and offspring into nonconcurrent relationships, which is also a contribution of the current study. As Thornberry (2009) suggested, this form of intergenerational relationship has greater potential to fully capture the underlying, cross-generational mechanisms than traditional concurrent research. Thus, in the following analysis, we focus on how a good parent–child relationship may act as a protection to buffer the risk engendered by having parents with different trajectories of offending in adolescence on their offspring's childhood and adolescent problem behavior. The current investigation also goes beyond Lizotte et al. (In press) by examining the most important protective factor—good parenting—in intergenerational discontinuity of antisocial behavior while controlling for parents' age at first birth.

Method

Data and Sample

Data for the current study are from the RYDS and the RIGS. The RYDS is a longitudinal study investigating the causes and consequences of serious, violent, and chronic delinquency. The RYDS has completed 14 waves of interviews for a panel of juveniles from their early teenage years (about age of 14) through age 31. The study began in 1988 with an original sample of 1,000 seventh- and eighth-grade students in the public schools of Rochester, New York, referred to as Generation 2

(G2). Their primary caretakers (most often the biological mothers), referred to as Generation 1 (G1), were also included in the study.

Since the base rates for serious delinquency are relatively low (Elliott, Huizinga, & Menard, 1989; Wolfgang, Thornberry, & Figlio, 1987), the original sample was stratified on two dimensions to provide respondents who were at high risk for serious delinquency and violence. First, males were oversampled (75% vs. 25%) as they were more likely than females to commit serious delinquent acts (Huizinga, Morse, & Elliott, 1992). Second, students from high crime rate areas of the city were also oversampled based on the assumption that living in such areas is a significant risk factor for delinquency. The initial sample was comprised of 68% African American, 17% Hispanic, and 15% White, and 77% of the sample were male.

The current study uses data from the first 12 waves of the RYDS (1988–1997), spanning two phases of the RYDS data collection. Phase 1 covered the adolescent years of G2 subjects, ages 14–18. In Phase 1, the students (G2) and their primary caretakers (G1) were interviewed 9 and 8 times, respectively, at 6-month intervals.[3] After a 2-year gap in data collection, Phase 2 began in 1994. In Phase 2, G2 subjects with their parents (G1) were interviewed at three annual intervals, at ages 21–23. The retention rates of the RYDS compare favorably to other panel studies of antisocial behavior. From Wave 2 to 12, there was only 1% attrition per year. At Wave 12, 85% (846) of the initial 1,000 subjects were reinterviewed, and the completion rate for parent interviews was 83%.[4]

Data for the current study are also drawn from the RIGS, an ongoing extension of the RYDS. Launched in 1999, the RIGS focuses on the oldest biological children of the original RYDS subjects (G2). The children, referred to as G3, enter the RIGS study as they turn 2 years old. Additional G3 subjects are continually added to the RIGS sample as they reach this age minimum. Interviews are conducted annually with the original RYDS subjects (G2), another primary caretaker (other care giver [OCG]) of the child (typically the other biological parent of G3) and all children (G3) who are 8 years old and above. For children under the age of 8, we collect information from G2s and OCGs about them and observe their interaction with parents in controlled situations. In Year 1 of the RIGS (1999), there were 371 G3 subjects ranging between 2 and 13 years of age. In Year 8 (2006), a total of 471 families participated in the RIGS with G3 subjects ranging between 2 and 20 years of age. It is important to make explicit that while the original RYDS panel is a cohort of subjects proximate to each other in age, this is not the case with the RIGS sample. Rather, the RIGS can be viewed as compiling multiple panels of G3 subjects at different ages.

The current study includes G3 cohorts between age 3 and age 10 when the RIGS began. Specifically, for the childhood model, G2 parenting measures and control variables were measured at Year 1 of the RIGS (1999) and G3 childhood problem behavior was measured at Year 2 (2000). For the adolescent model, G2 parenting measures and control variables were measured at Year 7 of the RIGS (2005) and G3 adolescent problem behavior was measured at Year 8 (2006).[5] Recall that at Year 8, the included G3 subjects ranged between 10 and 17 years old. Through doing this, we assured the proper time order of variables—protective factors (1999 and 2005, respectively) are to be measured after existing risk (1988–1997) and before the outcome (2000 and 2006, respectively). Table 1 reports descriptive statistics for the outcome, parenting measures, and control variables.

Measures

Dependent variable. Both G3 childhood and adolescent externalizing behavior are measured using items taken from Achenbach's (1991, 1992) Child Behavioral Checklist (CBCL).[6] In the RIGS, the CBCL was administered to both G2 subjects and the other primary caregivers of G3 subjects. If G2 subjects were female (biological mothers), their own interview data were used, whereas for male G2 subjects (biological fathers), the OCG interview data were used. Previous studies using the same

Table 1. Descriptive Statistics.

Variables	Childhood Model ($N = 336$)		Adolescent Model ($N = 329$)	
	M	SD	M	SD
G3 externalizing behavior	0.445	0.263	0.401	0.300
G2 affective ties to G3	4.423	0.407	4.487	0.464
G2 consistency of discipline	3.501	0.808	3.823	0.690
G2 involvement	3.788	0.637	3.848	0.664
G2 concurrent delinquency	1.341	1.909	0.804	1.574
G2 gender	1.414	0.493	1.413	0.493
G3 gender	1.482	0.500	1.483	0.500
G2's age at G3's birth	19.074	2.042	19.067	2.048
G2 African American	0.762	0.427	0.766	0.424
G3 cognitive competence	89.607	12.443	89.552	12.516
G2 higher secondary education	0.710	0.454	0.722	0.449
G2 as supervisory parent	0.848	0.360	0.849	0.359
G3 anger/frustration	0.000	1.000	—	—
G3 peer delinquency	—	—	0.000	1.000

Note. G2 = Generation 2; G3 = Generation 3; SD = standard deviation.

data sets (Thornberry, Freeman-Gallant, & Lovegrove, 2009a, 2009b) have shown that biological mothers are most knowledgeable about their children's behavior.

