

PATTERNS AND PREDICTORS
OF SCHOOL READINESS AND
EARLY CHILDHOOD SUCCESS
AMONG YOUNG CHILDREN IN
BLACK IMMIGRANT FAMILIES



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For more on the Young Children in Black Immigrant Families research initiative, please visit: www.migrationpolicy.org/cbi.

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Executive Summary

Policy and academic interest in young children has grown substantially in recent years, prompted in part by advancements in the scientific understanding of early childhood and mounting evidence of the importance of early experiences for later development. Of particular concern is the finding that achievement disparities among different racial, ethnic, and socioeconomic groups emerge before children begin school and often persist long term. Over the past decade, there has been a marked increase in the number of studies focused on the antecedents of early school success that aim to inform policy and practice, and ultimately improve outcomes for children. There has also been an increased focus on children in immigrant families — a sizable and growing share of the US child population — within this body of literature. However, most studies of school readiness among children of immigrants have focused on Hispanic (and, to a lesser extent, Asian) families, leaving a significant gap in knowledge about the early childhood experiences of children in other immigrant groups.

Despite the fact that 12 percent of all Black children living in the United States are first- or second-generation immigrants (from Africa, the Caribbean, Latin America, and other regions), there has been comparatively little research on their health and development, particularly in early childhood. The goal of this report is to help address this gap by providing information about the patterns and predictors of school readiness skills among US-born children in Black immigrant families. Drawing on a unique data set that follows a nationally representative cohort of children from birth to school entry, we describe the early childhood experiences and outcomes of children in Black immigrant families relative to their peers in other immigrant and native groups (defined by race/ethnicity and parents' region of origin).

The data presented here indicate several areas of strength for Black immigrant families that are likely to support positive outcomes for their children, including high rates of marriage, parental education and em-

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ployment, and English proficiency. Good health practices on the part of Black immigrant mothers — such as very low rates of alcohol, tobacco, and drug use during pregnancy and very high rates of breastfeeding — may explain the generally positive health outcomes we observe among their children. The children of Black immigrant parents face less risk of low birth weight than children of Black US-born parents and fewer birth complications than children of Hispanic immigrants. During early childhood, Black immigrant parents also consistently report their children as being in good health, and are more likely to do so than Hispanic immigrant parents.

In addition to investing in health, Black immigrant parents also report strong support of education for young children. They express higher educational expectations for their children than most groups of US-born parents and Hispanic immigrant parents, and are very likely to enroll them in center-based care during their preschool years. Center care use is particularly high among Caribbean immigrant families, who identify preparation for kindergarten as a key reason for selecting this type of child care.

Other studies have shown that young children of immigrants often compare favorably to their peers in native families on measures of classroom behavior. We find evidence of this for children of Black immigrants as well. According to their preschool teachers, children of African immigrant parents display fewer problem behaviors than children in almost any other immigrant or native group. Children of Caribbean immigrants were identified as having more problematic behavior than those of African immigrants, but were still rated on par with children in white native families.



Our descriptive analysis also reveals some potential areas of risk for young children in Black immigrant families. More than half live in low-income families, and while Black immigrants fare better on many economic indicators than Hispanic immigrants or Black native families, they still experience more disadvantage than Asian and European immigrants or white natives. In terms of developmental risks, we find that children of Black immigrants have relatively high rates of child obesity (comparable to Black and Hispanic children of US-born parents), despite other advantages in the health domain.

An examination of intergroup differences in the patterns and predictors of children’s early academic skills reveals that children in Black immigrant families compare favorably to several other groups of children likely to be living in low-income households in the United States. Despite lower cognitive scores at age 2 than many of their peers (especially those of Asian and European descent), by kindergarten, children of Black immigrants are doing relatively well in reading and math. They display stronger early academic skills than Hispanic children of immigrant and native parents, as well as Black children of native parents. Furthermore, much of the academic disadvantage they face vis-à-vis other groups can be largely accounted for by family socioeconomic status. Once socioeconomic variables are controlled, children of Black immigrants actually outperform several other groups in reading skills, including white children in native families. We also find evidence of more proximal contributors — beyond family socioeconomic status — to early academic skills among children of Black immigrants, including supportive parent-child interactions, developmentally stimulating materials and activities in the home, and participation in center-based early care and education programs. At the same time, a significant amount of the variation in children’s reading and math scores in this sample of the second generation remains unexplained by the variables included in this study and warrants further investigation.

