Rural Early Childhood Brief
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National Center for Rural Early Childhood Learning Initiatives
Mississippi State University

Preliminary Rural Analysis of the Early Childhood Longitudinal Study – Kindergarten Cohort

Overview

This brief introduces the first results from a rural analysis of selected national datasets. Here we provide key findings concerning kindergarten readiness of rural children from an analysis of the Kindergarten Cohort of the Early Childhood Longitudinal Study (ECLS). Future briefs will summarize our findings concerning the health of the Kindergarten Cohort, data from the Birth Cohort, and data from the National Health Interview Survey (NHIS). A forthcoming report will provide more findings from our analyses of the ECLS and NHIS and suggest questions for additional research.

A lack of reliable data about the state of rural young children prompted the Rural Early Childhood analyses of the ECLS and NHIS datasets. Most public-use national datasets do not lend themselves to reliable estimates of the well-being of rural young children (ages 0-8) because data confidentiality rules preclude identification of rural respondents or because rural children are underrepresented in national samples (Capizzano & Fiorillo, 2004). Some data concerning rural children is available; the Rural Families Data Center reported last year that rural children from birth through age 17 are better off than non-rural children on some measures, such as English-speaking ability and housing, but worse off on many other measures, including education outcomes (2004). Counties with persistent poverty are overwhelmingly rural (Weber, 2004). Poverty rates for children from birth through age 17 are available using a metropolitan-to-nonmetropolitan comparison: One in five nonmetro children age 17 or under was in poverty in 2003, a rate of 20.1 percent, while the metro rate of child poverty was 17.1 percent (Economic Research Service, 2004). However, these rates are not available for rural young children using a precise definition of rurality (Capizzano & Fiorillo, 2004), nor do these rates precisely correlate to rural areas as designated in the ECLS.

Gershoff analyzed the children in the ECLS Kindergarten Cohort (ECLS-K) by family income, finding that nationally, increases in family income correlated with decreases in problem behaviors (2003). Gershoff likewise found that "children in families whose incomes fall below 200 percent [of the federal poverty level] are well below average on their reading, math, and general knowledge test scores" at kindergarten entry, "compared to the well-above-average scores of children living in families with incomes over 300 percent of [the federal poverty level] ($55,200 for a family of four)." Gershoff noted, "it is important to recognize that there is considerable variation in academic achievement within each of the groups. The fact that some of the children in low-income families scored considerably above the mean tells us that there are children who are able to surmount the challenges they face. Determining what enables these children to succeed academically should be an important priority for public policy research."

Fewer than one in ten rural black children were proficient at identifying beginning sounds at kindergarten entry, compared to four out of ten non-rural white children.

Considering the established findings that rural children are more likely to be economically disadvantaged and to have poorer educational outcomes, Gershoff's observation that some young children overcome the challenges of low income and other disadvantages suggests a compelling question: Can rural residence be a protective factor for some young children? The future of rural communities themselves, as well as the children who enter kindergarten, may be at stake. As the Council of State Governments has noted, rural schools with smaller enrollments are at higher risk under the federal No Child Left Behind Act. That act requires schools to conduct annual tests of children in grades 3 through 8, with sanctions for schools where children do not progress toward state benchmarks (Hull, 2003).

As part of its Datasets Initiative to address the information gap in rural early care and education, Rural Early Childhood commissioned the non-partisan research organization, Child Trends, to analyze selected indicators in the ECLS datasets for the rural subset. Those indicators, measured and assessed at the time the children entered kindergarten, include social behavior, language development, the mother's education level, foster care placement, poverty, enrollment in a center-based program at age four, credentials of kindergarten teachers, and access to child care subsidies. The selection of indicators resembled the February recommendations of the National School Readiness Indicators Initiative, which identified a core set of indicators for "ready" children, families, communities, health services, early care and education, and schools (Rhode Island Kids Count, 2005). The forthcoming report by Rural Early Childhood will compare the full set of recommended readiness indicators to availability in the Early Childhood Longitudinal Study and the National Health Interview Survey, to determine the feasibility of a rural-to-non-rural comparison for those indicators.

