

How Teenage Fathers Matter for Children: Evidence From the ECLS-B

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Stefanie Mollborn¹ and Peter J. Lovegrove¹

Abstract

Much is known about how having a teenage mother influences children's outcomes, but the relationship between teenage fatherhood and children's health and development is less well documented. Using the Early Childhood Longitudinal Study–Birth Cohort, the authors investigated how teenage fathers matter for children. They expected teenage fathers' influence on children to differ from adult fathers' in three domains: the household context, the father–mother relationship, and the father–child relationship. Teenage fathers were less often married and more often cohabiting or nonresident, and their children experienced a variety of social disadvantages in their household contexts. The quality of the father–child relationship did not often differ between adolescent and adult fathers. Fathers' marital status and children's household contexts each fully explained the negative relationship between having a teen father and children's cognitive and behavior scores at age 2. These findings suggest that policy interventions could possibly reduce these children's developmental gaps in the critical preschool years.

Keywords

teenage fathers, adolescent fathers, fathering, ECLS-B, paternal coresidence

¹University of Colorado at Boulder, Boulder, CO, USA

Corresponding Author:

Stefanie Mollborn, Department of Sociology and Institute of Behavioral Science, UCB 483, University of Colorado at Boulder, Boulder, CO 80309-0483, USA

Email: mollborn@colorado.edu

Recent increases in the U.S. teenage birth rate (Hamilton, Martin, & Ventura, 2009) have refocused public attention on the consequences of adolescent childbearing, but teenage fathers are often overlooked. One key reason for this omission is a dearth of nationally representative quantitative data. There is a need for research that uses recent national survey data to draw conclusions that apply to teenage fathers and their children throughout the United States. This study uses the newly released Early Childhood Longitudinal Study–Birth Cohort (ECLS-B) to ask two primary questions concerning the association between having a teenage father and children’s outcomes, a relationship that has received surprisingly little empirical attention in the past (Coley & Chase-Lansdale, 1998). First, how do teen fathers influence their children’s lives and early health and development? This descriptive exploration includes a particular focus on adolescent fathers’ coresidence with their children. Second, why might having a teenage father compromise children’s early health and development? We work to identify mediational pathways through which this occurs.¹

Popular perceptions equate teenage *parenthood* with teenage *motherhood*. Most teenage parents are female because most teenage mothers’ children are fathered by adult men (Coley & Chase-Lansdale, 1998), whereas few teenage boys date adult women. Still, there are many teenage fathers, and they are largely invisible in public discourse. These assumptions are reflected in scholarly work: In most studies of teenage parenthood, scholars have focused solely on mothers (for reviews, see Coley & Chase-Lansdale, 1998; Hoffman, 1998). Most previous research has agreed that the children of teenage mothers have substantially worse outcomes in their preschool years than children of adult mothers in areas such as cognitive, language, physical, and social development (Luster, Bates, Fitzgerald, Vandenbelt, & Key, 2000), though this relationship is often caused more by preexisting maternal disadvantage than by young maternal age per se (Levine, Pollack, & Comfort, 2001; Turley, 2003). Cognitive, verbal, and behavioral outcomes measured in early childhood predict success when children start school (Baydar, Brooks-Gunn, & Furstenberg, 1993), which is linked in turn to later assessments of achievement, high school completion, and higher educational attainment (Luster, Bates, Vandenbelt, & Nievar, 2004). Despite their importance, less is known about these early years of children’s development than later periods (National Center for Education Statistics, 2006).

Although 30% to 50% of children born to teenage mothers also have a teenage father (see Roye & Balk, 1996), research about the influence of teenage fatherhood on children is sparse. Is it reasonable to believe that children are affected by having a young father? Past research suggests that most teenage fathers are not coresident with their children (Pirog & Magee, 1997), but they

are still involved parents (Harris, 1998), at least early in the child's life, and they typically support their children financially (East & Felice, 1996). Therefore, we may expect many teenage fathers to have a more meaningful influence on their children's early development than conventional wisdom might anticipate. Although the traditional fathering role has focused on providing financially for the mother and child, we consider a wider variety of ways in which fathers may influence their children's lives.

How Do Teenage Fathers Matter for Children's Lives?

Past theorists of parenting, and fatherhood in particular, have identified many areas in which fathers matter for their children's health and development. We focus here on three of these: the child's household context, the father–mother relationship, and the father–child relationship. These three domains were chosen over others, because we expect that in these areas, the influence of a teenage father may be very different from that of an adult father. It is important to acknowledge that the three domains interact with each other in influencing children's outcomes, as the literature cited below illustrates. Fathers' multifaceted contributions to the lives of their children in these three domains have been identified as particularly important in the past. For example, Hawkins et al. (2002) developed a nine-dimensional theoretical model of father involvement that was not specific to any particular age group. Their nine dimensions broke down into these three broader domains: providing financial resources (which is a part of household context), support of the mother (father–mother relationship), and seven types of interaction with the child (father–child relationship).

Several influential theories predicting parenting behaviors (Belsky, 1984; Patterson, DeBaryshe, & Ramsey, 1989) and intergenerational continuity in anti-social behavior (Capaldi, DeGarmo, Patterson, & Forgatch, 2002; Thornberry, Freeman-Gallant, & Lovegrove, 2009) have acknowledged that some or all of these dimensions are important in understanding the contributions fathers make to their children's lives far beyond the financial realm. In a review of the literature on low-income fathers, Nelson (2004) noted a need for more research about fathers' influences on their children's well-being. These influences could be direct or indirect through their relationships with their children's mothers.

Children's Household Context

The broadest of the three domains of fathers' influence on their children, household context (including both socioeconomic and other factors), can contribute

to children's well-being both directly and indirectly by affecting family processes such as the father-child relationship (Belsky, 1984; Capaldi et al., 2002; Patterson et al., 1989). For example, Whitbeck et al. (1997) found that harsh parenting by fathers increased with financial stress. In terms of the direct influence of household context, fathers' material support has been positively linked to children's outcomes in past research (Argys, Peters, Brooks-Gunn, & Smith, 1998; for a review, see Nelson, 2004).

