Rural Disparities in Baseline Data of the Early Childhood Longitudinal Study: A Chartbook

National Center for Rural Early Childhood Learning Initiatives
Mississippi State University

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Rural Disparities in Baseline Data of the Early Childhood Longitudinal Study: A Chartbook

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Contents

List of Tables

List of Figures

Introduction

This report introduces the results from an analysis contrasting young children's care and development in rural and non-rural settings using baseline data from the Early Childhood Longitudinal Study (ECLS) birth and kindergarten cohorts (ECLS-B and ECLS-K). These are coordinated studies carried out by the U.S. Department of Education, one following a nationally representative group of babies through entry into school, and the other following a nationally representative group of kindergarteners through elementary school.

A lack of reliable data about the state of rural young children prompted this analysis of the ECLS datasets. Most public-use national datasets do not lend themselves to reliable estimates of the status of young rural 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). The U.S. Department of Health and Human Services (DHHS) confirmed this year that less is known about the quality, availability, use, and cost of human services in rural America than in non-rural America because suitable data are difficult to find. DHHS reported that "much of the research on rural areas addresses circumstances in a specific locality with results that may be the consequence of local implementation factors, and not generalizable to other or all rural areas." Moreover, "some national studies exclude rural sites altogether or, if they do include both rural and non-rural sites, do not report rural and non-rural results separately" (U.S. Department of Health and Human Services, 2005, p. 2).

Some data concerning rural children are available. The Rural Families Data Center reported in 2004 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, p. 5). Counties with persistent poverty are overwhelmingly rural (Weber, 2004). Rural chil-

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dren are more likely to live in poverty. The U.S. Economic Research Service reported in 2005 that 21% of rural children lived in poverty, in comparison with 18% of non-rural children (2005). Rural child poverty rates are higher for all racial and ethnic groups except Asian Americans (Rural Families Data Center, 2004). However, until now, these rates have not been available for rural young children using a precise definition of rurality (Capizzano & Fiorillo, 2004, p. 36-37), nor do these rates precisely correlate to rural areas as designated in the ECLS.

As part of its Datasets Initiative to address this information gap in rural early care and education, the National Center for Rural Early Childhood Learning Initiatives, known as Rural Early Childhood, commissioned the non-partisan research organization, Child Trends, to compare data on selected indicators for children from rural and non-rural subsets in the ECLS-B and ECLS-K baseline data.

The National Center for Education Statistics (NCES) of the U.S. Department of Education launched the ECLS, an ongoing study of two nationally representative samples of children, by collecting baseline data in the fall of 1998, when the original cohort of more than 21,000 children was entering kindergarten. 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 school children (West, Denton, & Germino-Hausken, 2000, 5). The ECLS also provides a rural designation. Rural children in the ECLS-K baseline data were predominantly Southern and Midwestern, with rural Black children almost entirely in the South and rural American Indian or Alaska Native children almost entirely in the Midwest and West (see Figure 17).

Indicators in the ECLS-K baseline dataset selected for the present report were measured and assessed at the time the children entered

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kindergarten, and focus on the children's social behavior and language development; the mother's education level, family poverty, access to child care subsidies, and children's foster care placement; children's enrollment in a center-based program at age four, and credentials of kindergarten teachers.

The NCES expanded the ECLS in 2001 by assembling a second sample, known as the Birth Cohort, of approximately 10,000 children born between January and December 2001. Baseline data were collected when the children were between 6 months and 22 months of age, with most children about 9 months of age (Flanagan & Park, 2005). The ECLS-B indicators that we examine here relate to demographics, family life, health and physical development, social-emotional development, and child care arrangements. While the NCES has not issued any reports focusing on 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. In these analyses, "rural" areas include those areas with a population of less than 25,000 located outside of central metropolitan statistical areas and metropolitan statistical areas.

Discussion

Overall, the ECLS baseline data for kindergarteners suggest that rural life offers young children a few advantages at home and in early care and education settings, in comparison to the experiences of non-rural children. Those advantages include greater likelihood of contact with a non-resident or non-custodial parent within the previous four weeks for those not living with their fathers, 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 developmen-

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tal evaluations, regular family dinners, and safe neighborhoods.

Non-Hispanic White (hereafter White) rural kindergarten children enjoy some additional advantages, in comparison to White non-rural kindergarteners, 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, and they are less likely to demonstrate internalizing problems such as anxiety or sadness.

However, rural young children are at significant disadvantage at kindergarten entry, in comparison to non-rural children, for numerous indicators. While our major focus is on differences in the development of the children and in their early care (both within the family and in early care and education settings), differences also occur in the children's broader economic and demographic circumstances. For example:

- 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 only one out of five rural Black children live 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.

In the sections that follow, we provide rural to non-rural comparisons of selected indicators from the ECLS-K and ECLS-B baseline data focusing on three issues: school readiness, utilization of early care and education, the status of young American Indian and Alaska Native children, and the mental health and family life of young rural children.

School Readiness

Gershoff (2003) analyzed the data for children in the ECLS Kindergarten Cohort by family income, finding that nationally, increases in family income correlated with decreases in problem behaviors (p.