About the ECLS-K

The National Center for Education Statistics of the U.S. Department of Education launched the Early Childhood Longitudinal Study, an ongoing study of a nationally representative sample of children, by collecting baseline data in the fall of 1998, when the children were entering kindergarten. This brief addresses a rural-to-non-rural comparison of the baseline data for the Kindergarten Cohort, which is derived from standardized one-on-one assessments of children, interviews of parents, observations of kindergarten settings, and questionnaires completed by kindergarten teachers. The direct child cognitive assessment was administered using a computer-assisted personal interview. The ECLS-K battery used a two-stage assessment approach: The first stage in each domain consisted of a routing test to determine a child's approximate skills. According to the child's performance on the routing test, the child was administered the appropriate skill level assessment for that domain during the second stage. The reading and mathematics assessments had three skill levels. The ECLS-K involves repeated waves of data collection in the spring of the children's kindergarten year, the fall and spring of first grade, and the spring of their third- and fifth-grade years. The ECLS-K was designed to provide information about numerous sub-groups, including black, white, Hispanic, and Asian children; children in different income brackets; and public and private schoolchildren (West, et al, 2000). While the National Center for Education Statistics has not issued any reports of the rural children and families in the ECLS samples, both cohorts of the study are large enough to support comparison of rural and non-rural children and families. The study's rural and non-rural designations are based on definitions of the U.S. Census Bureau, which designates places of fewer than 2,500 persons living outside urban areas as "rural." The ECLS rural designation also includes small towns of 25,000 or fewer residents.

Initial Findings

Overall, rural life appears to offer young children, in comparison to non-rural children, a few advantages at home and in child care centers, preschool, and kindergarten. Those advantages include

greater likelihood of contact with a non-resident or non-custodial parent within the previous four weeks, enrollment in a Head Start program during the year prior to kindergarten, small kindergarten class size (15 or fewer children), and an orderly kindergarten class. They also include greater likelihood of social competence, receipt of certain developmental evaluations, regular family dinners, and safe neighborhoods.

Non-Hispanic White (hereafter white) rural children enjoy some additional advantages, in comparison to white non-rural children, including greater access to full-day kindergarten and a safe classroom. Non-Hispanic Black (hereafter black) rural children, in comparison to black non-rural children, are more likely to have early childhood teachers who have taken one or more courses in early childhood education; they are less likely to demonstrate internalizing problems such as anxiety or sadness.

However, rural young children are at significant disadvantage, in comparison to non-rural children, for many key indicators:

- Rural children overall are 60 percent more likely to be placed in special education in kindergarten (See Figure 1).
- Rural children are significantly less likely than non-rural children to have parents with at least a bachelor's degree.
- Rural children are only about half as likely as non-rural children to live in households with annual incomes of $75,000 or more.
- Rural black children are significantly more likely than non-rural black children to have parents who lack high school degrees.

While disparities between rural and non-rural children are significant for many indicators, the disparities are even wider when rural black children are compared to non-rural white children:

- About three times as many black children in non-rural areas as black children in rural areas were proficient at identifying the beginning sounds of words (22 percent vs. 8 percent). The parallel figures for white children in non-rural as opposed to rural areas were 40 percent and 26 percent (See Figure 2).

The difference was even more striking when comparing rural black children with non-rural white children:

- Four out of ten of non-rural white children were proficient at identifying beginning sounds at

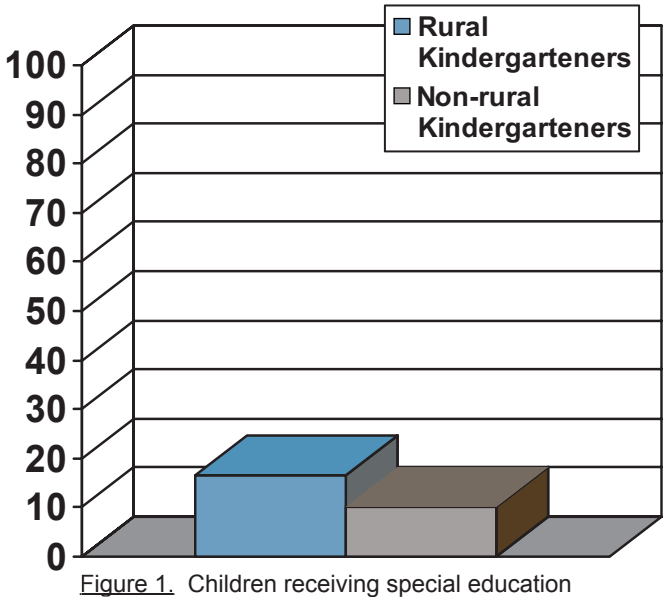

Figure 1. Children receiving special education placement.

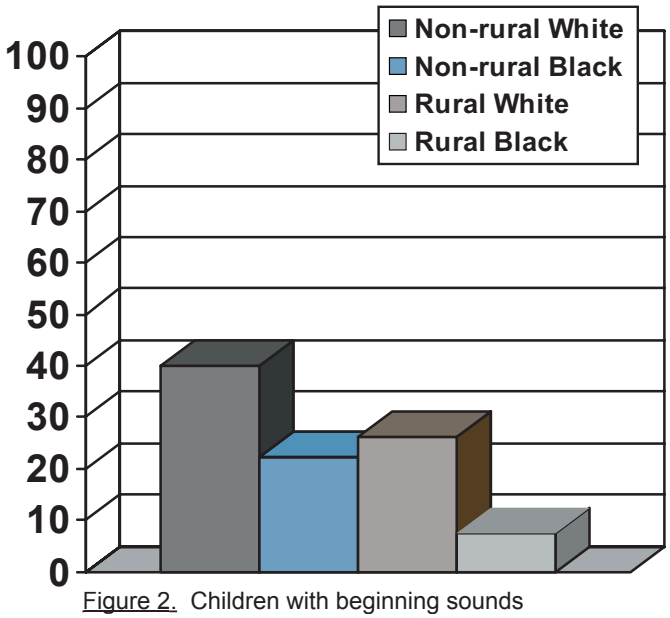

Figure 2. Children with beginning sounds proficiency at kindergarten entry.