On the basis of past research, *we expect teenage fathers' contributions to children's household context to be less positive on average than those of adult fathers.* Teenage fathers' typically lower education and income compared with adult fathers' pose a "contextual risk" for their children (Capaldi et al., 2002; Lerman, 1993; Thornberry et al., 2009). Not surprisingly, then, young fathers do not usually provide large amounts of direct financial support for their children (Coley & Chase-Lansdale, 1998). Previous research has demonstrated the importance of material resources for understanding the educational outcomes of teenage mothers and fathers (Mollborn, 2007), but more research is needed on measuring resources that adolescent fathers typically provide to children.

The Father-Mother Relationship

As the second domain of fathers' influence, the father-mother relationship has been shown to affect fathers' parenting and child development (Belsky, 1984; Patterson et al., 1989). Much of the literature on the father-mother relationship focuses on emotional support. Fagan and Palkovitz (2007) found that closer father-mother relationships increased fathers' involvement in children's care. Father absence was associated with depression and anxiety among mothers (Gee & Rhodes, 2003), and support from fathers elevated mothers' psychological well-being (Thompson & Peebles-Wilkins, 1992). These findings are interesting because maternal mental health is an important determinant of children's development (Black, Papas, Hussey, Dubowitz, et al., 2002). Coresidence may be an important facet of the father-mother relationship because living with the biological father tends to be economically beneficial for mother and child (for a review, see Roye & Balk, 1996).

As with household context, *we expect adolescent fathers to be less involved with and supportive of the mother on average than adult fathers.* Teenage parents are less likely to marry than adult parents are (Coley & Chase-Lansdale, 1998), and Marsiglio (1987) found that only about half of teenage fathers lived with their children after their birth. Few teen moms are involved with their children's fathers from pregnancy to age 3, and relationships get less supportive as time goes on (Gee & Rhodes, 2003). All of this adds up to

lower levels of partner support, as well as mixed benefits of such support: Roye and Balk (1996) noted that partner support is often, but not always, related to positive outcomes when children have a teenage mother.

The Father–Child Relationship

As the third and final domain of fathers' influence, the quality of father–child relationships and fathers' parenting behaviors are important for understanding children's behavior (Capaldi et al., 2002; Thornberry et al., 2009). Examples of important aspects of this relationship include discipline, paternal involvement, attitudes about parenting, and emotional attachment to the child. Father involvement has been shown to be positively related to children's academic performance (Cooksey & Fondell, 1996) and adolescents' behavior (Carlson, 2006). Fagan and Iglesias (2000) found that fathers' communication with their children improved children's communication skills, which in turn reduced behavior problems. However, some research has found a nonexistent or inconsistent effect of father involvement on children's outcomes (Amato & Rezac, 1994; Flouri, 2006) and has emphasized the importance of considering the quality of the father–mother relationship when investigating the association between father–child contact and child outcomes (Amato & Rezac, 1994).

We expect the quality of the father–child relationship to be lower on average for teenage fathers than for adult fathers. Not only are adolescent fathers less likely to be coresident and therefore likely less involved in the child's day-to-day life, but some teen fathers have also been found to have less competent parenting skills (Fagot, Pears, Capaldi, Crosby, & Leve, 1998). Coley and Chase-Lansdale (1998) noted the importance of conducting further research on the relationship between father–child bonds and child outcomes.

Our analyses explore differences between teenage fathers and adult fathers in all three of these domains. As stated above, we expect that when compared with adult fathers, teenage fathers' children will have more socially disadvantaged household contexts than adult fathers' children, the relationship between the teen father and the child's mother will be less supportive, and adolescent fathers will have a less involved and supportive relationship with their child. Because we expect that having a teenage father affects children in each of these three domains in ways that are negatively related to child development, *we expect that having a teen father compromises children's early development compared with having an adult father.* Little past research on this relationship is available. In one study, Furstenberg and Harris (1993) analyzed teenage mothers' children from the Baltimore Study, many of whom had also been born to an adolescent father. They found that strong attachments to coresident fathers led to improved

behavioral and educational outcomes in adolescence. However, children with no relationship to their fathers had better outcomes than those who had poor relationships with their fathers or those whose fathers were highly involved in early childhood but decreased their contact over time. Coley and Chase-Lansdale (1998) noted that more research needs to be conducted in this area.

In terms of understanding the relationship between having an adolescent father and children's outcomes, we take a multifaceted view of child health and development. Direct measurements and assessments of the child yield considerable information about the child that, in combination with parent reports, allows us to evaluate the child's progress broadly. Our outcomes are measured at birth and in infancy (at about 9 months of age) and toddlerhood (at about 24 months). The health outcomes we measure include birth weight, the number of injuries requiring medical care, chronic and acute illnesses, and parent-reported health of the child. We analyze assessments of children's motor development. Finally, we examine two early developmental outcomes that are salient for future academic success (Baydar et al., 1993): cognitive development and behavior.