The primary caregiver was asked how often it is true that the child participates in different types of problematic behaviors, ranging from hanging around with others who get in trouble, destroying their own things to getting into fights, and physically attacks (see Appendix). Responses were indicated on a 3-point ordinal scale: *never* (0), *sometimes* (1), or *often* (2). The scale yielded a reliability of .89 in G3 childhood model and a reliability of .93 in G3 adolescent model.

Risk

The measure of parental (G2) risk is based on G2 self-reported data on their own delinquent career collected in the first 12 waves of the RYDS. G2 subjects responded to the general delinquency index containing 31 items covering a range of delinquent behaviors from minor offenses such as status offenses and petty theft, to more serious crimes like robbery, burglary, and aggravated assault.

Recall that parental risk for offspring antisocial behavior is treated as an underlying trait or latent variable, representing individual propensity for offending. Following model selection techniques suggested by Nagin (2005), a five-group model was identified as best. The Bayesian Information Criterion (BIC) scores rise steadily from a two-group ($BIC_{inter} = -5,376.00$; $BIC_{intra} = -5,365.16$) to a five-group solution ($BIC_{inter} = -5,235.49$; $BIC_{intra} = -5,206.58$) and thereafter begin a steady decline. Using Jeffreys' scale of evidence, Bayes factors also show strong evidence for the five-group model ($B_{ij} > 10$). Table 2 reports the diagnostics of assignment accuracy for the model.

The resulting five general delinquency prevalence trajectories are shown in Figure 1: (1) very low rate group, (2) late bloomers, (3) decliners, (4) bell-shaped desistors, and (5) high-level chronic offenders. Although some trajectories represent similar levels of propensity of offending at certain ages (e.g., G2 late bloomers and bell-shaped desistors at around 19 years old), they are different at other developmental stages. Rather than using dummy variables as group indicators, G2's probability of

Table 2. Diagnostics of Assignment Accuracy.

Group	$\hat{\pi}$	p_j (Proportion Classified in Group j)	Mean Posterior Probabilities					Odds Correct Classification
			(1) Very Low Rate	(2) Late Bloomers	(3) Decliners	(4) Bell-Shaped Desistors	(5) High-Level Chronic Offenders	
(1) Very low rate	0.292	0.336	**0.799**	0.066	0.063	0.032	0.039	9.638
(2) Late bloomers	0.158	0.142	0.060	**0.795**	0.049	0.033	0.063	20.667
(3) Decliners	0.191	0.182	0.057	0.049	**0.798**	0.034	0.063	16.731
(4) Bell-shaped desistors	0.080	0.069	0.063	0.063	0.074	**0.739**	0.060	32.557
(5) High-level chronic offenders	0.279	0.271	0.000	0.035	0.044	0.030	**0.891**	21.123

Note. The boldface values refer to "average posterior probability of assignment" for each trajectory group.
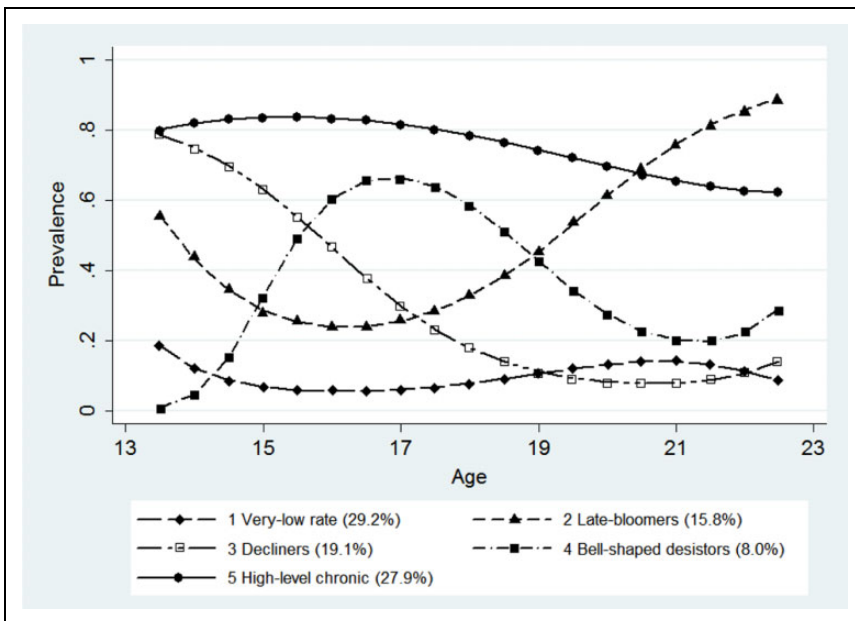
Figure 1. General delinquency prevalence trajectory groups, Waves 1–12.

membership in each of the general delinquency groups are used as indicators of their delinquent career. For example, an individual might have an 85% probability of belonging to Group 1, and a 15% probability of belonging to Group 2. His or her unique trajectory is a weighted average reflecting 85% of Group 1 trajectory and 15% of Group 2. This approach provides a solution to the technical dilemma that all members of the group are treated as homogenous (Raudenbush, 2005).