One general implication of this work is that strategies to promote positive outcomes among children of Black immigrants should build on existing strengths. For example, if recognized as a resource, children’s language and literacy skills could be used to help support development in other domains. In addition, the fact that so many Black immigrant families participate in early care and education programs (at a much higher rate than has been observed for other immigrant groups) should prompt a closer look at the quality and effectiveness of these settings for children of Black immigrants. Such programs might also serve as a valuable means of engaging with parents. Finally, our findings suggest that efforts to reduce the socioeconomic disadvantages faced by Black immigrant populations may serve as an important investment in children’s educational success.

Strategies to promote positive outcomes among children of Black immigrants should build on existing strengths.

I. Introduction

Over the past decade, there has been a marked increase in the number of studies focused on the antecedents of early school success that aim to inform policy and practice, and ultimately improve outcomes for children. Within this body of literature, children in immigrant families have begun to garner attention because of their sizable and growing share of the US child population. Between 1990 and 2010, the immigrant child population doubled, from 4 million to 8 million, accounting for all of the growth in the US population aged 8 or younger during that period. It is estimated that one out of every four young children



has at least one parent who was born outside of the United States.¹ Significant changes over the past few decades in demographic trends and immigration flows have meant that a majority of these families have origins outside of Europe and Canada, making the broader context of racial and ethnic stratification in the United States a more salient consideration in understanding their experiences.²

Much of the existing work on early development and school readiness among immigrants' children has focused on Hispanic (and to some extent Asian) children, who comprise the largest segments of this population. As a result, information about the experiences of young children of immigrants in other racial/ethnic groups is lacking. Although 12 percent of all Black children living in the United States are first- or second-generation immigrants (from Africa, the Caribbean, Latin America, or other origins), comparatively little research exists regarding their health and development, especially during early childhood.

This report seeks to address this gap by providing information about the patterns and predictors of school readiness and early academic success of children in Black immigrant families. Drawing on a unique data set that follows a nationally representative cohort of children from birth to school entry, we describe the early childhood experiences and outcomes of children in Black immigrant families relative to their peers and test to what extent group differences in emergent academic skills are related to sociodemographic characteristics, the home learning environment, and participation in early education programs. While existing studies have generally compared children of Black immigrants to children of Black US-born parents (as we do here), we also examine how this group fares in comparison to their non-Black peers from both immigrant and nonimmigrant families. In making these comparisons, we are interested in identifying not only areas of relative disadvantage, but areas of relative advantage.

II. Background

It has become increasingly clear that children's educational experiences in the years leading up to school entry — both at home and in out-of-home settings — are linked to their long-term academic trajectories.³ A large body of research has identified warm, responsive interactions with adults; rich language environments; and the availability of developmentally stimulating materials and activities as particularly important for promoting early cognitive development and establishing the foundations for academic success.⁴ Also well established in the literature is the idea that children from different social and economic backgrounds enter school with different odds of success. For example, as much as half of the Black-white gap in high school test scores is believed to exist at kindergarten entry.⁵ Children's differential access to early learning experiences, mainly due to family socioeconomic circumstances, may be a key contributor to such gaps. Indeed, disparities in early academic skills by race, ethnicity, and income have been linked