Special Focus on Coresidence

Perhaps the most striking difference between teenage and adult fathers identified in past literature is their rates of coresidence with mother and child. Studies indicate that at most half of adolescent fathers live with their children, and they tend to decrease contact as the children age (Gee & Rhodes, 2003; Marsiglio, 1987). Fathers' coresidence implies (but by no means guarantees) a higher level of economic support of the mother and child, but its effects often stretch far beyond the financial realm. Many fathers view coresidence and parental involvement as an "inseparable role set," with sharply decreased contact when nonresident compared with coresident (Furstenberg, 1990). At its best, coresidence provides the opportunity for a more supportive relationship with the mother as well as many taken-for-granted prospects for father-child interaction that must usually be intentionally scheduled if the father is nonresident. In other words, fathers' coresidence may affect all three of the domains described above. However, teen fathers' coresidence may not have uniformly positive effects on children because other family members may step in to help in the absence of the father. Extended family coresidence is relatively common among teenage mothers' families (Unger & Cooley, 1992). Given the meager resources that many adolescent fathers have, in many cases, these family members may provide more support than he would have done. This logic undergirds the requirement of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (popularly known as

the welfare reform law) that minor mothers must live with a parent or guardian to receive cash support (Black, Papas, Hussey, Hunter, et al., 2002). Because the influence of adolescent fathers' coresidence on children may be mixed, *we do not have specific expectations about the effects of teen fathers' coresidence*. Focusing only on teenage fathers, we explore this issue by comparing coresident and nonresident fathers across a variety of measures.

Why Does Having a Teen Father Compromise Children's Development?

If we find that having a teenage father is associated with compromised health and development for young children, then we will attempt to explain why this occurs using the three domains outlined above. We will identify developmental gaps between adolescent fathers' and adult fathers' children as well as domains in which having a younger father seems to represent an important source of potential disadvantage for children. These domains will be examined as possible mediational pathways to explain the differences in health and development.

Method

Data

The Early Childhood Longitudinal Study-Birth Cohort (ECLS-B) followed a sample of about 14,000 children born in 2001 from infancy through the start of kindergarten (U.S. Department of Education, 2007). Using a nationally representative sample, it tracked children throughout this early developmental period, using both parent interviews and direct child assessments. The sample was selected using a clustered list frame sampling design based on births registered in the National Center for Health Statistics vital statistics system. Investigators sampled births from 96 core primary sampling units, which were counties and county groups. Babies whose birth mothers were younger than 15 years old when the child was born were excluded in response to state confidentiality and sensitivity concerns, so the findings from this study are not representative of children who have very young teenage mothers.

This study used the first two waves of data, from when the children were about 9 months (unweighted $SD = 1.9$ months, range = 16.1 months) and 24 months ($SD = 1.3$ months, range = 21.4 months). The primary parent (overwhelmingly the mother) was interviewed in person, and resident and nonresident fathers who had been in contact with the child in the past 3 months were asked to complete somewhat different written questionnaires if the mother

permitted it. See West (2007) for a discussion of the ECLS-B father surveys as compared with other data sources on fathers. We used all three of these data sources to construct information about the life situations of children and their biological fathers. The weighted response rates for Waves 1 and 2 were 74% and 93%, respectively, for the primary parent interview. Among cases in which the parent interview was completed, 76% and 78% returned the resident father questionnaire, and 50% and 40% returned the nonresident father questionnaire. Low response rates are a common problem in studies of fathers (West, 2007). Replication weights were provided to make responses to the father surveys representative of children born in 2001 whose fathers lived with them or had regular contact with them.

We identified teenage fathers as biological fathers who were age 19 or younger at the study child's birth. There were about 150 children with teenage fathers who answered both questionnaires and were included in our analyses, as well as about 4,700 children with adult biological fathers.² To be eligible for our analysis sample, the children needed to have completed both waves of child assessments. Findings should not be considered representative of all nonresident fathers because of the relatively low response rates for the nonresident father questionnaire described above, and because two groups of potential respondents were excluded: nonresident fathers who did not have recent contact with their children (13% of all teenage fathers) and cases in which the mother refused access to the father (19% of all teenage fathers). Of the teenage fathers who were eligible to complete the father questionnaire, 73% of coresident fathers and 51% of nonresident fathers returned the survey. These response rates are comparable with the overall sample's (see above). Despite several drawbacks, the statistical power afforded by the relatively adequate size of this subsample, in combination with the newness of the survey and its detailed focus on the critical period of early childhood, makes the ECLS-B data one of the best data sources currently available for research on teenage fathers and their children.

Although the level of nonresponse is a limitation of this data set (West, 2007), as with many other sources of information about fathers, nonresponse bias analyses conducted by the National Center for Education Statistics suggested that there were not many differences between respondents and nonrespondents to the father surveys that would lead to nonresponse bias (National Center for Education Statistics, 2005). We conducted our own analyses comparing various groups of nonresponding fathers with respondents on three key sociodemographic measures from Wave 1 mother reports: child's household socioeconomic status (SES), father's years of education, and father's race (White vs. non-White). Compared with nonresident fathers who completed the survey, fathers who were ineligible because the mother refused access and fathers

who were eligible but refused to complete the survey were not significantly different on SES or race, but they had fewer years of education. Fathers who were ineligible because of no recent contact with their child did not differ significantly from responding nonresident fathers on any of these measures.

This study focuses on the children's developmental outcomes at approximately 9 months and 2 years. There is a considerable psychometric literature on the advantages and limitations of various ways of measuring development at these ages. The developmental outcomes measured in the ECLS-B data are based on 60 minutes of one-on-one assessment based on reputable and widely used assessment measures in child development, and they are intended to provide a reasonably comprehensive picture of each child's age-appropriate developmental progress.

Variables

Early child health and development. We included a variety of health-related measures; means and bivariate comparisons for these and all other variables are presented in Table 1. Wave 2 measures were used whenever possible. Children's *birth weight* was constructed by ECLS-B from birth certificate data and coded as normal ($\geq 2,500$ g), low (1,500-2,499 g), or very low ($< 1,500$ g). The primary parent reported the child's *general health* as excellent, very good, good, fair, or poor. We used parent reports to determine whether the child had had an episode of *severe acute illness* requiring hospitalization or an emergency room visit (such as respiratory or gastrointestinal illness), or a *severe injury* requiring the same level of care, between Waves 1 and 2. We also identified children whose parent reported that they had been diagnosed with a *chronic condition*, with examples ranging from heart defects to asthma to blindness, from birth to Wave 2.