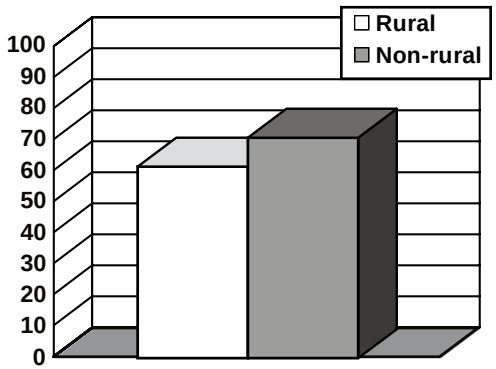

Figure 1. Percentage of Children in ECLS-K Baseline Data with Letter Recognition Skill at Kindergarten Entry, by Rurality.

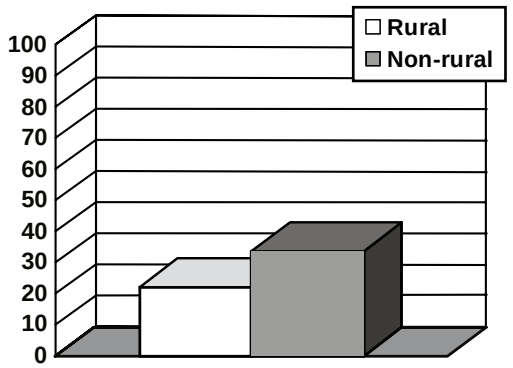

Figure 2. Percentage of Children in ECLS-K Baseline Data with Beginning Sound Recognition Skill at Kindergarten Entry, by Rurality.

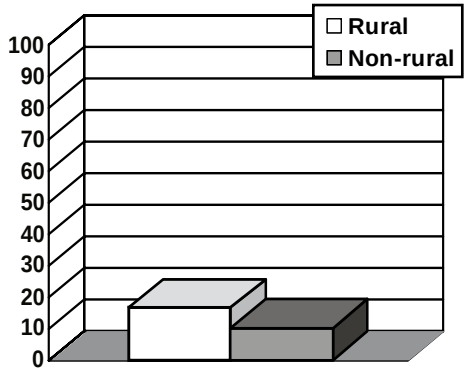

Figure 3. Percentage of Children in ECLS-K Baseline Data with Special Education Placement at Kindergarten Entry, by Rurality.

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6). She also found that "children in families whose incomes fall below 200% [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% 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" (p. 5).

Comparison of the baseline data for rural and non-rural children in the ECLS-K reveals further disparities for many school readiness indicators (see Figures 1 and 2). The analyses point to disparities by rurality overall and within racial/ethnic groups. In addition, there are particularly large differences on some indicators when these are contrasted for rural Black children and non-rural White children. For example:

- Rural children overall are 60% more likely to be placed in special education in kindergarten (see Figures 3 and 6).
- About three quarters of non-rural White children were proficient in letter recognition upon entering kindergarten, but only about two-thirds of rural White children were proficient (76.6% vs. 66.3%). The parallel figures for non-rural and rural Black children were 63.7% and 54.1% respectively (see Figure 4). As can be seen in the figure, the gap between rural Black children and non-rural White children was particularly large.
- 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 (22.1% vs. 7.5%). The parallel figures for White children in non-rural as opposed to rural areas were 40.0% and 26.2% (see Figure 5). Again, there was a particularly large gap on this indicator between rural Black children and non-rural White children.

Utilization of Early Care and Education Arrangements

An analysis of the National Household Education Surveys (NHES) (Mulligan, Brimhall, West, & Chapman, 2005) found wide variation in the utilization of different early care and education arrangements for young children by family poverty level, with children living below the poverty threshold less likely to be in formal care arrangements. This analysis of 2001 NHES survey results does not consider rurality, although the NHES dataset does permit precise rural estimates of utilization of center-based programs (Capizzano & Fiorillo, 2004). However, rural analysis of the ECLS-B baseline data shows that rural children were less likely to receive parental care only, and more likely to

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be in relative care (see Table II.E.1). Analysis of the ECLS-K baseline data reveals that rural children were only two-thirds as likely as non-rural children to be in center-based care other than Head Start during the pre-kindergarten year (see Figure 7). Interestingly, enrollment during the pre-kindergarten year in Head Start shows a different pattern: rural children overall were almost twice as likely as non-rural children to attend Head Start (see Table I.F.3). The pattern held for White as well as Black children in rural versus non-rural settings, but was somewhat more marked for Black children. Black children in rural areas had particularly low rates of participation in center-based care but particularly high rates of participation in Head Start. In addition, Black children in rural areas were particularly likely to have multiple child care arrangements.

- Just 13.6% of rural Black children attended a center-based early education program in the year before kindergarten, while 37.2% of non-rural Black children attended a center-based program. The parallel figures for White children in rural vs. non-rural areas were 35.3% and 54.5%.
- Overall, children in rural areas were much more likely than children in non-rural areas to participate in Head Start in the year before kindergarten (17.1% versus 8.7%, respectively). Differences held across racial and ethnic groups. For example, 48.7% of rural Blacks participated in Head Start compared with 19.5% of non-rural Black children.
- Fifty-six percent of rural Black children were in multiple care arrangements in the year before kindergarten; only 48.3% of non-rural Blacks and 35.8% of non-rural White children were in multiple care arrangements.