Protective Factors

Informed by Thornberry's (2005) intergenerational model of antisocial behavior, protective factors for the current investigation are embedded in the parent–child relationship. Specifically, three dimensions of good parenting are investigated in the current study:[7]

G2's affective ties or attachment to G3 is measured by a 10-item scale derived from Hudson's (1982) Index of Parental Attitudes. G2 subjects were asked, for instance, how often they would say "you get along well with the child" or "you think child is terrific" and so on. Responses were indicated on a 5-point scale from *never* (1), *seldom* (2), *sometimes* (3), *often* (4) to *always* (5). Items have been averaged to provide a mean score and higher scores indicate a higher level of attachment. The reliability of the scale is above .80 for both childhood and adolescent models.

A 4-item scale is used to measure G2's consistency in disciplining G3. G2 subjects were asked, for example, once they have decided on a punishment, "how often the child can get out of it" or "how often the kind of punishment depends on G2's mood." Responses were indicated on a 5-point scale from *never* (1), *seldom* (2), *sometimes* (3), *often* (4) to *always* (5). Items have been averaged to provide a mean score, and higher scores indicate a higher level of G2's consistency of discipline. The reliability of the scale is above .70 for both childhood and adolescent models.

A 7-item scale is used to measure G2's involvement in child's activities when G3 is in childhood. G2 subjects were asked, for instance, "how often do you talk to child about what child did during the day" or "how often do you take child to visit friends or relatives." A similar 5-item scale is used to measure G2's involvement in G3's activities when G3 is in adolescence. The 2 items that have been eliminated are "how often G2 would read to G3" and "how often G2 would take G3 to a playground, park or place to play with other children," which are no longer applicable to adolescent G3 subjects. Responses were again indicated on a 5-point scale from *never* (1), *seldom* (2), *sometimes* (3), *often* (4), to *always* (5). Higher scores indicate a higher level of G2 involvement in G3's activities. The reliability of the scale is above .75 for both childhood and adolescent models.

Controls

Empirical studies have shown that if parents are currently involved in criminal activities, they could have a concurrent, detrimental impact on the well-being of their offspring (e.g., Garnier & Stein, 2002; Loeber & Stouthamer-Loeber, 1986). A 19-item self-reported delinquency index is used to control for G2's current offending activities. Becoming a parent before the normatively expected age has been found to be a risk factor for deviance for both parents and for their offspring (e.g., D'Onofrio et al., 2009; Krohn, Lizotte, & Perez, 1997; Thornberry, 2005). Younger parents also tend to have poorer child-rearing skills such as more frequent use of corporal punishment than parents who bear a child at a later age (e.g., Berlin et al., 2009; Straus, 1994). Thus, we control for G2's age at G3's birth. Following Thornberry and colleagues (Thornberry, 2005; Thornberry et al., 2009a), we also controlled whether G2 as supervisory parent or not. Other relevant factors we have controlled for include G2 race/ethnicity, G2 educational level, G2 gender, G3 gender, G3 cognitive competence, G3 temperament in childhood, and G3 peer delinquency in adolescence.

Analytic Strategy

To examine how a parent's delinquent career may impact a child's problem behavior and how such relationships may be buffered or moderated by protective factors derived from parent–child relationships, we employ a series of equations to predict the outcome of interest using G2's probability of membership in each general delinquency trajectory group, parenting measures, and interactions between the two.

$$Y = \alpha_1 + \alpha_2 T_2 + \alpha_3 T_3 + \alpha_4 T_4 + \alpha_5 T_5 + \theta_1 C_1 ... + \theta_8 C_8 + \theta_9 C_9 + e. \tag{1}$$

Equation 1 illustrates the baseline model. Y represents either G3 childhood or adolescent externalizing behavior, T_2 through T_5 represents each G3's parent's (G2) probability of membership in the general delinquency Trajectory groups 2 through 5 (Trajectory group 1, the very low group, is omitted from Equation 1 as the reference category) and C_1 through C_9 represents included control variables.

$$Y = \alpha_1 + \alpha_2 T_2 + \alpha_3 T_3 + \alpha_4 T_4 + \alpha_5 T_5 + \beta_1 P_1 + \beta_2 P_2 + \beta_3 P_3 + \theta_1 C_1 ... + \theta_8 C_8 + \theta_9 C_9 + e. \tag{2}$$

Equation 2 estimates the main effects model of the general delinquency trajectory groups and our three parenting measures, indicated as P_1 through P_3, on G3 externalizing behavior. Again T_2 through T_5 represents G2's probability of membership in the general delinquency Trajectory groups 2 through 5, and C_1 through C_9 represents included control variables. This equation treats the three parenting measures as potential meditational factors in that it only examines their main effects.

The central research question that we are interested in is how good parenting may moderate the impact of the risk that parental delinquent history represents for their offspring. It is hypothesized that there are interaction effects between trajectory groups and each parenting measure we examine. This model is shown in Equation 3. There are two main reasons why we do not examine all cross-product terms at the same time. First, examining interactions between trajectory groups and all three parenting measures simultaneously, rather than one parenting measure each time, would actually hinder us from clearly viewing which aspect/aspects of parenting is most important in this regard. Second, given the modest sample size, we do not have enough statistical power to simultaneously examine 12 cross-product terms in the model (for each parenting measure, we have four interaction terms).

$$Y = \alpha_1 + \alpha_2 T_2 + \alpha_3 T_3 + \alpha_4 T_4 + \alpha_5 T_5 + \beta_1 P_1 + \beta_2 P_2 + \beta_3 P_3 + \gamma_1 T_2 \times P_j + \gamma_2 T_3 \\ \times P_j + \gamma_3 T_4 \times P_j + \gamma_4 T_5 \times P_j + \theta_1 C_1 ... + \theta_8 C_8 + \theta_9 C_9 + e. \tag{3}$$