Three observation-based measures were used in both waves of the ECLS-B to assess early child development: The Bayley Short Form—Research Edition (BSF-R) motor and mental scales and the Interviewer Observations of Child Behavior. See Nord et al. (2006) for more information on these assessments. The BSF-R was developed by ECLS-B, based on the Bayley Scales of Infant Development—Second Edition (BSID-II). The *mental scale* measured children's early cognitive development, including communication skills, expressive and receptive vocabulary, comprehension, and problem-solving skills. Siegel (1979) argued that low scores on the Bayley test in infancy predicted low scores on language, cognitive, perceptual, and visual motor tests in later childhood. The revised Bayley Scale (BSID-II), from which the BSF-R has been directly developed, has been demonstrated to be a valid measure of IQ, and its score correlates positively with other measures of IQ (Nellis & Gridley, 1994).

Table 1. Weighted Descriptive Statistics Comparing Teenage and Adult Fathers and Coresident and Nonresident Teenage Fathers

Variable	Range	Means for All Fathers		Means for Teen Fathers	
		Teenage	Adult	Coresident	Nonresident
Father's sociodemographic characteristics					
Non-Hispanic White	0-1	0.35**	0.62	0.46*	0.23
Non-Hispanic African American	0-1	0.23*	0.10	0.08**	0.38
Hispanic/Latino	0-1	0.24	0.21	0.41**	0.06
Non-Hispanic Asian	0-1	0.01**	0.03	0.02	0.01
Non-Hispanic Native American	0-1	0.01†	0.02	0.02†	0.01
Multiple races	0-1	0.16**	0.03	0.01**	0.32
Years of education—Wave 1	8-20	11.39**	13.56	11.27	11.51
Child's household context					
Child household SES—Wave 1	-2.06-2.25	-0.73**	0.04	-0.76	-0.70
Father's yearly income (dollars)—Wave 2	0-1,000,000	19103.01**	48951.83	26326.69**	9829.43
Monthly child support paid (dollars)—Wave 1	0-1,500	22.38**	79.91	—	—
Other types of monetary help given—Wave 1	0-3	1.95	2.00	—	—
Child household food insecure without hunger—Wave 1	0-1	0.09	0.09	0.09	0.09
Child household food insecure with hunger—Wave 1	0-1	0.04	0.02	0.01	0.06
Number of grandparents in child's household—Wave 1	0-3	0.89**	0.14	0.65**	1.14
Positive child home environment factors—Wave 2	5-29	17.09**	19.39	17.45	16.71
Father-mother relationship					
Coresident, married to mother—Wave 1	0-1	0.18**	0.78	—	—
Coresident, not married to mother—Wave 1	0-1	0.31**	0.10	—	—
Nonresident, recent contact with child—Wave 1	0-1	0.49**	0.10	—	—
Father-child relationship					
Involvement with child (scale)—Wave 2	0-5	3.20	3.25	3.40	2.98

(continued)

Table 1. (continued)

Variable	Range	Means for All Fathers			Means for Teen Fathers	
		Teenage	Adult	Coreresident	Nonresident	
Proficiency with parenting/discipline—Wave 2	1-5	3.88	3.68	3.93	3.84	
Teach child that misbehavior will be punished	1-5	4.71	4.64	4.67	4.75	
Express affection by hugging, kissing, holding	1-5	3.82	3.75	3.89	3.74	
Have little difficulty sticking to rules with others around						
Beliefs in an involved father role—Wave 2	1-4	3.88	3.89	3.89	3.84	
Essential for child's well-being for dad to play	1-4	3.80	3.74	3.72*	3.93	
Dad's treatment has long-term effects on child	1-4	2.81**	3.37	2.76*	3.61	
Dad's activities do not matter, providing for them does						
Feelings of attachment to child—Wave 1	0-3	2.78*	2.66	2.82	2.73	
Talk a lot about child to friends/family	0-3	2.87**	2.73	2.85	2.89	
Often find yourself thinking about child	1-4	2.10**	1.89	2.08	2.12	
Negative attitudes about fatherhood (scale)—Wave 2	0-1	0.66†	0.77	0.81**	0.49	
Reports being better than average father—Wave 1						
Child's early health and development						
Child born with very low birth weight	0-1	0.02†	0.01	0.02	0.02	
Child born with moderately low birth weight	0-1	0.11*	0.06	0.14	0.08	
Child's general health—Wave 2	1-5	4.37†	4.50	4.24†	4.50	
Child had severe acute illness—Wave 1 to Wave 2	0-1	0.06	0.10	0.06	0.07	
Child had chronic condition—Birth to Wave 2	0-1	0.21	0.19	0.18	0.24	
Child had serious injury—Wave 1 to Wave 2	0-1	0.20	0.15	0.23	0.17	
Standardized child behavior index—Wave 2	-2.34-1.41	-0.09*	0.11	-0.07	-0.12	
Cognitive assessment—Wave 2 T-score	16.54-88.81	47.95**	50.78	48.15	47.73	
Motor assessment—Wave 2 T-score	2.91-97.36	49.45	50.37	47.29*	51.73	

Note: SES = socioeconomic status. $N \sim 150$ teenage fathers, 4,700 adult fathers. Some rows have missing data.

Source: Early Childhood Longitudinal Study—Birth Cohort (2006).

* $p < .05$. ** $p < .01$. † $p < .10$, two-tailed tests, design-based F tests.

Researchers have documented the limits of the prediction of later cognitive scores using early measures of cognitive development, but a low Bayley score does indicate that a child may struggle to learn later in life (Dockrell & McShane, 1993; Niccols & Latchman, 2002).