- 1 Donald J. Hernandez, Nancy Denton, and Suzanne E. Macartney, "Children in Immigrant Families: Looking to America's Future," *Social Policy Report* 23, No. 3 (2008): 3–23; Karina Fortuny, Randolph Capps, Margaret Simms, and Ajay Chaudry, *Children of Immigrants: National and State Characteristics* (Washington, DC: Urban Institute, 2009), www.urban.org/publications/411939.html.
- 2 Karen R. Humes, Nicholas A. Jones, and Roberto R. Ramirez, "Overview of Race and Hispanic Origin: 2010" (2010 Census Briefs C201BR-02, US Census Bureau, Washington, DC, March 2011), www.census.gov/prod/cen2010/briefs/c2010br-02.pdf; Mary Mederios Kent, "Immigration and America's Black Population," *Population Bulletin* 62, No. 4 (2007): 3–16, www.prb.org/pdf07/62.4immigration.pdf.
- 3 Katherine A. Magnuson, Marcia K. Meyers, Christopher J. Ruhm, and Jane Waldfogel, "Inequality in Preschool Education and School Readiness," *American Educational Research Journal* 41 (2004): 115–57; Michaella Sektan, Megan McClelland, Alan Acock, and Fred Morrison, "Relations between Early Family Risk, Children's Behavioral Regulation, and Academic Achievement," *Early Childhood Research Quarterly* 25 (2010): 464–79.
- 4 National Research Council and Institute of Medicine, *From Neurons to Neighborhoods: The Science of Early Childhood Development* (Washington, DC: National Academies Press, 2000).
- 5 Meredith Phillips, James Crouse, and John Ralph, "Does the Black-White Test Score Gap Widen after Children Enter School?" in *The Black-White Test Score Gap*, eds. C. Jencks and M. Phillips (Washington, DC: The Brookings Institution, 1998).



to group differences in the prevalence of home literacy activities and materials,⁶ responsive adult-child interactions,⁷ and participation in early care and education programs.⁸

A. School Readiness and Early School Success among Children of Immigrants

Broadly speaking, children of immigrants are often characterized as a vulnerable population academically because of low average levels of parent education, family income, and exposure to English.⁹ Immigrant families also tend to face unique challenges associated with adjusting to a new society and community, and a potentially unfamiliar education system. Despite these potential areas of risk, the literature also suggests several protective mechanisms that may operate for children in immigrant families. These include positive selection factors associated with migration: individuals who successfully migrate are often healthier and more resourceful or skilled than those who remain in the home country.¹⁰ As a group, immigrant parents tend to have high rates of marriage and employment,¹¹ low rates of maternal depression,¹² and high levels of commitment to educational opportunities for their children.¹³ These characteristics are likely to benefit children's development.

The scientific literature on the transition to school for young children in immigrant families is still emerging. Many school readiness studies examine disparities by family income level, race/ethnicity, and language use; fewer pay attention to parents' nativity and its intersection with other "gaps." At the same time, research on the academic trajectories of immigrant children has focused primarily on middle childhood and adolescence, rather than early childhood. The available evidence for younger children suggests that children of immigrants begin school at an academic disadvantage relative to their peers with US-born parents.¹⁴ Furthermore, such disparities may emerge quite early in life — recent national data indicate that by 24 months of age, children with immigrant parents score significantly lower on standardized assessments of cognitive development than those with US-born parents.¹⁵