Equation 3 is similar to Equation 2, with four additions. In Equation 3, $T_2 \times P_j$ represents the interaction between G2's probability of membership in delinquency Trajectory group 2 and individual parenting measure ($j = 1, 2,$ or 3). $T_3 \times P_j$ represents the interaction between G2's probability of membership in delinquency Trajectory group 3 and individual parenting measure, and so on. The remaining variables are the same as those included in Equation 2. Again, the delinquency Trajectory group 1 is omitted as the reference group. If there is one or more significant interaction term after adjusting for multiple testing with the Bonferroni technique, a final model including all significant interactions will be estimated. The data have been screened for patterns of missingness and the technique of "multiple imputation" has been found desirable for dealing with missing data in our sample. In addition, all variables are mean centered to avoid the problem of multicollinearity (Aiken & West, 1991).[8]

Results

The main interest of the current study is to examine the degree to which measures of parenting interact with the history of parental delinquent behavior to protect youth from the effects of parental delinquency. It is also interesting to see if there are any differences in the effect of parenting by developmental stage. We therefore present the results first for when G3 subjects were children and then for when they were adolescents.[9]

Table 3. Regression of Childhood Externalizing Behavior on Trajectory Groups, Parenting Measures, and Control Variables.

Variables	Baseline Model (1)			Main Effects Model (2)		
	b (SE)	p Value	β	b (SE)	p Value	β
Intercept	0.445 (0.013)	<.001**	—	0.447 (0.012)	<.001**	—
Late bloomers (T_2)	0.132 (0.063)	.036*	.116	0.113 (0.060)	.060	.099
Decliners (T_3)	0.067 (0.047)	.157	.082	0.056 (0.045)	.217	.069
Bell-shaped desistors (T_4)	0.204 (0.071)	.004**	.148	0.159 (0.069)	.022*	.115
High-level chronic (T_5)	0.097 (0.040)	.014*	.152	0.079 (0.038)	.038*	.124
G2 affective ties to G3	—	—	—	−0.120 (0.037)	.001**	−.186
G2 consistency of discipline	—	—	—	−0.051 (0.018)	.006**	−.157
G2 involvement	—	—	—	−0.016 (0.027)	.565	−.039
G2 concurrent delinquency	0.005 (0.007)	.488	.036	−0.001 (0.007)	.948	−.007
G2 gender	−0.039 (0.031)	.198	−.073	−0.071 (0.032)	.026*	−.133
G3 gender	−0.038 (0.026)	.154	−.072	−0.025 (0.025)	.316	−.048
G2's age at G3's birth	−0.007 (0.007)	.271	−.054	−0.004 (0.007)	.583	−.031
G2 African American	−0.011 (0.033)	.725	−.018	−0.011 (0.031)	.719	−.018
G3 cognitive competence	−0.000 (0.001)	.882	.000	−0.000 (0.001)	.930	.000
G2 higher secondary education	0.027 (0.031)	.394	.047	0.031 (0.031)	.306	.054
G2 as supervisory parent	0.010 (0.040)	.805	.014	−0.013 (0.041)	.747	−.018
G3 anger/frustration	0.115 (0.013)	<.001**	.437	0.095 (0.013)	<.001**	.361

Note. G2 = Generation 2; G3 = Generation 3; SE = standard error.
*p < .05. **p < .01.

G3 Childhood Delinquency Models

The first step in our analysis is to establish the relationship between G2 offending history and G3 externalizing behavior. The baseline model in Table 3 shows the results from ordinary least squares regression in which G3 externalizing behaviors are regressed on G2 trajectory groups and all control variables. If parents have a greater likelihood of being in the late-bloomer group (T_2), the bell-shaped desistors group (T_4), or the high-level chronic group (T_5), the likelihood of their young children having externalizing behavior is significantly greater than if they are in the very low offender group (T_1). The only control variable that is significantly related to G3 externalizing behaviors is G3 anger/frustration.

When the parenting variables are added to the equation (main effects model), the coefficients for membership in the bell-shaped desistors and the high-level chronic group are still significant, but the coefficient for the late-bloomers group no longer meets the criterion for statistical significance. Both affective ties and consistency of discipline have significant and moderate (β = −.186 and β = −.157, respectively) main effects on G3 externalizing behavior, although the third measure of parenting, parent involvement, does not. The addition of the parenting measures mediates the relationship between membership in the late-bloomer group and G3 externalizing behavior.

While the mediating effect of the parenting measure for the late-bloomer group is meaningful, what we are particularly interested in are the interactions between the measure of risk (trajectory groups) and the parenting measures because, if significant, they will indicate that parenting measures protect against externalizing behavior for G3 even in the face of having parents with delinquent history. The results for equations including the interaction terms are presented in Table 4. For purposes of clarity in presenting the results, only the main effects and interaction terms are reported, omitting the results for the control variables.

Model 1 in Table 4 includes the results for our measure of affective ties. As in the first set of equations, main effects for the bell-shaped desistor group (T_4), the high-level chronic group (T_5), affective

Table 4. Regression of Childhood Externalizing Behavior on Trajectories Groups, Parenting Measures, and Their Interactions.