The *motor scale* measured psychomotor development, assessing children's fine motor skills such as grasping and manipulating small objects and their gross motor skills such as standing, walking, and balance. We used the *t*-scores, which adjust for children's age at assessment by comparing them with the distribution of scores for others their age, in descriptive analyses. Multivariate analyses instead used the raw scores and controlled for age at assessment. While administering the BSF-R, interviewers also completed the Interviewer Observations of Child Behavior, which are a subset of the Behavior Rating Scale, a supplement to the BSID-II. Interviewers observed and rated *child behaviors* such as attentiveness, affect, and interest for a total of 13 items at Wave 2. We standardized each item and calculated the mean of all items, so a score of 0 represents average behavior, and each unit is one standard deviation.

Teenage fatherhood. We divided the fathers into teenage fathers, who gave birth to the study child by age 19, and adult fathers. Birth certificate information was used when available, with the following reports filling in any gaps: ECLS-B's constructed paternal age measure, father survey reports, and mother interview reports. Nelson (2004) noted that mothers' reports of objective measures such as this one often agree with fathers' reports, which implies that they might be relied on when father reports are absent. Although it would have been ideal to divide the teenage fathers into a younger group of minors and an older group of legal adults, the younger group did not contain enough respondents.

Child's household context. Our first measures represent the household's socioeconomic context. As with all measures other than child outcomes, we used Wave 1 variables whenever they were available, with Wave 2 measures added when necessary. *Household SES* was constructed by ECLS-B from the primary parent interview and includes household income and the mother's and father's or resident partner's education and occupational prestige. Fathers' specific contributions to the household are represented by three variables: the father's annual *income* (for all fathers), monthly *child support* paid, and *other financial help* provided for expenses such as child care and diapers (for nonresident fathers only). The household's level of *food security* taps into extreme economic disadvantage, constructed by ECLS-B and coded into three mutually exclusive categories: food secure, food insecure without people going hungry, and food insecure with people going hungry.

Additional variables represent two other aspects of the child's household that are likely influenced by the father. The *presence of at least one grandparent*

in the household provided a potential source of income and/or child care. We also counted the number of positive factors in the child's *home environment*, constructed from the primary parent interview and including various components of a supportive/unsupportive or dangerous household, including items such as the use of car seats and smoke alarms, the number of toys, and whether the child has a set bedtime. These items were dichotomized to create a count of "positive" environmental factors.

Father–mother relationship. Because of lower response rates in mothers' more detailed reports about their relationship with their child's father and because question content differed when the father was coresident versus nonresident, we relied on marital status and coresidence information to represent this domain. Fathers were coded into mutually exclusive categories as *coresident and married to the child's mother*, *coresident and not married to the child's mother* (i.e., cohabiting), and *nonresident with recent contact with the child*. As we discussed above, fathers who did not have contact with the mother and child in the past 3 months were not included in the nonresident father survey.

Father–child relationship. We included several measures of fathers' perceptions of the quality of their relationship with their child. *Involvement with the child* was represented by a scale averaging 12 items asking how frequently fathers engage in activities with the child, such as eating meals, playing games, and brushing teeth (Cronbach's $\alpha = .87$). *Proficiency with fatherhood and discipline* consisted of three separate items describing fathers' parenting style in terms of discipline and affection. Fathers' *beliefs in an involved father role* were reflected by three items about play with their father being essential for children's well-being, fathers' treatment having long-term effects on children, and only providing for the child, rather than shared activities, being important. Fathers' *feelings of attachment to the child* were represented by two items measuring how frequently the father talked about and thought about his child. *Negative attitudes about fatherhood* were measured by a scale averaging fathers' level of agreement with five statements, such as feeling trapped by parental responsibilities and expecting to have closer and warmer feelings for the child than they actually had (Cronbach's $\alpha = .66$). Finally, fathers' reports of *being a better than average father* were constructed from a single question about which category "best describes how you feel as a father." "Better than average" or "very good" were compared with less positive self-assessments.

Sociodemographic variables. We included information about fathers' *race/ethnicity* (coded as Hispanic/Latino or non-Hispanic White, African American, Asian/Pacific Islander, or Native American/Alaska Native), drawn from the child's birth certificate with the ECLS-B's constructed measure based on the mother interview filling in any gaps. The father's years of completed *education* was an ECLS-B constructed measure taken from the mother interview.

Analyses

Descriptive analyses compared means for all variables for teenage fathers versus adult fathers, while accounting for weighting and complex survey design using Stata statistical software. Teenage fathers were then further split by their coresidence with the child, and means were compared using bivariate tests (design-based F tests comparing means between groups). Further analyses compared children's early health and development between those with adult and teenage fathers and between resident and nonresident teenage fathers. To retain as much data as possible for descriptive analyses, missing cases were deleted listwise within each individual bivariate comparison, resulting in varying N s for each row of the tables. Our multivariate analyses used important domains of variables identified in the bivariate analyses to examine whether they explained why having a teenage father compromises children's early development. We report significant differences at the $p < .10$ level, but because more cautious readers may prefer to focus only on results that are significant at $p < .05$ and below, we label marginally significant findings in the text.

Results

Comparing Teenage and Adult Fathers

We expected that teenage fathers' influences on their children would vary from those of adult fathers across three primary domains. Before discussing findings for each of these in turn, we begin by describing differences between the two groups for sociodemographic variables. Findings in this section are drawn from the left side of Table 1.

Sociodemographic measures. The first comparison in Table 1 shows that teenage fathers' children differed from those with adult fathers on several sociodemographic variables. There were much lower proportions of non-Hispanic Whites and Asian/Pacific Islanders among teenage fathers as compared with adult fathers. Conversely, there were much higher proportions of non-Hispanic African Americans, Native Americans/Alaska Natives ($p < .10$), and men reporting multiple races among teen fathers than among adult fathers. There was no significant difference between the two groups of fathers in the proportion reporting Hispanic ethnicity.