American Indian and Alaska Native Young Children

America's Indian and Alaska Native children are predominantly rural (see Figures 8 and 9). In the ECLS-B, 1.2% of rural children and 0.3% of non-rural children are American Indian or Alaska Native (see Table II.A.4). In the ECLS-K, American Indian and Alaska Native children

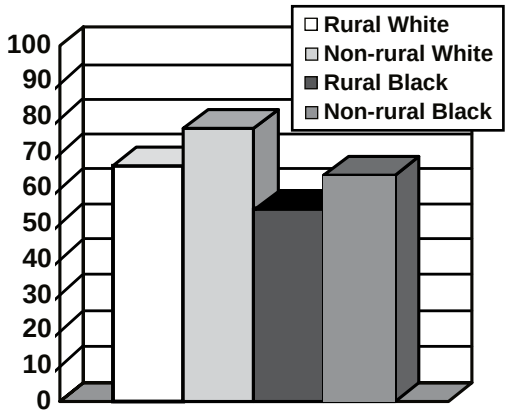

Figure 4. Percentage of Children in ECLS-K Baseline Data with Letter Recognition Skill at Kindergarten Entry, by Ethnicity and Rurality.

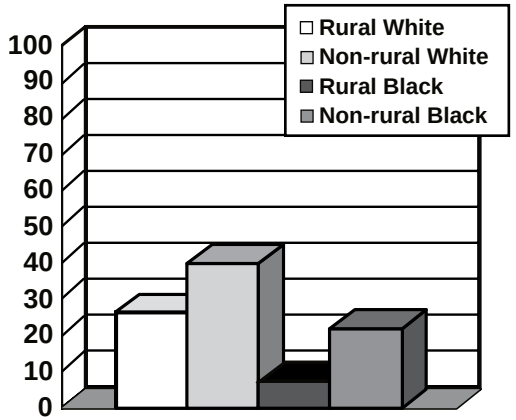

Figure 5. Percentage of Children in ECLS-K Baseline Data with Beginning Sounds Recognition Skill at Kindergarten Entry, by Ethnicity and Rurality.

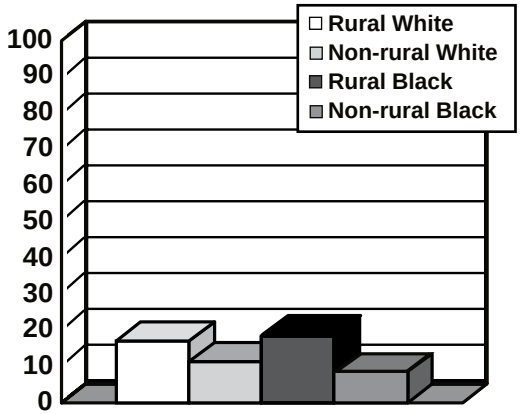

Figure 6. Percentage of Children in ECLS-K Baseline Data with Special Education Placement at Kindergarten Entry, by Ethnicity and Rurality.

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are 5.4% of the rural child population and only 0.6% of the non-rural child population (see Table I.A.3). For this reason, attention to early care and education for American Indian and Alaska Native children is an explicit research priority of Rural Early Childhood. Likewise, analysis by rurality of health and school readiness indicators for the American Indian and Alaska Native subset of the ECLS was a specific recommendation of the American Indian and Alaska Native Education Research Agenda (Strang and Von Glatz, 2001). The agenda was the product of White House Executive Order 13096 (1998) and reflected a scarcity of research on early childhood development and education for this group of children (Demmert, 2001). A working group gathered ideas through a series of regional forums, a conference, and other means, ultimately setting the following priorities for research in the area of early childhood education: status of infant and preschool children on school readiness indicators and availability of programs and services for infants and preschoolers (Strang, Von Glatz, & Hammer, 2002).

The authors of the agenda suggested that the ECLS was "the most significant study … underway" and predicted that findings concerning Native children would be "invaluable for Native researchers who seek to untangle the interrelationships among personal characteristics, family background, community, early childhood services, and success in making the transition to school" (Strang and Von Glatz, 2001, p. 34). "Comparisons of educational outcomes within the population of American Indian and Alaska Native students may be very useful. For example, comparisons could be based on … urban or rural residence" (p. 11). The authors of the agenda noted that the ECLS Birth Cohort included "a specific oversampling of the Indian population through a supplement provided by the Office of Indian Education" and that the ECLS Kindergarten Cohort would "provide useful data on high-poverty rural populations" (p. 14).

In the spirit of the American Indian and Alaska Native research agenda, we examined selected indicators for this group of children in

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both ECLS cohorts, finding that these young children and their families possessed some important advantages in comparison to other rural children and families. For example, American Indian and Alaska Native rural parents in the ECLS-B were more likely to exhibit positive parenting skills, during observation, than other rural parents:

- **Encouraged play:** Rural American Indian and Alaska Native parents were more likely than rural Black and Hispanic parents to provide toys or interesting activities for their babies.
- **Allowed exploration:** Rural American Indian and Alaska Native parents were less likely than rural White and Hispanic parents to interfere with or restrict their babies' actions or exploration at least three times during an observation.
- **Positive discipline strategies:** Rural American Indian and Alaska Native parents were significantly more likely than all other subgroups to report that they would use positive discipline strategies exclusively in response to a hypothetical situation in which their child hit them. More specifically, when parents were asked how they would respond if their child hit them, those who responded by indicating they would have the child take a timeout, talk to the child about what he or she did wrong, make the child apologize, take away a privilege, give the child a warning, or make the child do household chores were included as using only positive discipline strategies.
- **Parental warmth:** Rural American Indian and Alaska Native parents (76.1%) were about as likely as rural White parents (77.8%) and more likely than other subgroups to report high levels of parental warmth.
- **Parental aggravation:** Rural American Indian and Alaska Native parents (8.0%) reported similar levels of aggravation in parenting as rural White parents (7.6%) and were significantly less likely than rural non-Hispanic Black parents (16.8%) to report high levels of aggravation.

