Single-parent households and children's educational achievement: A state-level analysis

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**Abstract**

Although many studies have examined associations between family structure and children's educational achievement at the individual level, few studies have considered how the increase in single-parent households may have affected children's educational achievement at the population level. We examined changes in the percentage of children living with single parents between 1990 and 2011 and state mathematics and reading scores on the National Assessment of Educational Progress. Regression models with state and year fixed effects revealed that changes in the percentage of children living with single parents were not associated with test scores. Increases in maternal education, however, were associated with improvements in children's test scores during this period. These results do not support the notion that increases in single parenthood have had serious consequences for U.S. children's school achievement.

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**1. Introduction**

Two well-known facts provide a rationale for the current study. First, the percentage of children living with single parents increased substantially in the United States during the second half of the 20th century. Only 9% of children lived with single parents in the 1960s—a figure that increased to 28% in 2012 (Child Trends, 2013). Given current trends, about half of all children will spend some time living with single parents before reaching adulthood (McLanahan and Percheski, 2008).

Second, research shows that children in single-parent households score below children in two-parent households, on average, on measures of educational achievement (Amato, 2005; Brown, 2010; McLanahan and Sandefur, 1994). The combination of these two observations suggests that the rise in single parenthood has lowered (or slowed improvements in) the educational achievement of children in the United States.

Some observers have claimed that the rise of single-parent families (as reflected in high rates of divorce and nonmarital childbearing) is the primary cause of school failure and related problems of delinquency, drug use, teenage pregnancies, poverty, and welfare dependency in American society (Blankenhorn, 1995; Fagan, 1999; Pearlstein, 2011; Popenoe, 2009; Whitehead, 1997). Consider the following statements:

Very high rates of family fragmentation in the United States are subtracting from what very large numbers of students are learning in school and holding them back in other ways. This in turn is damaging the country economically by making us less hospitable to innovation while also making millions of Americans less competitive in an increasingly demanding worldwide marketplace.

[(Pearlstein, 2011, p. xiii)]
Fatherlessness is the most harmful demographic trend of this generation. It is the leading cause of declining child well-being in our society. It is also the engine driving our most urgent social problems, from crime to adolescent pregnancy to child sexual abuse to domestic violence against women.

(Blankenhorn, 1995, p. 1)

Marital and family stability is undeniably linked to economic prosperity for American families... The effects of marital breakdown on national prosperity and the well-being of individual children are like the action of termites on the beams in a home's foundation: They are weakening, quietly but seriously, the structural underpinnings of society.

(Fagan, 1999)

How strong is the evidence to support these claims? Although dozens (perhaps hundreds) of studies have examined associations between family structure and children's educational achievement at the individual level, few studies have considered whether single parenthood is linked to declines in children's educational achievement (or other forms of well-being) at the aggregate level. The purpose of the current study is to assess whether changes in the percentage of children living with single parents were related to changes in children's scores on the National Assessment of Educational Progress (NAEP) between 1990 and 2011. To address this question, we conducted a state-level analysis of NAEP data using statistical models with state and year fixed-effects.

2. Background

A small number of studies have suggested that single parenthood has problematic consequences for children's school performance at the aggregate or societal level. Using multilevel modeling, Pong (1997, 1998) found that U.S. students performed more poorly on math and reading achievement tests in schools with high proportions of children from single-parent families, even after controlling for school socioeconomic status and other school characteristics. Bankston and Caldas (1998) obtained comparable results with aggregate data on general academic achievement from students in Louisiana. In a cross-national study, Pong et al. (2003) found that single-parent family status was negatively associated with math and science achievement scores in nine out of 11 countries. Moreover, the gap in achievement between children with one rather than two parents was smaller in countries with more supportive social policies, such as family and child allowances and parental leave. These four studies are useful in showing that single parenthood and academic performance are associated within schools and countries. None of these studies, however, used longitudinal data to see if increases in single parenthood are accompanied by declines in the aggregate level of student performance.

Several studies have shown that the rise in the percentage of children living with single parents since the 1960s was related to an increase in child poverty in the U.S., although the strength of this association varies with the particular years studied (Eggebeen and Lichter, 1991; Iceland, 2003; Martin, 2006; Thomas and Sawhill, 2005). Given that single parents (usually mothers) are more likely than married mothers to be poor, this result is not surprising. Nevertheless, the rise in child poverty associated with single parenthood since the 1960s may have had negative consequences for children's educational outcomes.

Several good reasons exist for assuming that the number of parents in a household affects children's academic achievement (for reviews, see Amato, 2010; Brown, 2010; McLanahan and Percheski, 2008). First, children in single-parent households have a lower standard of living than do children in two-parent households. Family income, in turn, is a good predictor of children's school grades and test scores. Second, parents are important sources of social capital and provide many resources to children, including emotional support, encouragement, everyday assistance, and help with homework. Parents' provision of social capital, in turn, is positively associated with children's school success. Children who live with single parents, however, have less access to these social resources, in general, than do children with two parents in the household. Finally, most children with single parents have experienced the disruption of their parents' unions, and many of these children endure additional parental transitions before reaching adulthood. The cumulative amount of household instability or "turbulence" in children's lives is associated with a variety of problematic outcomes, including school performance and educational attainment.

Selection provides an alternative explanation. Growing up in poverty increases the risk of becoming a single parent as well as the risk of academic failure for one's children. In addition, some parents have personal traits that predict poor academic outcomes for children, such as low cognitive ability, personality disorders, alcohol or substance use problems, and poor social and parenting skills. These traits also increase the risk of relationship disruptions and the formation of single-parent households. Because these traits can be causes of single parenthood as well as problematic child outcomes, the association between family structure and children's academic achievement is likely to be at least partly spurious.

Researchers have adopted a variety of strategies to assess whether the links between family structure and child outcomes are causal or spurious, including the use of fixed effects models to control for unmeasured time-invariant variables. Results from studies using fixed effects models are mixed, however, with some suggesting that associations between family structure and child outcomes are spurious (Aughinbaugh et al., 2005; Bjorklund and Sundstrom, 2006; Bjorklund et al., 2007), and others supporting a causal interpretation (Amato and Anthony, 2014; Cherlin et al., 1998; Ermisch and Francesconi, 2001; Gennetian, 2005). After reviewing studies that used fixed effects models and other methods to adjust for unobserved heterogeneity, McLanahan et al. (2013) concluded that father absence probably increases children's antisocial behavior but may not