kindergarten entry; fewer than one out of ten rural black children were proficient in this early literacy skill.

- About three quarters of non-rural white children were proficient in letter recognition upon enter ing kindergarten, but only about two-thirds of rural white children were proficient (77 percent vs. 66 percent). Non-rural white children were nearly one and a half times more likely than rural black children to be proficient in letter recognition upon entering kindergarten.

- Only one out of five rural black children lived with both biological parents; one out of three non-rural black children and three out of four non-rural white children lived with both biological parents (See Figure 3).

- Only 14 percent of rural black children attended a center-based early education program in the year before kindergarten, while 37 percent of non-rural black children attended a center-based program. The parallel figures for white children in rural vs. non-rural areas were 35 percent and 54 percent (See Figure 4).

- Fifty-six percent of rural black children were in multiple care arrangements in the year before kindergarten; only 48 percent of non-rural blacks and 36 percent of non-rural white children were in multiple care arrangements.

- Rural black children were more likely than non-rural black children to spend three hours or longer per weekday watching television (42 percent vs. 35 percent). Rural black children also were almost three times as likely as rural and non-rural white children to spend three hours or longer per weekday watching television.

Conclusion

Disparities in well-being indicators for rural young children reveal possible opportunities to direct prevention and early intervention services in a more targeted fashion. Future Rural Early Childhood briefs will provide more findings from the rural analysis of the Early Childhood Longitudinal Study and other large national datasets.

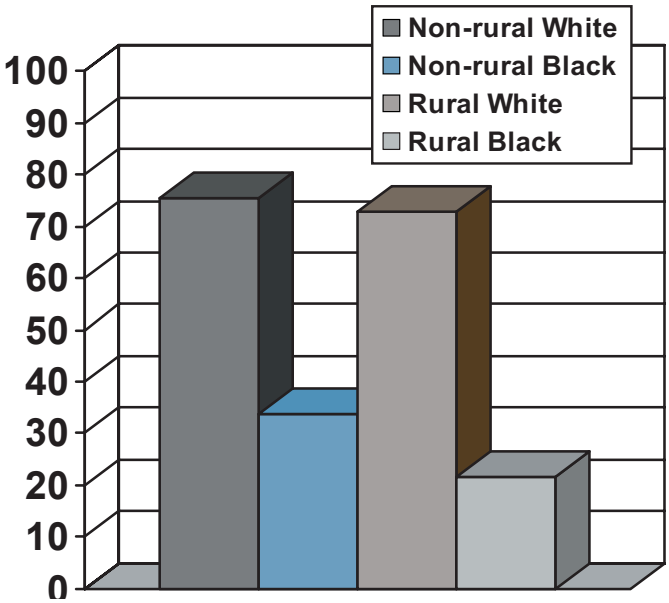

Figure 3. Children with two biological parents.

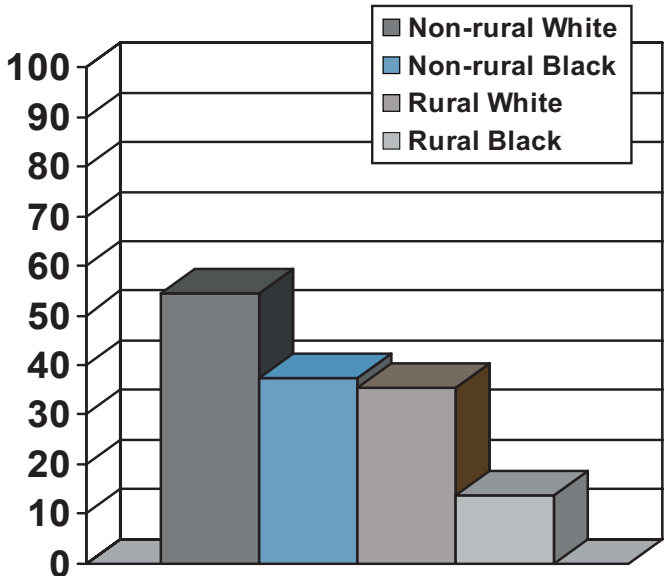

Figure 4. Children in center-based care during year prior to kindergarten.

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