Variables	Affective Ties Model (1)			Consistency of Discipline Model (2)			Involvement Model (3)		
	b (SE)	p Value	β	b (SE)	p Value	β	b (SE)	p Value	β
Intercept	0.445 (0.012)	<.001**	—	0.442 (0.012)	<.001**	—	0.448 (0.013)	<.001**	—
Late bloomers (T_2)	0.116 (0.060)	.052	.102	0.109 (0.060)	.071	.096	0.115 (0.061)	.058	.101
Decliners (T_3)	0.054 (0.046)	.233	.066	0.057 (0.045)	.208	.070	0.062 (0.046)	.177	.076
Bell-shaped desistors (T_4)	0.178 (0.075)	.018*	.129	0.141 (0.079)	.045*	.102	0.155 (0.071)	.029*	.113
High-level chronic (T_5)	0.078 (0.038)	.040*	.122	0.075 (0.038)	.046*	.117	0.082 (0.038)	.033*	.128
G2 affective ties to G3	-0.119 (0.038)	.002**	-.184	-0.128 (0.039)	.001**	-.198	-0.125 (0.038)	.001**	-.193
G2 consistency of discipline	-0.053 (0.020)	.011*	-.163	-0.048 (0.019)	.012*	-.147	-0.057 (0.018)	.001**	-.175
G2 involvement	-0.015 (0.023)	.509	-.036	-0.019 (0.025)	.452	-.046	-0.007 (0.023)	.754	-.017
Affective Ties × T_2	-0.112 (0.139)	.421	-.043	—	—	—	—	—	—
Affective Ties × T_3	0.153 (0.123)	.214	.072	—	—	—	—	—	—
Affective Ties × T_4	0.083 (0.137)	.546	.038	—	—	—	—	—	—
Affective Ties × T_5	-0.179 (0.096)	.064*	-.113	—	—	—	—	—	—
Discipline × T_2	—	—	—	0.012 (0.083)	.883	.009	—	—	—
Discipline × T_3	—	—	—	0.085 (0.063)	.174	.081	—	—	—
Discipline × T_4	—	—	—	0.122 (0.092)	.186	.069	—	—	—
Discipline × T_5	—	—	—	-0.064 (0.048)	.188	-.079	—	—	—
Involvement × T_2	—	—	—	—	—	—	-0.031 (0.100)	.755	-.018
Involvement × T_3	—	—	—	—	—	—	-0.041 (0.081)	.613	-.030
Involvement × T_4	—	—	—	—	—	—	-0.024 (0.118)	.841	-.011
Involvement × T_5	—	—	—	—	—	—	0.039 (0.061)	.517	.037

Note. G2 = Generation 2; G3 = Generation 3; *SE* = standard error.
Control variables are included when estimating the regression models. For the purpose of clarity, coefficients of control variables are not reported here.
*$p < .05$. **$p < .01$.

Table 5. Regression of Adolescent Externalizing Behavior on Trajectory Groups, Parenting Measures, and Control Variables.

Variables	Baseline Model (1)			Main Effects Model (2)		
	b (SE)	p Value	β	b (SE)	p Value	β
Intercept	0.401 (0.017)	<.001**	—	0.401 (0.016)	<.001**	—
Late bloomers (T_2)	0.234 (0.079)	.003**	.183	0.187 (0.078)	.017*	.146
Decliners (T_3)	0.093 (0.065)	.156	.100	0.057 (0.062)	.365	.062
Bell-shaped desistors (T_4)	0.203 (0.092)	.027*	.127	0.110 (0.091)	.226	.069
High-level chronic (T_5)	0.168 (0.052)	.001**	.229	0.122 (0.047)	.009**	.166
G2 affective ties to G3	—	—	—	−0.248 (0.048)	<.001**	−.384
G2 consistency of discipline	—	—	—	−0.013 (0.027)	.644	−.030
G2 involvement	—	—	—	−0.012 (0.031)	.710	−.027
G2 concurrent delinquency	0.022 (0.012)	.061	.115	0.010 (0.011)	.335	.052
G2 gender	−0.009 (0.040)	.820	−.015	−0.033 (0.037)	.368	−.054
G3 gender	−0.037 (0.033)	.262	−.062	−0.000 (0.032)	.993	.000
G2's age at G3's birth	−0.014 (0.009)	.125	−.096	−0.005 (0.008)	.551	−.034
G2 African American	−0.053 (0.043)	.217	−.075	−0.049 (0.040)	.228	−.069
G3 cognitive competence	0.000 (0.001)	.791	.000	−0.000 (0.001)	.528	.000
G2 higher secondary education	0.005 (0.041)	.912	.007	0.039 (0.037)	.292	.058
G2 as supervisory parent	−0.015 (0.060)	.800	−.018	−0.018 (0.067)	.785	−.022
G3 peer delinquency	0.041 (0.018)	.021*	.137	0.037 (0.016)	.020*	.123

Note. G2 = Generation 2; G3 = Generation 3; SE = standard error.
*$p < .05$. **$p < .01$.

ties, and consistency of discipline are significant. In addition, the interaction between affective ties and the high-level chronic group is marginally significant ($p = .064$). However, this moderation effect becomes far from significant after correcting for multiple comparisons through the Bonferroni adjustment (the Bonferroni criterion: $p < .05/12 = .004$). The interaction terms for affective ties and other trajectories of parental delinquency are not significant. In Model 2 of Table 4, results for the equation including consistency of discipline are reported. We observe the same main effects as we did in the previous analysis. There exist no significant interactions between consistency of discipline and trajectory group membership. Similar results are obtained for parental involvement (Model 3) with only main effects for the bell-shaped desistors, the high-level chronic offenders, affective ties, and consistency of discipline being significant and no significant interaction terms.

G3 Adolescent Delinquency Models

In this section, we repeat the analysis in the previous section but do so for the time when the respondents were in their teenage years. In the baseline model of Table 5, the four trajectory group variables along with control variables are used to account for G3 externalizing behavior during adolescence. The coefficients for the late bloomer (T_2), the bell-shaped desistor (T_4), and the high-level chronic (T_5) groups are all significant. Thus, having parents with any of these different criminal history trajectories increases the likelihood that their children will exhibit externalizing behaviors. The only other significant predictor of G3 externalizing behavior is G3 peer delinquency.

In Model 2 of Table 5, the parenting variables are added to the equation. Main effects for the late bloomer and high-level chronic groups remain significant. The parenting variables mediate the relationship between the bell-shaped desistor trajectory and externalizing behavior. Once again, it appears that attachment to parents is the most important influence among the parenting dimensions

on externalizing behavior. Peer delinquency remains significant on predicting adolescent externalizing behavior.