Teenage fathers had about 2 years less education than adult fathers, with a Wave 1 average of 11.4 years compared with 13.6 years for adult fathers. It is important to note that the average adolescent father in this data set did not have a high school degree, which is often considered to be a minimum requirement for attractive employment opportunities (Upchurch & McCarthy, 1990)

and likely affects the resources teenage fathers can provide. All of these sociodemographic differences reveal that teenage fathers came from more typically disadvantaged groups than adult fathers did.

Child's household context. We first examined differences in socioeconomic resources. The households of teenage fathers' children had much lower mean levels of *SES* at Wave 1 than those of adult fathers' children, and supplemental analyses found that this disadvantage persisted at Wave 2. At less than \$20,000 per year on average, teenage fathers' income at Wave 2 was much lower than adult fathers' mean of almost \$50,000 per year. As might be anticipated given this difference in income, teenage fathers paid much less *child support* than adult fathers. There was no significant difference in the amount of *other monetary help*, such as help with paying for health care and toys, provided by adolescent versus adult fathers. Coley and Chase-Lansdale (1998) similarly noted that levels of informal, irregular financial support of children were surprisingly high among young fathers. There were no significant differences in household levels of *food insecurity* with or without hunger.

The nonsocioeconomic household measures also imply disadvantage for teenage fathers' children. The presence of *grandparents* in an infant's household may be a resource because of potential financial contributions from adults who may be near the peak of their earnings trajectory or child care contributions from those who may have some free time. Most children of teenage fathers had a grandparent in the household, whereas most children of adult fathers did not. Despite this potential advantage, however, teenage fathers' children had a lower number of positive *home environment* factors than adult fathers' children did. Taken together, these findings largely met our expectations, showing that average households of teenage fathers' children typically exhibited multiple types of disadvantage that could compromise development.

Father–mother relationship. Teenage and adult fathers also showed strikingly different patterns of *marriage* and *coresidence* with their child and the child's mother. About half of teenage fathers lived with the mother and child at Wave 1 (a very similar proportion to that reported by Marsiglio, 1987), compared with nearly 9 out of 10 adult fathers. Supplemental analyses found that these proportions remained similar when the study children were about 2 years old. This coresident group was split into married and cohabiting couples, with important differences by paternal age. Just 18% of teenage fathers were married to their child's mother, compared with 78% of adult fathers. However, teenage fathers were significantly more likely than adult fathers to cohabit with the child's mother. There was also a significantly higher proportion of adolescent fathers among the group of nonresident fathers. These differences mirrored our expectations.

Father–child relationship. Few results in this domain met our expectations. Perhaps surprisingly, given their lower rates of coresidence, teenage fathers' reported *involvement* in playing with and caring for their children at Wave 2 was not significantly different from adult fathers'. This finding echoes Toledo-Dreves, Zabin, and Emerson (1995), who found that nonresident teenage fathers were frequently involved in child care. None of the items measuring teenage fathers' reported levels of *proficiency with parenting* and their *beliefs in an involved father role* differ from adult fathers' either. The only exception is that teenage fathers agreed less often than adult fathers with the statement that fathers' shared activities with children do not matter, but providing for them does. Adolescent fathers reported feeling more *attached to their child* than adult fathers did in terms of both talking and thinking about the child, which contradicted our expectations. Only two variables' means were different in the expected direction: Teen fathers reported higher average levels of *negative attitudes about fatherhood*, and less frequently reported being at least a *better than average father* ($p < .10$), than did adult fathers.

Child health and development. Given teenage fathers' children's overrepresentation in disadvantaged demographic categories and their underprivileged household contexts, we would expect them to have compromised health and development compared with children of adult fathers. Five of the nine child measures were significant, all in the expected direction. Teenage fathers' children were more frequently born with very low ($p < .10$) and moderately low birth weight than adult fathers' children, their primary parent reported their general health to be poorer ($p < .10$), and their cognitive and behavior scores at age 2 were significantly lower. Supplemental analyses found that there were no significant differences between the cognitive and behavior scores of teenage fathers' and adult fathers' children in infancy, but by age 2 (see Table 1), a discernible developmental gap representing 0.3 standard deviations for the cognitive scale and 0.2 standard deviations for the behavior scale emerged. There were no significant differences between teenage and adult fathers' children for acute or chronic illness, serious injury, or motor scores.

Comparing Coresident and Nonresident Teenage Fathers

The right side of Table 1 limits descriptive analyses to teenage fathers, comparing those who were coresident with those who were not. There were strikingly few significant differences between these two groups in the three domains of fathers' influence. This may be in part because of sample size (the subsample of about 150 teenage fathers was divided into two roughly equal groups), but many of the means are so similar that a somewhat larger sample likely would not have resulted in statistical significance. There were no

educational differences between coresident and nonresident teen fathers, but higher proportions of coresident teen fathers were American Indian/Alaska Native ($p < .10$), White, and Hispanic compared with nonresident fathers, and lower proportions of coresident fathers were African American and of multiple races. Just two household context measures were significant but with striking differences between the two groups. Coresident teenage fathers' average annual income was nearly triple that of nonresident fathers, and children with nonresident adolescent fathers were much more likely to have a coresident grandparent. Three father-child relationship factors were significant: Nonresident teen fathers reported being "better than average" fathers less frequently than coresident adolescent fathers and believed that providing for a child mattered more than sharing activities with them, yet at the same time they believed more strongly that fathers' treatment of babies has long-term effects on children. The only significantly different child outcomes were that at age 2, nonresident adolescent fathers' children were reported to be in slightly better health ($p < .10$) and had higher motor scores ($p < .05$) than coresident fathers' children. Together, these findings suggest a few mixed benefits and drawbacks to teenage fathers' coresidence, but many factors are not significantly related to teen fathers' coresidence. We did not find a clear answer to our question about whether coresidence is an advantage or a disadvantage for teenage fathers' children. Breaking the coresident fathers into married and cohabiting groups might shed further light on the issue, but the numbers of married teen fathers were too small for meaningful descriptive analysis.