- 6 Valerie E. Lee and David T. Burkam, *Inequality at the Starting Gate: Social Background Differences in Achievement as Children Begin School* (Washington, DC: Economic Policy Institute, 2002); Christine Winquist Nord, Jean Lennon, Baiming Liu, and Kathryn Chandler, *Home Literacy Activities and Signs of Children's Emerging Literacy, 1993 and 1999*, NCES 2000-02rev (Washington, DC: National Center for Education Statistics, 1999), <http://nces.ed.gov/pubs2000/2000026.pdf>; Amy Rathbun and Jerry West, *From Kindergarten through Third Grade: Children's Beginning School Experiences*, NCES 2004-007 (Washington, DC: US Government Printing Office, 2004), <http://nces.ed.gov/pubsearch/pubinfo.asp?pubid=2004007>.
- 7 Jeanne Brooks-Gunn and Lisa B. Markman, "The Contribution of Parenting to Ethnic and Racial Gaps in School Readiness," *Future of Children* 15, No. 1 (2005): 139-68.
- 8 Katherine Magnuson and Jane Waldfogel, "Early Childhood Care and Education: Effects on Ethnic and Racial Gaps in School Readiness," *Future of Children* 15, No. 1 (2005): 169-96.
- 9 Lee and Burkam, *Inequality at the Starting Gate*.
- 10 Cynthia Feliciano, "Educational Selectivity in US Immigration: How Do Immigrants Compare to Those Left Behind?" *Demography* 42, no. 1 (2005): 131-52.
- 11 Donald J. Hernandez, "Demographic Change and the Life Circumstances of Immigrants," *Future of Children* 14, no. 2 (2004): 16-47; Jane Reardon-Anderson, Randolph Capps, and Michael E. Fix, "The Health and Well-Being of Children in Immigrant Families" (New Federalism: National Survey of America's Families Policy Brief B-52, Urban Institute, Washington, DC, November 2002), www.urban.org/publications/310584.html.
- 12 Rashmita S. Mistry, Jeremy C. Biesanz, Nina Chien, Carolee Howes, and April D. Benner, "Socioeconomic Status, Parental Investments, and the Cognitive and Behavioral Outcomes of Low-Income Children from Immigrant and Native Households," *Early Childhood Research Quarterly* 23 (2008): 193-212.
- 13 Tama Leventhal, Yange Xue, and Jeanne Brooks-Gunn, "Immigrant Differences in School-Age Children's Verbal Trajectories: A Look at Four Racial/Ethnic Groups," *Child Development* 77, No. 5 (2006): 1359-74; India Ornelas, Krista Perreira, Linda Beeber, and Lauren Maxwell, "Challenges and Strategies to Maintaining Emotional Health: Qualitative Perspectives of Mexican Immigrant Mothers," *Journal of Family Issues*, 30 (2009): 1556-75.
- 14 Robert Crosnoe, "Health and the Education of Children from Race/Ethnic Minority and Immigrant Families," *Journal of Health and Social Behavior* 47, No. 1 (2006): 77-93; Wen Jui Han, "The Academic Trajectories of Children of Immigrants and Their School Environments," *Developmental Psychology* 44, No. 6 (2008): 1572-90; Katherine Magnuson, Claudia Lahaie, and Jane Waldfogel, "Preschool and School Readiness of Children of Immigrants," *Social Science Quarterly* 87 (2006): 1241-62.
- 15 Bruce Fuller, Margaret Bridges, Edward Bein, Heeju Jang, Sunyoung Jung, Sophia Rabe-Hesketh, Neal Halfon, and Alice Kuo, "The Health and Cognitive Growth of Latino Toddlers: At Risk or Immigrant Paradox?" *Maternal and Child Health* 13 (2009): 755-68.



Yet, broad comparisons of children in immigrant and native families often obscure the significant heterogeneity that exists within these populations.¹⁶ Educational outcomes for immigrants have been shown to vary by generation, immigration status, country and region of origin, age at arrival, time in the United States, language, skin color, religion, and even gender. Moreover, much of this research has focused on Latino and Asian children as the two largest segments of the immigrant population, leaving many unanswered questions about other immigrant groups.¹⁷

B. The Early Developmental Experiences and Outcomes of Black Children of Immigrants

Studies providing information about the early childhood experiences of children in Black immigrant families are rare. Relatively more data are available regarding the educational progress of older children and adolescents, who are much more likely than younger children to be first generation (i.e., foreign born) rather than second generation (i.e., US born with foreign-born parents). This generational difference has important implications for comparing results across studies of different age groups, as discussed in more detail below.