Rural life appears to offer some benefits for American Indian and Alaska Native children and their families in comparison to non-rural life:

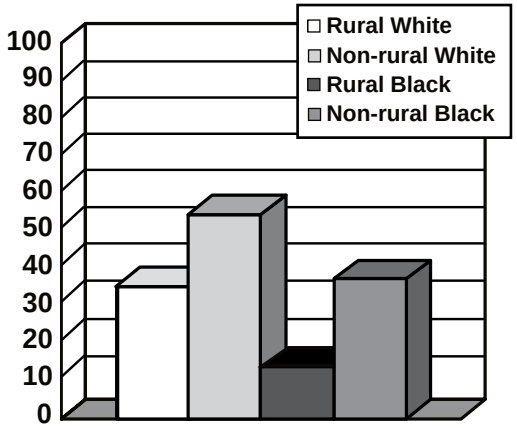

Figure 7. Percentage of Children in ECLS-K Baseline Data in Center-Based Care During Pre-K Year, by Ethnicity and Rurality.

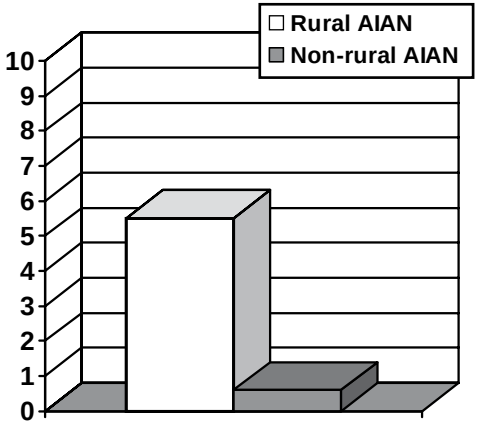

Figure 8. Percentage of American Indian and Alaska Native Children in ECLS-K Baseline Data, by Rurality.

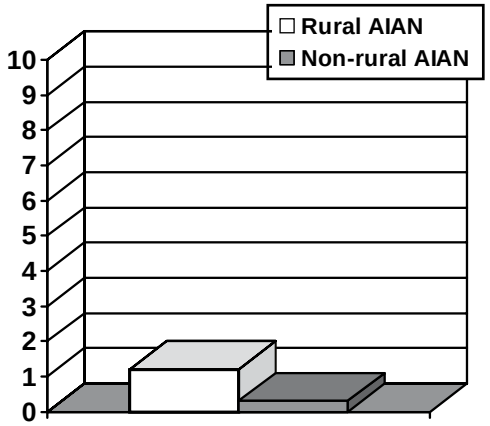

Figure 9. Percentage of American Indian and Alaska Native Children in ECLS-B Baseline Data, by Rurality.

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- **Head Start participation:** Rural American Indian and Alaska Native kindergarteners were more likely than their non-rural counterparts to have attended a Head Start program (39.1% vs. 14.1%).
- **Attendance at full-day kindergarten:** Rural American Indian and Alaska Native kindergarteners were more likely than non-rural counterparts to be enrolled in a full-day kindergarten program (89.8% vs. 37.8%).

As the NCES reported in August 2005, ECLS-B baseline data do not show differences between American Indian and Alaska Native children and other children in early cognitive and physical development (Flanagan & Park, 2005). However, analysis by *rurality* of the ECLS-B cohort reveals that American Indian and Alaska Native parents and children in rural America differed significantly from their counterparts in non-rural areas and from rural children in other ethnic subgroups on numerous health indicators that could affect children's later development:

- **Breastfeeding:** In the ECLS-B, rural American Indian and Alaska Native mothers (8.8%) were significantly less likely than rural White (25.6%) or Hispanic mothers (23.6%) to be breastfeeding their babies at baseline.
- **Second-hand smoke exposure:** In the ECLS-B, rural American Indian and Alaska Native babies were significantly more likely than rural Black and Hispanic babies to be exposed to smoking in the home (see Figure 4). There was no significant difference between American Indian/Alaska Native and White babies on this measure.
- **Parental alcohol use:** In the ECLS-B, rural American Indian and Alaska Native babies were significantly more likely than rural Black babies to have mothers who drank in the 3 months before pregnancy. There was no significant difference between American Indian/Alaska Native and White or Hispanic babies on this measure.

In addition, the ECLS-K provides further evidence of gaps and risk factors for young American Indian and Alaska Native children:

- **Poverty:** Rural American Indian and Alaska Native kindergarteners were more than twice as likely as their non-rural counterparts to live below the poverty threshold (60.5% vs. 23.1%).
- **Parental education:** Rural American Indian and Alaska Native kindergarteners were only about a third as likely as non-rural American Indian and Alaska Native kindergarteners to have a parent with a bachelor's degree or higher degree (7.8% vs. 26.4%).

