Understanding Race Differences in the Role of Grandparents in Single-Mother Families

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Background

The number of children living with a single parent has increased dramatically in the past 30 years. In 2005, 23% of all U.S. children under the age of 18 were living with a single mother; examined separately by race, data show that 16% of White children were living with a single mother in 2005, compared to 50% of Black children. All single-parent households are not alike, however. For example, 13% of children living with a single parent also have a grandparent in the household (U.S. Census Bureau, 2005). Little is known about whether living with a grandparent benefits these children. For example, do such children fare as well as those living with married parents, or are they more similar to children of single mothers living alone?

Our previous work (Dunifon and Kowaleski-Jones, 2007) examined whether children living with single mothers benefit when they also live with a grandparent, finding benefits for white, but not black, children. In this study, we "unpack" these race differences by 1) examining a wider set of child outcomes than those examined in the previous study, in order to document which aspects of child development are influenced by grandparent co-residence, and for which outcomes race differences in the influence of grandparents are observed; and 2) controlling for an extensive set of grandparent characteristics that may differ by race, such as age, education, and health, as well as measures of how long the child has lived with the grandparent and a measure of whether the home the child and the mother are living in is owned by the grandparent.

Data

We use data from the 1979 to 2004 waves of the National Longitudinal Survey of Youth (NLSY) merged mother-child file. We examine outcomes for children living with an single mother and a grandparent, and evaluate differences in outcomes between these children and those living with a single mother alone, and those living with married parents, using measures capturing the total number of years a child has lived in various family structures. We contrast the influence of grandparent co-residence for white non-Hispanic and black non-Hispanic children (sample sizes preclude a separate analysis of Hispanic children).

The sample from our previous work consisted of 6,501 non-Hispanic Black and White children ages 5 - 15 between 1986 and 2002. For the current paper we will add additional children who were in this age range in 2004.

Measures

Outcomes. We will build on our previous work, which considered math and reading achievement, taken from the Peabody Individual Achievement Tests (PIAT), as well as the cognitive stimulation scale taken from the Home Observation for Measurement of the Environment (HOME) scales (Bradley & Caldwell 1984a, 1984b). We will continue to use these measures in the current paper, but will also examine a wider set of outcomes, including internalizing and externalizing behavior problems, delinquency, depression, relationships with parents, risk-taking, and sexual activity.

Family Structure. Five variables are used to measure children's living arrangements at the time of each assessment. These are the total number of years over his or her lifetime that the child has

lived with: two married biological parents (the omitted category in all analyses), a mother married to a nonbiological father, a mother living with a cohabiting partner (these cohabiting partners could be either the child's biological father or another man; because of limited sample size, we are not able to separate these two groups of cohabitors), a single mother living alone, or a single mother living with one or more of the child's grandparents. As noted above, our analyses examine outcomes for children living with an single mother and a grandparent, and evaluate differences in outcomes between these children and those living with a single mother alone, and those living with married parents

Control Measures. All analyses control for the following measures: average income over the child's lifetime up to the assessment (in $1,000s), ages of the child and mother, number of children in the household (including the assessed child), mother's highest grade completed, total number of years the mother has been employed up to the assessment point, and total years of welfare receipt up to the assessment point. As described below, our use of within-child fixed-effects models means that child- or mother-specific characteristics that do not change across the time of the study, such as child gender or mother's age at first birth, are controlled, but are not estimated.

All analyses also include controls for the duration since the most recent family structure disruption a child has experienced at each assessment point, the duration since the child last lived with a grandparent, and the total number of disruptions a child has experienced. The addition of these controls address several potential concerns. First, the amount of time children have lived in various arrangements is likely correlated with the number of family structure disruptions they have experienced, as well as the recency of the last disruption. Additionally, our key explanatory measure of interest, total years spent with a grandparent in the household, could have occurred at any point over the study. Including a measure of how recently the child lived in this arrangement helps to control for the fact that, for some children, the experience of living with a grandparent was very recent (or is ongoing), whereas for others it may have occurred several years ago.

Grandparent Characteristics. A key contribution of the current study is the inclusion of several grandparent characteristics, which could themselves differ by race and therefore explain the race differences in the influence of grandparent co-residence observed in our previous work. We will include in our analysis controls for: grandparent age, grandparent health, grandparent education, how long the child has lived with the grandparent, whether the grandparent lived in the south, the extent to which the grandparent provided a stimulating learning environment when the mother was a child, and a measure indicating whether the child, mother and grandparent live in a home owned by the grandparent. This last measure could help us understand who is helping whom in the three-generational family. If the family is living in the home of the mother, then it is possible that the grandparent is financially unable to contribute and is actually drawing resources away from the child. If the family is living in the home of the grandparent, this may signal that the grandparent is financially supporting the family in other ways as well. Table 2 shows average differences in some of these measures for the grandparents of White and Black children in this study. The results show that grandparents of Black children have 1.5 years less education than grandparents of White children. Additionally, such grandparents provided a less stimulating learning environment for their own children (i.e., they were less likely to have subscribed to newspapers or magazines, or to have a library card), compared to grandparents of White children (75% vs. 83%). Finally, grandparents of Black children were much more likely to have lived in the South (a place with potentially fewer educational and social opportunities) at the time of the birth of the child's mother (64% vs. 27%). These results are only suggestive, but indicate that perhaps Black and White grandparents bring different skills to their grandparenting role.