The work on older children's academic performance suggests an immigrant advantage (at times referred to as the "immigrant paradox"), such that immigrant youth have better-than-expected outcomes given their family's socioeconomic status. Put another way, immigrant youth in middle and high school have been found to outperform native youth from similar socioeconomic backgrounds on standardized academic achievement tests.¹⁸ This advantage appears to pertain to Black immigrant youth as well, who score higher on achievement measures, and are more likely to finish high school and pursue postsecondary education than Black children in native families.¹⁹ Comparisons in this literature across different immigrant populations indicate that children of Black immigrants academically surpass some groups (e.g., children of Hispanic immigrants) while lagging behind others (e.g., white and Asian immigrants), a pattern that aligns closely, but not entirely, with intergroup differences in socioeconomic status.²⁰ For example, Black immigrant families experience lower poverty rates than (non-Black) Hispanic immigrants, but higher rates than white and Asian immigrant families.²¹

At the same time, existing studies of early academic skills among young children of immigrants (the vast majority of whom are US born), do not suggest as clear an advantage. A recent study of low-income 4-year-olds found that children of immigrants score lower on measures of school readiness than their co-ethnic peers in nonimmigrant families.²² More specifically, the Black children of immigrant parents in this sample displayed weaker cognitive and language skills than Black children of native parents, even when controlling for child and family characteristics. In another large study, children of immigrants scored higher on an assessment of kindergarten math than their co-ethnic peers in native families, but this advantage was evident only after socioeconomic and home language characteristics were taken into

16 Donald J. Hernandez, Nancy Denton, and Suzanne E. Macartney, "Children in Immigrant Families: Looking to America's Future," *Social Policy Report* 23, No. 3 (2008): 3–23.

17 Susan K. Brown and Frank D. Bean, "Assimilation Models, Old and New: Explaining a Long-Term Process," *Migration Information Source* special issue on the second generation, October 2006, www.migrationinformation.org/USfocus/display.cfm?ID=442; Robert Crosnoe and Ruth López Turley, "K-12 Educational Outcomes of Immigrant Youth," *Future of Children* 21 (2011): 129–52; Magnuson, Lahaie, and Waldfogel, "Preschool and School Readiness of Children of Immigrants."

18 See review by Crosnoe and Turley, "K-12 Educational Outcomes of Immigrant Youth," 129–52; Natalia Palacios, Katarina Guttmanova, and Lindsay P. Chase-Lansdale, "Early Reading Achievement of Children in Immigrant Families: Is There an Immigrant Paradox?" *Developmental Psychology* 44 (2008): 1381–95.

19 Kevin Thomas, "Poverty among Young Children in Black Immigrant, US-Born Black, and Non-Black Immigrant Families: The Role of Familial Contexts" (Discussion Paper Series DP 2010-02, University of Kentucky Center for Poverty Research, 2010).

20 Crosnoe, "Health and the Education of Children from Race/Ethnic Minority and Immigrant Families." Andrew J. Fuligni, "The Academic Achievement of Adolescents from Immigrant Families: The Roles of Family Background, Attitudes, and Behavior," *Child Development* 68 (1997): 351–63.

21 Thomas, "Poverty among Young Children in Black Immigrant, US-Born Black, and Non-Black Immigrant Families."

22 Jessica De Feyter and Adam Winsler, "The Early Developmental Competencies and School Readiness of Low-Income, Immigrant Children: Influences of Generation, Race/Ethnicity, and National Origins," *Early Childhood Research Quarterly* 24 (2009): 411–31.



account.²³ Moreover, this advantage did not exist for children of Caribbean immigrants, who were one of the lowest-scoring groups along with children in Black native and American Indian families.

Taken together, this set of findings provides tentative evidence that children of Black immigrants enter school at an academic disadvantage compared to many of their peers in non-Black immigrant and native families; however, it appears they may make significant gains during the elementary years, as they outperform their native peers in middle and high school. As we note above, though, studies of secondary education tend to focus on first-generation immigrant youth, whereas studies of school readiness focus primarily on second-generation immigrant children (given that more than 90 percent of this age group was born in the United States). It is therefore unclear whether the more positive outcomes observed for later versus early schooling among children of Black immigrants reflect an upward academic trajectory, changes in relative status compared to other children (e.g., children of Black natives), or differences associated with generational status.

This set of findings provides tentative evidence that children of Black immigrants enter school at an academic disadvantage compared to many of their peers.