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- **Parents reading to children:** Rural American Indian and Alaska Native kindergarteners were less likely than non-rural kindergarteners from the same groups to have a parent who read to them three or more times per week (60.5% vs. 82.7%).
- **Children reading to selves:** Rural American Indian and Alaska Native kindergarteners were less likely than their non-rural peers from the same groups to read to themselves outside of school three or more times per week (58.2% vs. 82.4%).
- **Social competence:** Rural American Indian and Alaska Native kindergarteners were less likely than non-rural American Indian and Alaska Native kindergarteners to be rated by their parents as very often exhibiting social competence in terms of their ease in joining play, making and keeping friends, and interacting positively with other children (38.8% vs. 53.8%).
- **Self-control:** Rural American Indian and Alaska Native kindergarteners were less likely than their non-rural counterparts to be rated by their teachers as very often exhibiting self-control, as reflected in their respect for the property rights of others, control of their tempers, and acceptance of peer ideas for group activities (19.9% vs. 37.3%).
- **Internalizing behavior problems:** Rural American Indian and Alaska Native kindergarteners were more likely than non-rural counterparts to exhibit internalizing behavior (10.8% vs. 4.9%), as rated by their teachers. Internalizing behaviors included anxiety, loneliness, low self-esteem, and sadness.
- **Externalizing behavior problems:** Rural American Indian and Alaska Native kindergarteners were more likely than their non-rural counterparts to exhibit externalizing behavior (15.3% vs. 7.3%), as rated by their teachers. Externalizing behaviors included the frequency with which a child argued, fought, got angry, acted impulsively, and disturbed ongoing activities.
- **Letter recognition:** Rural American Indian and Alaska Native children in the ECLS-K were significantly less likely than rural White or Black children to be proficient at letter recognition.

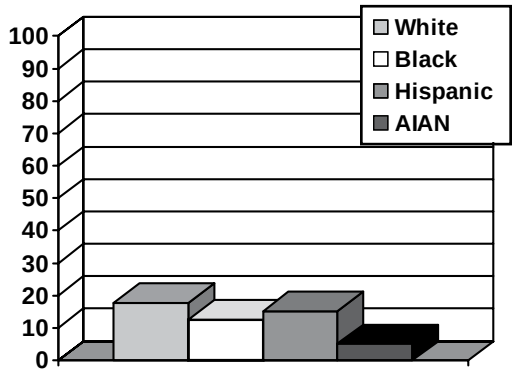

Figure 10. Percentage of Rural Children in ECLS-B Baseline Data with Non-Relative Care as Primary Care, by Ethnicity.

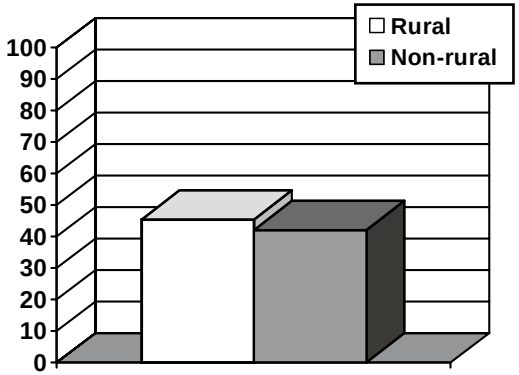

Figure 11. Percentage of Rural Children in ECLS-K Baseline Data to Demonstrate Social Competence, by Rurality.

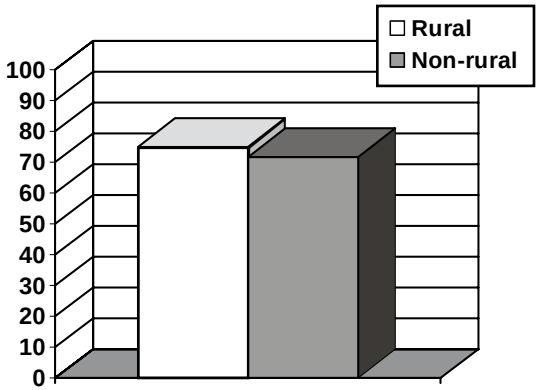

Figure 12. Percentage of Rural Children in ECLS-K Baseline Data Whose Parents Demonstrated High Level of Warmth, by Rurality.

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- **Beginning sounds recognition:** Rural American Indian and Alaska Native children in the ECLS-K were less than one-fourth as likely as rural White children to be proficient at beginning sounds recognition.

Data from both the birth and kindergarten cohorts indicate that rural American Indian and Alaska Native children were more likely to be in care by a parent or relative and less likely to be in a center-based program, than other rural children:

- **Care by relatives:** Among rural babies, rural American Indian and Alaska Native babies were significantly more likely than rural White and Hispanic babies to receive care by a relative (42.5% versus 26.9% and 13.6%, respectively).
- **Non-relative care:** According to ECLS-B baseline data, American Indian and Alaska Native children were the least likely group of rural children to be cared for by non-relatives as babies: Only 5.1% of rural American Indian and Alaska Native babies were cared for by a non-relative (see Figure 10).
- **Center-based pre-kindergarten care:** Rural American Indian and Alaska Native children in the ECLS-K were less than one-third as likely as rural White children to have attended a center-based pre-kindergarten program (10.6% for American Indian and Alaska Native children versus 35.3% for White children).