The results from the equations incorporating the interaction terms are reported in Table 6. The results for affective ties (Model 1) demonstrate that the main effects of the late bloomer and high-level chronic trajectories are significantly related to adolescent externalizing behavior. Affective ties to parents also displays statistical significance. The only interaction term that is significant (even after the Bonferroni adjustment) is that between affective ties and the high-level chronic group ($p = .001$). That is, a close relationship between parent and child protects against the effect of having a parent who has a history of high-level involvement in delinquent behaviors.

The results for consistency of discipline (Model 2), however, present a slightly different and unexpected pattern. The same main effects are observed as in the affective ties analysis. There also exists a significant interaction between consistency of discipline and the late-bloomer group ($p = .003$) after the adjustment for multiple comparisons. This coefficient, however, indicates that the direction of the relationship is opposite to what we predicted. That is, rather than protecting against the influence of having a parent who is in the late-bloomer group, consistency of discipline exacerbates the impact of this trajectory. We will endeavor to explain this unexpected finding in the Discussion section.

Model 3 in Table 6 provides the results when involvement is included in the equation. The main effects for the late bloomers, the high-level chronic group, and affective ties are once again statistically significant. Unlike what we found for affective ties and consistency of discipline, none of the interaction terms involving involvement are significant.

Since there are two statistically significant interaction terms after adjusting for multiple testing, a final model including all significant interactions is presented as a basis for the final discussion. Table 7 shows that when comparing with individuals in the very low group, late bloomers ($p = .001$; $\beta = .212$) and high-level chronic offenders ($p = .025$; $\beta = .139$) manifest statistically significant and nonnegligible effects on G3 adolescent externalizing behavior. G2 affective ties to G3 again is the most important influence among all explanatory factors on adolescent externalizing behavior. Controlling for the other variables in the model, a 1 standard deviation (SD) increase in parental attachment to child leads to a 0.357 SD decrease in adolescent externalizing behavior. The moderation effects between affective ties and high-level chronic offenders ($p = .009$; $\beta = -.149$) as well as consistency of discipline and late bloomers ($p = .007$; $\beta = .198$) remain highly significant and moderate.

Discussion

Past research has generally examined how risk or problem behavior could transmit across generations within the family (e.g., Farrington, 2011; Farrington et al., 2001; Moffitt & Caspi, 2003; Thornberry, 2005; Thornberry et al., 2009a, 2009b). Empirical studies, however, have also demonstrated that the estimates of the similarity in parents' and children's delinquency, although significant, are not particularly large in magnitude (e.g., Cairns, Cairns, Xie, Leung, & Hearne, 1998; Furstenberg, Levine, & Brooks-Gunn, 1990; Hops, Davis, Leve, & Sheeber, 2003; Robins, West, & Herjanic, 1975). That is, a good portion of children with parents who have a serious delinquent history will not become delinquents themselves. From both a theoretical and policy point of view, it is important to understand why and how not every ''bad'' parent raises a similarly delinquent child.

With respect to the first research question, results from both childhood and adolescent models clearly demonstrate that different shapes of offending trajectories do differentially impact the transmission of delinquency to offspring. If parents have a greater likelihood of being in the late-bloomer, bell-shaped desistor, or high-level chronic group, the likelihood of their offspring having problem

Table 6. Regression of Adolescent Externalizing Behavior on Trajectories Groups, Parenting Measures, and Their Interactions.

Variables	Affective Ties Model (1)			Consistency of Discipline Model (2)			Involvement Model (3)		
	b (SE)	p Value	β	b (SE)	p Value	β	b (SE)	p Value	β
Intercept	0.401 (0.016)	<.001**	—	0.416 (0.019)	<.001**	—	0.402 (0.016)	<.001**	—
Late bloomers (T_2)	0.202 (0.078)	.011*	.158	0.291 (0.080)	<.001**	.228	0.171 (0.076)	.024*	.134
Decliners (T_3)	0.094 (0.059)	.107	.102	0.077 (0.061)	.214	.083	0.062 (0.064)	.337	.067
Bell-shaped desistors (T_4)	0.143 (0.088)	.106	.090	0.100 (0.088)	.258	.063	0.152 (0.093)	.105	.095
High-level chronic (T_5)	0.126 (0.050)	.013*	.172	0.113 (0.049)	.021*	.154	0.113 (0.049)	.021*	.154
G2 affective ties to G3	-0.223 (0.056)	<.001**	-.345	-0.282 (0.048)	<.001**	-.436	-0.239 (0.046)	<.001**	-.370
G2 consistency of discipline	-0.025 (0.034)	.467	-.058	-0.001 (0.029)	.981	-.002	-0.009 (0.027)	.738	-.021
G2 involvement	-0.001 (0.033)	.993	-.002	0.012 (0.034)	.704	.027	-0.004 (0.031)	.910	-.009
Affective Ties × T_2	0.019 (0.179)	.915	.006	—	—	—	—	—	—
Affective Ties × T_3	-0.187 (0.148)	.208	-.080	—	—	—	—	—	—
Affective Ties × T_4	0.128 (0.194)	.508	.037	—	—	—	—	—	—
Affective Ties × T_5	-0.357 (0.107)	.001**	-.242	—	—	—	—	—	—
Discipline × T_2	—	—	—	0.337 (0.113)	.003**	.195	—	—	—
Discipline × T_3	—	—	—	-0.049 (0.097)	.616	-.035	—	—	—
Discipline × T_4	—	—	—	-0.033 (0.163)	.841	-.011	—	—	—
Discipline × T_5	—	—	—	-0.104 (0.069)	.136	-.099	—	—	—
Involvement × T_2	—	—	—	—	—	—	0.077 (0.142)	.589	.033
Involvement × T_3	—	—	—	—	—	—	0.025 (0.107)	.816	.018
Involvement × T_4	—	—	—	—	—	—	0.099 (0.160)	.537	.036
Involvement × T_5	—	—	—	—	—	—	-0.083 (0.080)	.306	-.072

Note. G2 = Generation 2; G3 = Generation 3; *SE* = standard error.
Control variables are included when estimating the regression models. For the purpose of clarity, coefficients of control variables are not reported here.
*p < .05. **p < .01.