Explaining the Relationship Between Teenage Fatherhood and Child Development

Having identified a number of ways in which teenage fatherhood is associated with social disadvantage for children and their households, we moved to using this disadvantage to try to explain *why* having a teenage father was associated with compromised child development. Table 1 documented five child health and development measures that were significantly related to having a teenage father. After omitting marginally significant relationships, three significant outcomes remained: moderately low compared with normal birth weight and cognitive and behavior scores at age 2. Because birth weight was determined by factors that predated the start of our measurement period, we did not try to explain this relationship.³ Instead, we focused on identifying factors that mediated the relationship between teenage fatherhood and first Wave 2 cognitive scores, then behavior scores.⁴ The behavioral and cognitive domains of development are linked (Patterson et al., 1989), and both are important for understanding children's long-term educational outcomes (Baydar et al., 1993).

In Table 1, the two domains of fathers' influences on children that differed between teenage and adult fathers most consistently and in the expected direction were the child's household context and the father–mother relationship (operationalized as coresidence and marital status). Both of these seem like potential pathways of disadvantage that might help us understand why having a teen father is negative for children's development. Our multivariate regression models, reported in Table 2, examined whether each of these domains explained the effect of having a teenage father on children's cognitive and behavior scores at age 2. The dependent variables were measured at Wave 2 and the mediators at Wave 1 (except for father's income and home environment, which were not reported until Wave 2).

Model 1 for each dependent variable shows the relationship between teenage fatherhood and the outcome, with only the child's age at assessment controlled. For both dependent variables, having a teenage father was associated with lower scores. Model 2 shows that for both dependent variables, the effect of having a teenage father was fully mediated by the father's coresidence and marital status. The positive effect of having married biological parents at Wave 1 on children's cognitive and behavior scores at Wave 2 was much greater than the initial negative effect of having a teenage father in Model 1. The comparison between cohabiting and nonresident fathers was not significant for either outcome. The fact that teenage fathers were disproportionately nonresident or cohabiting rather than married apparently explained why their children's development was compromised.

Model 3 examined the child's household context, rather than the father–mother relationship, as a potential mediator. The effect of having a teenage father on children's cognitive and behavioral scores at age 2 was fully mediated by household context, specifically household SES, positive home environment scores, and (for cognitive development only) fathers' income. Having a teenage father was associated with lower levels of these variables, and this explained why children who had a teenage father exhibited lower cognitive and behavioral scores. Because fathers' SES from before the pregnancy was not controlled in these models (the data set includes few such measures), some of these variables' effects on child outcomes could be the result of background socioeconomic factors related to both teenage fatherhood and child development, rather than the result of any direct effect of being a teenage father on socioeconomic factors. Similarly, background factors related to the disproportionate selection of some individuals into marriage may explain why marital status mediated the relationship between teenage fatherhood and child outcomes, rather than the experience of marriage itself.

Table 2. Summary of Weighted Regression Analyses Predicting Early Child Cognitive and Behavioral Development

Variable	Wave 2 Cognitive Score						Wave 2 Behavior Score					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Father was younger than 20 years at birth (1 = yes)	-3.05**	1.06	-0.29	1.08	1.06	1.16	-0.20*	0.09	-0.08	0.09	-0.04	0.10
Wave 2 assessment age (months)	2.09**	0.20	2.14**	0.20	2.35**	0.20	0.05**	0.02	0.05**	0.02	0.06**	0.02
Father—mother relationship ^a												
Father coresident, married (1 = yes)			4.88**	0.67					0.19**	0.06		
Father coresident, not married (1 = yes)			0.65	0.87					-0.04	0.07		
Father's Wave 2 yearly income ^b												
Second quartile					1.05†	0.64					-0.02	0.05
Third quartile					1.51*	0.69					0.01	0.05
Fourth quartile					0.92	0.75					0.01	0.06
Income information missing					-0.76	0.68					-0.04	0.06
Child household SES					2.45**	0.32					0.08**	0.02

(continued)

Table 2. (continued)

Variable	Wave 2 Cognitive Score						Wave 2 Behavior Score					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Household food security ^c												
Food insecure without hunger			-0.98	0.71							-0.02	0.06
Food insecure with hunger			-1.11	1.61							0.16	0.13
Number of grandparents in household			-0.54	0.47							-0.06	0.04
Positive home environment factors			0.55**	0.06							0.02**	0.01
Model statistics												
Constant	76.99		71.85		59.56					-1.30		
Design-based <i>F</i> test (degrees of freedom)	59.45 (2, 4830)		50.01 (4, 4816)		49.98 (11, 4148)					8.32 (2, 4795)		
<i>R</i> ²	.04		.08		.18			.01		.02		.04

Note: SES = socioeconomic status. $N \sim 150$ teenage fathers, 4,700 adult fathers.

Source: Early Childhood Longitudinal Study–Birth Cohort (2006).

a. Nonresident (reference category).

b. First quartile (lowest income; reference category).

c. Food secure (reference category).

* $p < .05$. ** $p < .01$. † $p < .10$, two-tailed tests, design-based *F* tests.

Discussion

This study set out to use recent, nationally representative data to identify ways in which having a teenage father matters for children. This issue has received surprisingly little empirical attention in the past. We focused on three domains of fathers' influence on children for which having an adolescent father might be different than having an adult father. As expected, teen fathers' children typically lived in households that were disadvantaged in a variety of ways compared with the households of adult fathers' children. These disadvantages included both socioeconomic factors and nonsocioeconomic ones, such as the quality of the child's home environment. Teenage fathers were also more often nonresident or cohabiting with their child's mother and less frequently married to her. Perhaps surprisingly, there were largely nonsignificant or inconsistent differences between the father-child relationships of teen fathers and adult fathers. There was little evidence that teenage fathers' involvement with or attitudes toward parenting differed much from those of adult fathers, despite their strikingly different patterns of coresidence. In general, differences between coresident and nonresident teenage fathers were few and inconsistent, providing little evidence that coresidence was particularly beneficial or detrimental to these fathers' children on average.