Mental Health and Family Life

Nationally, one in five children and adolescents is estimated to have a mental health problem while one in ten has a serious mental health problem (Pottick, et al., 2002). Two factors in rural communities seem to combine to form a greater threat of mental health problems to rural young children: poorer access to preventive and early intervention men-

National Center for Rural Early Childhood Learning Initiatives
Mississippi State University
Child Trends

Grace, C., Shores, E. F., Zaslow, M., Brown, B., Aufseeser, D., & Bell, L. (2006). *Rural disparities in baseline data of the Early Childhood Longitudinal Study: A chartbook.* (Rural Early Childhood Report No. 3). Mississippi State, MS: National Center for Rural Early Childhood Learning Initiatives, Mississippi State University Early Childhood Institute.

tal health services and higher rates of poverty. Pumariega, Rogers, and Rothe (2005) suggest that location of mental health services is one systemic factor contributing to disparities in children's mental health. Family poverty can indirectly contribute to childhood mental health problems and behavioral disorders because it can increase the risk of mental health problems in parents and/or increase the chance of child abuse (U.S. Department of Health and Human Services, 1999). Nationwide, the capacity of mental health services has not kept pace with demand (Pottick, et al., 2002), and as rural communities have particular difficulty meeting the needs for mental health services, rural children are one of the groups least likely to have access to services (U.S. Department of Health and Human Services, 2003, 2004). For example, Gamm, Stone, and Pittman (2003) calculate that 95% of smaller rural counties, with populations of 2,500 to 20,000, have no child psychiatrist. Mental health providers in rural areas typically are bachelor's degree–level social workers without authority to prescribe medications (Koppelman, 2004). State and local rural health leaders have ranked mental health as the fourth-highest rural health priority (Gamm et al., 2003) and Koppelman said an adequate supply of providers is "critical in meeting children's unmet needs for mental health care" (2004, p. 3).

Despite these rural risk factors of poverty and lack of access to preventive and early intervention mental health services, there is little publicly available data about the mental health needs of rural young children and their families (Thompson, 2005). For example, there is a need for clear data about whether rural families living in poverty tend to experience parental depression, domestic violence, and/or substance abuse at greater rates than non-rural families living in poverty or non-poor families. Observing that poverty, parental depression, domestic violence and substance abuse all threaten children's well-being, Lawrence, Chau, and Lennon called in 2004 for more study of "the extent to which these problems co-occur among low-income families and about their combined effect on children" (p. 3). Moreover, the proportion of adults with mental illness who are parents is not available, so the scope of unmet need for parenting support among parents with mental illness is not known (Nicholson, Biebel, Katz-Leavy, & Williams, 2002).

In the Kindergarten Cohort of the ECLS overall, children appear to have been developing positive social skills. West, Denton, and Germino-Hausken (2000) found that 80% of parents believed their children

Figure 13. Percentage of Rural Children in ECLS-K Baseline Data Whose Parents Reported High Level of Aggravation, by Rurality.

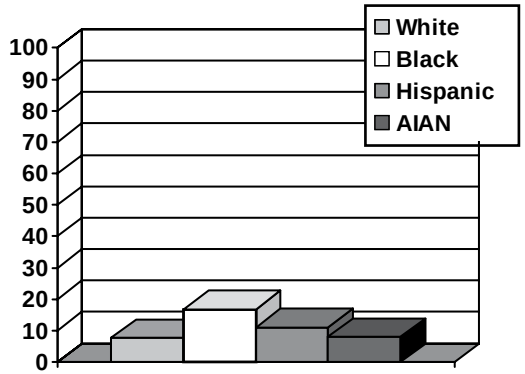

Figure 14. Percentage of Rural Children in ECLS-K Baseline Data Whose Parents Reported High Level of Aggravation, by Ethnicity.

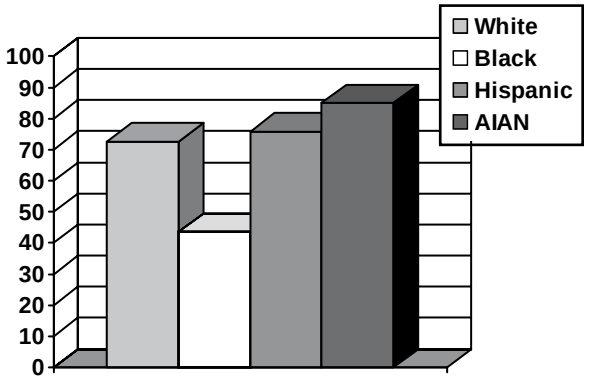

Figure 15. Percentage of Rural Children in ECLS-K Baseline Data Whose Parents Reported Using Positive Discipline Exclusively, by Ethnicity.

National Center for Rural Early Childhood Learning Initiatives
Mississippi State University
Child Trends

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joined others, made friends, and comforted others often or very often. Teachers reported observing these positive behaviors less often, but still rated half to three-fourths of kindergarteners as having these skills. Concerning problem behaviors, teachers reported that just 10 to 11% of kindergarteners often or very often argued or fought with others or easily became angry. Parents reported observing higher rates for frequent problem behaviors: 15% for fighting often to very often, 33% for arguing often to very often.

The ECLS-K baseline data show that rural kindergarteners did not differ from non-rural kindergarteners on many indicators of social-emotional health, although rural children were at a significant disadvantage in terms of some parenting practices and in potential access to mental health services through formal early childhood programs. Rural life appears to offer some benefits for the social-emotional development of young children and their families:

- **Social competence:** Rural kindergarteners were significantly more likely to be rated by their parents as showing social competence (45.3% of rural children vs. 41.9% of non-rural children) (see Figure 11). Rural Southern children also were significantly more likely to demonstrate social competence than the non-rural Southern children (48.6% vs. 43.5%). The South was the only region with such a difference.)
- **Neighborhood safety:** Significantly more rural parents than non-rural parents in the ECLS-K perceived that their neighborhoods were safe (81.8% vs. 69.6%). This difference held for all ethnic and income groups (under $25,000; $25,000 to $74,999; and $75,000 and above) except American Indian and Alaska Native parents, for whom the difference between rural and non-rural parents is not significant.
- **Parental warmth:** In the ECLS-K, rural parents were significantly more likely to report demonstrating warmth toward their children than were non-rural parents, although reported warmth was high in both groups (74.7% vs. 71.8%) (see Figure 12). The rural advantage in this regard is even greater for low-income parents: 70.0% of rural parents with annual incomes under $25,000 reported demonstrating warmth while 62.3% of non-rural low-income parents do so.
- **Home activities:** In the ECLS-K, rural families in middle- and high-income groups were significantly more likely to engage in frequent home activities together (such as doing art projects, reading, or playing games) than were non-rural families in the same income groups.
- **Parental aggravation:** In the ECLS-K, rural parents were significantly less likely than non-rural parents to indicate that they experienced high levels of aggravation in parenting (9.0% vs. 11.1%) (see Figure 15). This difference is striking for parents with annual incomes under $25,000: 11.7% of low-income rural parents experienced aggravation, while 17.3% of low-income non-rural parents did so.

National Center for Rural Early Childhood Learning Initiatives
Mississippi State University
Child TRENDS

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Rural life in itself does not appear be associated with differences in the social-emotional development of young children or their experiences within the family in some regards:

- **Behavior:** Overall, rural children and non-rural children in the ECLS-K demonstrated no significant differences in rates of externalizing problem behaviors such as arguing or getting angry; internalizing problem behaviors including the presence of low self-esteem or sadness; or in self-control, including children's ability to control their temper and behavior. There were exceptions to the pattern for specific ethnic and geographic subgroups, however: Rural American Indian and Alaska Native children were more likely than non-rural children in the same group (10.8% vs. 4.9%) to often or very often demonstrate internalizing behavior problems. Rural children in the West were more likely to do likewise than non-rural children in the West (9.2% vs. 5.6%).
- **Family routines:** There were no significant differences between rural and non-rural families of kindergarteners in terms of having regular times for breakfast, dinner, and bed or for eating breakfast together – indicators of family life that can support positive communication among family members. Rural families were more likely to eat dinner together as a family than were non-rural families.
- **Religious discussions:** About the same proportions of rural and non-rural families of kindergarteners appeared to engage in religious discussions several times per week (39.6% of rural families and 40% of non-rural families).
- **Spanking:** The proportion of parents who reported that they spanked their children one or more times per week was not significantly different between rural and non-rural respondents in the ECLS-K (29.5% for rural parents vs. 26.5% for non-rural parents).

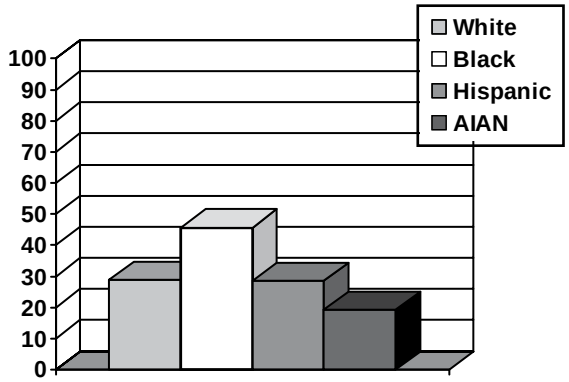

Figure 16. Percentage of Rural Children in ECLS-K Baseline Data Whose Parents Reported Spanking, by Ethnicity.

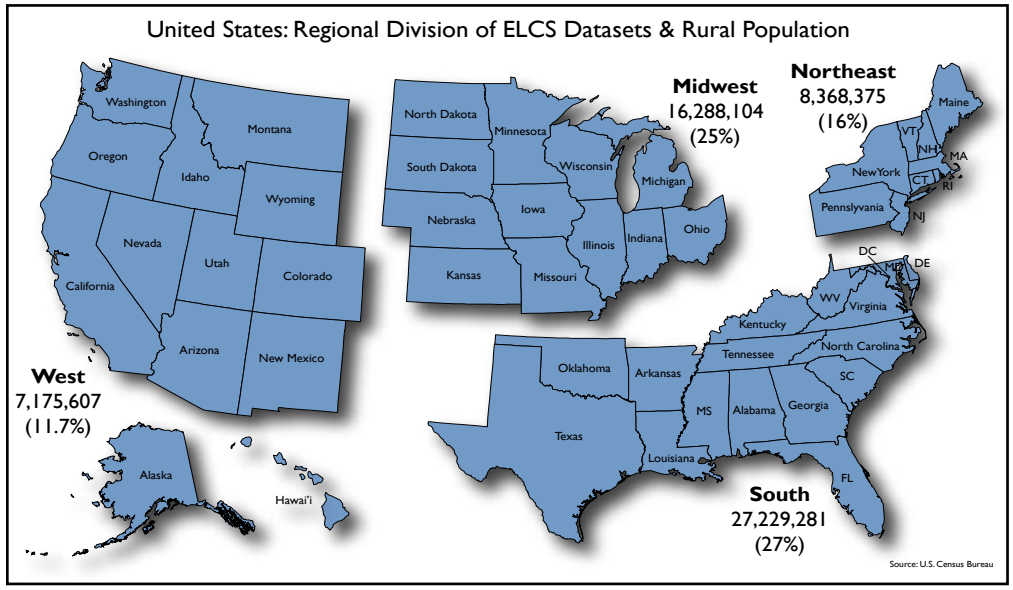

Figure 17. United States: Geographic Regions (Chad Landgraf, Rural Policy Research Institute)

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Mississippi State University
Child Trends

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However, in the ECLS-K, rural White parents were significantly more likely than non-rural White parents to report that they spanked their children once or more often per week (28.0% vs. 22.2%). Rural parents with high incomes also are significantly more likely to use spanking than non-rural parents with high incomes (23.9% vs. 17.8%).