Table 7. Regression of Adolescent Externalizing Behavior—Final Model.

	Final Model		
Variables	b (SE)	p Value	β
Intercept	0.407 (0.016)	<.001**	—
Late bloomers (T_2)	0.270 (0.081)	.001**	.212
Decliners (T_3)	0.073 (0.057)	.198	.079
Bell-shaped desistors (T_4)	0.104 (0.095)	.275	.065
High-level chronic (T_5)	0.102 (0.045)	.025*	.139
G2 affective ties to G3	−0.231 (0.049)	<.001**	−.357
G2 consistency of discipline	−0.017 (0.028)	.544	−.039
G2 involvement	0.002 (0.031)	.950	.004
Affective Ties × T_5	−0.220 (0.084)	.009**	−.149
Discipline × T_2	0.342 (0.120)	.007**	.198
G2 concurrent delinquency	0.015 (0.011)	.190	.079
G2 gender	−0.038 (0.039)	.333	−.062
G3 gender	0.004 (0.034)	.915	.007
G2's age at G3's birth	−0.003 (0.008)	.703	−.020
G2 African American	−0.037 (0.039)	.348	−.052
G3 cognitive competence	−0.001 (0.001)	.354	−.042
G2 higher secondary education	0.035 (0.043)	.421	.052
G2 as supervisory parent	−0.050 (0.070)	.478	−.060
G3 peer delinquency	0.043 (0.015)	.005**	.143

Note. G2 = Generation 2; G3 = Generation 3; SE = standard error.
*p < .05. **p < .01.

behaviors is significantly greater than if they are in the very low offender group. Accordingly, simply knowing an instant or cumulative level of offending is insufficient to fully understand the impact of parental offending history on the development of their offspring. By combining distinct subtypes of delinquent parents into the general category of "delinquents," we misrepresent the impacts of different shapes of trajectories on intergenerational transmission of problem behavior.

However, having a delinquent parent in one of the aforementioned trajectories does not necessarily mean the child will exhibit problem behavior. Children can be protected by good parenting even if their parents were juvenile delinquents. In specific, attachment to parent seems to be the most important meditational factor on G3 externalizing factor. Consistency of discipline is also important when the subjects were in their childhood years. The parenting variables mediate the relationship between the late-bloomer trajectory and childhood externalizing behaviors as well as the relationship between bell-shaped desistors and adolescent externalizing behaviors. Main effects for high-level chronic offenders are also reduced in both childhood and adolescent models.

While general protection or the mediating effect of the parenting measures is meaningful, what we are particularly interested in is the interaction between parental offending history (trajectory groups) and the parenting measures. That is, whether good parenting would serve to offset the effects of high parental involvement in delinquency.

The answer is affirmative for G3 adolescents whose parents were in the most delinquent trajectory group—the high-level chronic group. For those high-risk G3 subjects, parental attachment significantly interacts with the high-level chronic trajectory indicating that keeping a close parent–child relationship deflects the impact of having a highly delinquent parent and serves as a protective factor against parental delinquency. In other words, when parental attachment to children is presented, the problematic effects of having a parent with a high-level chronic delinquent history become weaker. Unlike some early studies examining the effects of attachment to delinquent parents on offspring

criminality (e.g., Jensen & Brownfield, 1983), we found that, for high-risk G3 subjects, the more one is attached to his or her parents, the less likely he or she would become delinquent, even if their parents have a serious criminal history.

Unexpectedly, for G3 adolescents, a statistically significant interaction between G2 late bloomer trajectory and consistency of discipline is observed in the direction opposed to what was predicted. Rather than protecting against the influence of having a parent who is in the late-bloomer group, consistency of discipline actually exacerbates the negative impact of this trajectory. To account for this unexpected finding, it might be useful to examine the nature of the late blooming trajectory.

Presumably, late bloomers experience a continued rise in their propensity of offending during the time periods when they are parenting G3 subjects. This not only provides an explanation for why the children of parents in the late blooming trajectory have an elevated rate of externalizing behaviors in their adolescent years, it also may provide an explanation for the interaction between the risk of having a parent in that trajectory group and consistency of discipline. G3 youth becomes more aware of their parents' delinquent activities than in their childhood years. When those parents try to discipline their children, G3 subjects may react to the hypocrisy that such discipline, in light of G2 behaviors, represents, thus exacerbating the effect of parental behavior on their children's problem behaviors. Meanwhile, the unexpected interaction does not occur between G2 late-bloomer trajectory and parental attachment/involvement. In fact, parental attachment or involvement is more an emotional dimension of parenting, whereas consistency of discipline is more coercive in nature (Hirschi, 1969; Patterson, Chamberlain, & Reid, 1982). That is, if propensity of offending for G2 late bloomers increases and they still coercively regulate their adolescent offspring's behavior, G3 adolescents may react with high level of defiance. However, for G2 parents whose relationship with G3 is close, defiance might not occur or at least be less severe.