Although some measures of health and development did not differ between children of adolescent and adult fathers, we found that children of teenage fathers were disadvantaged compared with adult fathers' children in several important ways: They more often had very low ($p < .10$) and moderately low birth weight compared with normal birth weight, their primary parent reported that they were in worse health than adult fathers' children ($p < .10$), and they had lower behavior and cognitive scores at age 2. The latter factor is particularly key for understanding later cognitive and educational outcomes in childhood and adolescence (Nellis & Gridley, 1994; Siegel, 1979).

Why was having a teenage father associated with compromised health and development among young children? Multivariate models focusing on the last two outcomes identified two separate mediating pathways. First, the relationship between having a teenage father and these child outcomes was fully explained by younger fathers' lower frequency of marrying the child's mother. Marriage was associated with greatly improved cognitive and behavior scores at age 2. Second, the child's household SES and home environment also fully explained the relationship between having a teen father and child outcomes. Teenage fathers' children had lower levels of SES and positive home environment factors, which were both important for their cognitive and behavioral development.

Both of these pathways through which teenage fatherhood influenced children's behavior and cognitive scores were likely influenced by selection processes: Teenage parents disproportionately come from socioeconomically disadvantaged backgrounds, so their children's compromised SES and home environments are at least partially a function of their parents' disadvantaged backgrounds rather than their young ages per se (for a review, see Hoffman, 1998). Similarly, living with married parents benefits children because of the stability in household composition, financial security, and parental well-being it tends to bring (for reviews, see Demo & Cox, 2000; Waite, 1995), but the selection of socioeconomically advantaged people into marriage explains at least some of its effects (Goldstein & Kenney, 2001; Waite, 1995). Regardless of the complex causality among teenage fatherhood, social disadvantage, and marriage, however, our analyses still show that the negative association between teenage fatherhood and child outcomes can be explained by marital status and household context.

It is important that this study found teenage fathers and their children to be a heterogeneous population with a wide variety of life situations. For example, teenage fathers came from three racial/ethnic groups in roughly equal numbers, and they were split evenly in terms of their coresidence with their children. Because few past surveys have been able to capture large enough subsamples of teenage fathers and their children to allow for meaningful analysis, identifying these diverse experiences using recent nationally representative data is an important first step in directing future research.

Future qualitative research could address some of the empirical puzzles identified in this study's descriptive findings. For example, why did teenage fathers and adult fathers report similar levels of involvement in terms of playing with and caring for their children, given that only half of teenage fathers live with their child compared with nearly 9 out of 10 adult fathers? Does this mean that nonresident, high-contact teenage fathers are deeply involved in their children's everyday lives, which would weaken the presumed strong link between paternal coresidence and involvement? Similarly, qualitative work could further investigate the directionality of the strong relationship between young fathers' coresidence and income. Are lower earning adolescent fathers shown the door by the child's mother, or does sharing a household with mother and child spur fathers to earn more money?

This study suffered from several important limitations that are typical of quantitative research on teenage fatherhood. First, fathers who lived with their children were more likely to participate in the study, and those who did not have regular contact with their children were excluded from the father questionnaire. This echoes problems from past surveys with parent-oriented

rather than child-oriented sample designs, which asked fathers to self-identify and therefore excluded fathers who did not know of their paternity and possibly those who rarely saw their child. Second, because of low response rates for the nonresident father questionnaires, findings about nonresident fathers were probably not representative and should be treated as preliminary. Third, the size of our subsample of teenage fathers who responded to the father questionnaire sometimes limited the power of our significance tests.

Understanding the influences teenage fathers have on their children and the contributions they make may help policy makers create appropriate types of father-inclusive intervention programs. Future research, using data that have a stronger set of background measures from before men became fathers, needs to work to disentangle the complicated causal relationships among teenage fatherhood, social disadvantage, and marriage. In the meantime, this study has some preliminary implications for researchers and policy makers who are trying to close the early developmental gap between the children of teenage parents and their peers. When teenage fathers were married to their children's mothers, or when socioeconomic disadvantage was absent and the home environment was positive, having a teen father was not detrimental to children's early cognitive or behavioral development. It was not inherently "bad" for all children to have a teenage father.

It is sobering that children of teenage fathers suffered from many social disadvantages in infancy and early childhood and were compromised at a critical point in their cognitive and behavioral development. However, it is encouraging that social disadvantages in children's household context and their lower rates of coresidence with their fathers fully explained the effect of their fathers' young age on their development. Future research needs to disentangle selection factors that influence the marital status and socioeconomic context of these children's households from the effects of these factors themselves. If these factors are found to be causally related to teenage fatherhood and children's outcomes, policy makers may have an opportunity to target them through interventions and improve the development of teenage fathers' children at an early stage, before the developmental gap widens and leads to more entrenched disadvantage during the school years.

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Notes

1. One pathway through which having a teenage father affects children's outcomes is through the high correlation between having a teen father and having a teen mother: Most children born to a teenage father also have a teenage mother (Mollborn & Dennis, 2009). Our study focuses instead on ways in which teenage fathers can directly influence children as they are growing up.
2. Because of ECLS-B confidentiality restrictions, all unweighted *N*s are rounded to the nearest 50.
3. Perhaps more than the other measures, birth weight is likely to be influenced by maternal rather than paternal characteristics.
4. We assessed mediation using the three-pronged approach outlined by Baron and Kenny (1986). In each case for which we claimed that mediation occurred, all three criteria were met. Table 2 shows that the mediators had a significant association with the dependent variables and that the teen father indicator showed a reduction in its associations with the dependent variables between one model excluding the mediator and another including the mediator. Finally, supplementary analyses found that being a teenage father predicted the significant mediators.

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