One concern is the small number of children who ever live with a single mother and a grandparent. In our previous study, of our full sample of 20,327 child-year observations (in which each child is observed an average of five times), 998 (5%) consisted of observations in which a child was living with a single mother and grandparent. This represents 548 (8%) out of 6501 children; 157 (29%) of these children are White, and 391 (71%) are Black. Additional observations will be added through the inclusion of the 2004 (and 2006 if available) fdata in the current study. Although these numbers are lower than we would like, they are similar to those found in other studies relating three-generational living arrangements to child outcomes (e.g., DeLeire & Kalil, 2002).

Table 1 presents means and standard deviations for the family structure variables, separately by race, for data up to 2002. The average White child (with an average age of almost 9 years) has spent almost 7 years living with biological married parents, about a year living with a single mother, and only fractions of years in the other categories. In contrast, the average Black child has spent only 3 years living with two biological married parents, has spent 4 years living with a single mother and no grandparent, and almost 2 years living with a single mother and a grandparent. Overall, Black children are more likely than White children to ever live with a single mother and a grandparent over the course of the study (10% vs. 2%, results not shown); more likely to ever live with a single mother alone (46% vs. 15%); and less likely to ever live with biological married parents (30% vs. 69%). Among children who ever live with a grandparent, the average total amount of time spent in such an arrangement is just over three years. This differs by race, with White children spending on average 2.3 years, and Black children spending on average 3.9 years (results not shown).

Analytical Plan

When estimating the associations between family structure and children's outcomes, it is possible that children living in various family structures may differ in unobservable ways. Without being able to fully control for all of the ways in which children in single-parent families, for example, differ from those in married-couple families, Ordinary Least Squares (OLS) regressions of child outcomes on family structure may be biased. To address this, we use within-child fixed-effect regressions, relying on repeated observations of family structure and the outcome of interest for each child. These analyses exploit the fact that we have several observations for each child in the NLSY. Specifically, we relate the amount of time a child has spent in various living arrangements (single mother alone, single mother with grandparent, married mother, etc.) to child outcomes in a given period.

As noted above, a key goal of this paper is to better understand race differences in the influence of grandparent co-residence on children. To do this, we will include in our analysis several grandparent characteristics (listed above), which may differ by race. It is possible that the race differences observed in our previous work, which suggested that grandparent co-residence could benefit white, but not black, children, are actually attributable to other characteristics of the grandparents which may differ by race. To test this, we will perform a series of interactions: first interacting our family structure measures (such as living with a single mother and grandparent) with a dummy for whether the child is black to document where there are race differences in the influence of grandparent co-residence on children. We will next perform a series of analyses to determine whether the race differences in the influence of grandparent co-residence differ by these characteristics. These analyses will include three-way interactions that add key grandparent characteristics (such as a dummy for less education or a dummy for grandparent poor health) to the interaction between race and family structure, as well as simply including the grandparent

characteristics as main effects and examining whether they account for any race differences in the influence of grandparent co-residence on children.

Summary

Using lifetime measures of children's living arrangements, a wide range of child outcomes, and an extensive set of grandparent characteristics, this goal of this paper is to better understand the role of grandparents in the lives of children living with single mothers, and in particular to shed light on race differences in these associations.

Works Cited

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Table 1. Unweighted Descriptive Statistics

Variables	BLACK		WHITE	
	M	*SD*	*M*	*SD*
Total years married biological parents	3.03	3.97	6.92	3.98
Total years mom married to step-father	.40	1.24	.44	1.39
Total years single mother and no grandparent	3.94	3.91	1.14	2.30
Total years single mother and grandparent(s)	1.76	2.77	.29	1.03
Total years cohabiting mother	.70	1.70	.50	1.52
Total number of family structure changes	.91	1.11	.70	1.14
Number of child-year observations	7858		12469	

Note: Source is National Longitudinal Survey of Youth children aged 5 - 15 between 1986 – 2002.

Table 2. Tests of Significance of Black-White Differences in Grandparent Characteristics

	White children	Black children	Significance of difference
Average years of education	11.46	10.10	$p < .001$
Provided newspapers, magazines and library card when child's mother was 14	.84	.75	$p < .001$
Lived in South when child's mother was born	.27	.64	$p < .001$

Note: Source is National Longitudinal Survey of Youth children aged 5 - 15 between 1986 – 2002. Characteristics are averaged across both maternal grandparents when available.