One the whole, protection effects from good parenting seem to be slightly different with the aging of the next generation. The parenting measures mainly exhibit "general protection" effects for G3 subjects in their childhood years. Parental attachment and consistency of discipline manifest statistically significant and moderate main effects. For G3 adolescents, parental attachment remains exhibiting moderate to strong main effects. In addition, for the sake of protecting individuals at particular risk, it is important to foster a close parent–child relationship but not through some coercive way. In brief, our results suggest that having strong affective ties between parents and children is important in the process of breaking the vicious cycle of delinquency in the family. These findings are in general consistent with theoretical expectations of social control perspective that it is attachment to parents, not the characteristics of parents to whom one is attached, that matters.

Although the present study adds to the small literature on intergenerational discontinuity of problem behavior, it is not without its limitations. First, because our analysis was restricted to a high-risk, predominantly African American sample (G2) and their oldest biological child (G3) in one city, replication for other ethnic groups in other cities is important to testing the external validity of the findings. Second, the sample size is modest. Although we decided not to simultaneously include all interaction terms, the results from multiple regression analysis examining moderation effects may still be vulnerable to measurement errors. Third, we did not include multiple caregivers in the family. For instance, we only examined how G2 affective ties to G3 may influence G3 delinquency, but not G1 affective ties to G3 or OCG affective ties to G3 within the same family. Intergenerational studies that do not incorporate data on multiple caregivers could be providing misleading estimates of the effects of the focal parents. As a result, this is only a partial test of Thornberry's (2005) intergenerational model of continuity. Additionally, future studies may also examine the trajectories of problematic behaviors for children. Future research that resolves these shortcomings may produce a more nuanced understanding of the effect of good parenting on intergenerational transmission and/or resilience of problem behavior.

Conclusion

In summary, the current study has identified important methodological, theoretical, and practical implications. Methodologically, it is important to distinguish the effect of not only the level of parental crime at one point in time but the shape of the criminal behavior trajectory on outcomes for their children. Although different trajectories may represent similar levels of propensity for offending at some stages of development, there are also important differences at other stages. Most importantly, results from the current analysis suggest that the effect on children's behavior is different depending on the shape of the trajectory group to which parents have a higher probability of belonging.

The theoretical and practical implications of the findings are in many ways joined. Theoretically, the findings seem to suggest that, at least in regard to parents, the quality of the parent–child relationship is important in determining the behavior of their children, regardless of whether parents had a history of being involved in criminal behavior. The classical social control perspective has provided a possible angle exploring intergenerational discontinuity of problem behavior. Practically, this suggests that the cycle of problematic behaviors within families can be broken if the parents can be taught to relate to their children in a manner that generates strong ties with their children—even if those parents have engaged or are currently engaging such behaviors. As such, it is hoped that this study could be used in support of any delinquency reduction programs that involve enhancing the parent–child relationship.

Appendix

Items for the Externalizing Behavior Subscale of the Child Behavior Checklist (CBCL)

Since the last interview, how often is it true that (child): (0 = *never*; 1 = *sometimes*; 2 = *often*)

Argues a lot?
Brags or boasts?
Is cruel, bullying, or mean to others?
Demands a lot of attention?
Destroys (his or her) own things?
Destroys things belonging to (his or her) family or others?
Is disobedient at home?
Is disobedient at school?
Doesn't seem to feel guilty after misbehaving?
Is easily jealous?
Gets into many fights?
Hangs around with others who get in trouble?
Lies or cheats?
Prefers being with older kids?
Physically attacks people?
Runs away from home?
Screams a lot?
Sets fires?
Steals at home?
Steals outside the home?
Is stubborn, sullen, or irritable?
Has sudden changes in (his or her) mood or feelings?
Swears or uses obscene language?

Teases a lot?
Has temper tantrums or a hot temper?
Thinks too much about sex?
Threatens people?
Is truant or skips schools?
Is usually loud?
Uses alcohol or drugs for nonmedical purposes?
Vandalizes?

Authors' Note

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Notes

1. "Bad" means criminal or delinquent here. Parents with a delinquent history are not necessarily poor at raising their children.
2. In current terminology of intergenerational studies of problem behavior, Generation 1 (G1) usually refers to the first or grandparent generation. Generation 2 (G2) refers to the middle or parent generation, and Generation 3 (G3) refers to the child generation (Thornberry, 2005).
3. G1 subjects were not interviewed at Wave 9 of the Rochester Youth Development Study (RYDS).
4. In a formal test of differential attrition, Krohn and Thornberry (1999) compared Generation 2 (G2) subjects retained to G2 subjects not retained at Wave 12. They found no significant difference between those retained and those not retained along the following dimensions—age, gender, social class, race/ethnicity, family structure, drug use, delinquency, property crime, and violent crime.
5. It is possible to lose Generation 3 (G3) subjects due to attrition. However, subject retention in the Rochester Intergenerational Study (RIGS) is above 98% (Lizotte et al., In press).
6. It bears mention that (1) we are not directly using the delinquency subscale in the Child Behavioral Checklist (CBCL) as our dependent variable because the delinquency subscale seems to be unreliable for our sample, especially in our childhood model ($\alpha = .518$ for Generation 2 [G2] report and $\alpha = .578$ for OCG report) and (2) we are also not using self-reported general delinquency scale because data are not available for G3 subjects younger than 8 years old.
7. The overlap among the parenting measures is minimal. All two-way correlations are below .45.
8. The variance inflation factor scores for all variables are below 2. We also checked for outliers, normality of residuals, and homoscedasticity. Our analysis conforms to the ordinary least squares model assumptions.
9. There are two reasons why we allow some overlap of age groups in the two models. First, there is no clear-cut definition of what constitutes childhood versus adolescence. Female and male subjects also tend to

initiate transitions from childhood to adolescence at different times. Second, given the number of predictors and interactions in our model, further limiting panels of Generation 3 (G3) subjects included in our analysis leads to some concern about statistical power.

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