However, for some indicators of parental mental health and participation in care settings where child mental health problems could potentially be identified, rural life appears to be a significant risk factor for young children:

- **Family routines:** Rural White families are significantly less likely than non-rural White families in the ECLS-K to eat breakfast together at least three times per week (66.0% vs. 72.2%).
- **Potential access to mental health services:** Early childhood education and care programs and medical visits are two settings in which problems in development can be identified and intervention suggested. Rural children overall were only two-thirds as likely as non-rural children to have attended a center-based early childhood program in the year before kindergarten (30.4% vs. 45.4%). Rural Black children were significantly less likely than non-rural Black children to have visited a doctor for a well-child check-up in the year before kindergarten entry (92.3% vs. 96.1%).
- **Maternal depression** is an important risk factor for young children. Young children with depressed mothers have higher rates of school difficulty, childhood depression, and adult depression themselves (Child Trends, 2004). According to mothers' own reports of depression in the ECLS-B, rural mothers were more likely to demonstrate symptoms of depression, with the gap primarily attributable to rural vs. non-rural White women (7.3% vs. 4.3%).

National Center for Rural Early Childhood Learning Initiatives
Mississippi State University
Child Trends

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Within rural areas, much higher proportions of black kindergarteners live in single parent families in comparison to other rural children. Rural black kindergarteners are more likely than White and Hispanic kindergarteners within rural areas to live in poverty. Rural black children are also much more likely than non-rural black children to live in poverty. Such demographic differences may contribute to a number of disparities in family functioning and child well-being:

- **Parental aggravation:** In the ECLS-K, Black rural parents are more than twice as likely as White rural parents to report high levels of parental aggravation (16.8% vs. 7.6%). (See Figure 14.)
- **Neighborhood safety:** In the ECLS-K, Black rural parents are significantly less likely to believe their neighborhoods are safe than are White rural parents (66.7% vs. 85.5%).
- **Home activities:** Only half of Black rural families (51.8%) in the ECLS-K reported engaging in frequent home activities such as art projects and reading stories, while two-thirds of White rural families (66.3%) in the same sample did so.
- **Discipline strategies:** Almost half of Black rural parents reported spanking their children once per week or more often, while less than a third of rural White and rural Hispanic parents did so (45.7% vs. 28.0 and 28.5%, respectively). Only 19.2% of rural American Indian and Alaska Native kindergarteners had parents who spanked this often (see Figure 16). The range for parents in all ethnic groups was much wider for rural parents (26.5 points) than for non-rural parents (14.1 points). Comparing Black, White, Hispanic and American Indian and Alaska Native rural parents in the ECLS-K, Black parents were substantially less likely to report that they would only use positive discipline approaches with their children in a hypothetical situation in which the child hit them (43.6% of Black rural parents vs. 72.6% of White rural parents and 75.9% of Hispanic parents) American Indian and Alaska Native rural parents were the most likely to use positive discipline exclusively (85.0%). As noted above, when parents were asked how they would respond if their child hit them, those who responded by indicating they would have the child take a timeout, talk to the child about what he or she did wrong, make the child apologize, take away a privilege, give the child a warning, or make the child do household chores were included as using only positive discipline strategies (see Figure 15). These are wider gaps than for non-rural parents, among whom White, Hispanic, and American Indian and Alaska Native parents all reported using positive discipline exclusively at rates of about 75%, while 51.5% of non-rural Black parents did so.

National Center for Rural Early Childhood Learning Initiatives
Mississippi State University
Child TRENDS

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- **Family routines:** Rural White families are substantially more likely than rural Black families to eat breakfast together at least three times per week (66.0% vs. 41.4%). This gap is narrower for eating dinner together at least three times per week (95.0% of rural White families vs. 87.4% of rural Black families).
- **Television Watching:** Rural Black children were almost three times as likely as rural and non-rural White children to spend three hours or longer per weekday watching television. Rural Black children also were more likely than non-rural Black children to spend three hours or longer per weekday watching television (41.8% vs. 34.5%).

These findings show that overall rural residence in some ways confers advantages on young children and their families in terms of family functioning and mental health (for example, neighborhood safety and children's social competence) while in other ways it involves disadvantages (such as maternal depression). Rural residence may limit access to services where early developmental problems may be identified. Among rural families, groups at particularly high demographic risk also show greater risk in terms of some indicators of family functioning. This information can be used in helping to target and strengthen services for young children and their families in rural areas.

About the Rural Disparities Charts

Rural Early Childhood commissioned Child Trends to compare the baseline data on selected indicators for the rural and non-rural groups in the ECLS-K and ECLS-B Cohorts. The tables that follow display the results of those comparisons, along with breakdowns of major income brackets and ethnic groups, and, for some indicators, additional breakdowns according to regions of the country. (See Figure 17 for a map of geographic regions.) Differences between the rural and non-rural subsamples that were found to be statistically significant are noted. Additional analyses examined differences by ethnicity within the rural subgroup. Where one ethnic group is significantly different than another within the rural group, the difference is indicated below the table. All reported finding are significant at least at the p=.1 level.

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