An important backdrop for understanding the experiences of immigrant children and families is the existing racial and ethnic stratification of the United States. Black immigrants may share similar experiences of prejudice and discrimination with US-born Blacks, which may undercut some of the advantages described above. Indeed, evidence suggests that discrimination may operate in educational settings for young children. In their study of elementary school outcomes, Robert Crosnoe and Ruth Turley observe that compared to other immigrant groups Black immigrant children, “did not demonstrate this pattern of immigrant advantages in teacher-rated socio-emotional school readiness, suggesting that the well-documented tendency for teachers to view black children’s behavior in school as problematic may trump the more positive views they tend to have of immigrant children.”²⁴

In general, higher levels of parental education and employment are associated with better developmental outcomes for children; however, recent evidence suggests that these resources may have less “payoff” for children in Black immigrant families compared to other groups.²⁵ Their lower incomes may be due in part to the limited employment options for educated Black immigrants who often work in low-wage, unskilled jobs — a phenomenon referred to as “brain waste.”²⁶ The extent to which children benefit from higher levels of parent education when it does not translate into better employment conditions and economic resources remains an open question. Higher levels of human capital presumably lead to upward mobility over time, but the fact that Black immigrant families are likely to be disadvantaged during their initial years in the United States, when they are also likely to have young children, is worrying.

23 Jennifer Glick and Bryndl Hohmann-Marriott, “Academic Performance of Young Children in Immigrant Families: The Significance of Race, Ethnicity, and National Origin,” *International Migration Review* 41, No. 2 (2007): 371–402.

24 Crosnoe and Turley, “K-12 Educational Outcomes of Immigrant Youth,” 140.

25 Thomas, “Poverty among Young Children in Black Immigrant, US-Born Black, and Non-Black Immigrant Families.”

26 Jeanne Batalova and Michael Fix, *Uneven Progress: The Employment Pathways of Skilled Immigrants in the United States* (Washington, DC: Migration Policy Institute, 2008), www.migrationpolicy.org/pubs/BrainWasteOct08.pdf.



III. Using National Longitudinal Data to Examine the Early Development of Children in Black Immigrant Families

The goal of this report is to contribute to the limited literature that exists about the early development of children in Black immigrant families. We use rich longitudinal data from a recent national study of early childhood to provide new information about the patterns and predictors of early academic skills for this understudied, yet demographically significant, group. In the broader literature on school readiness, gaps between native and immigrant children have been linked to group differences in family socioeconomic status, home learning environments, parental practices, and enrollment in early childhood education programs; however, little is known about the role these factors play for children in Black immigrant families.²⁷ Moreover, studies have tended to aggregate children of African, Caribbean, and Latin American descent, despite differences among these regional populations that may have important implications for children.²⁸

The data available for this study not only allow us to explore some of the mechanisms underlying disparities at the intersection of race/ethnicity and nativity, but can also help identify particular areas of strength for Black immigrant families. A better understanding of both the needs and competencies of this growing population can inform policy and practice.

Our specific aims are as follows:

- To describe the early childhood (birth to school entry) outcomes and experiences of second-generation (i.e., US-born) children in Black immigrant families in comparison to their peers in native and non-Black immigrant families
- To test whether a variety of demographic and family process variables (including early learning environments in the home and in early education programs) account for any observed differences in early academic skills between children of Black immigrants and children of other racial/ethnic backgrounds
- To examine which factors are most predictive of early school success among young children of Black immigrants, considering potential differences between children of African and Caribbean descent

By including children from multiple racial and ethnic backgrounds, we extend previous work, which has tended to focus on comparisons between Black children in immigrant and nonimmigrant families. In addition, with the available data we are able to disaggregate immigrant families based on parents' region of origin; we are particularly interested in distinctions between children of African and Caribbean heritage.

Our primary focus in this report is children's early reading and math skills (at age 4 and in kindergarten) as indicators of their academic functioning during the transition to school. However, we also examine several aspects of children's health and behavior given evidence that intellectual, social, emotional, and physical domains of development are interrelated, especially during the early years of life.²⁹

27 Crosnoe and Turley, "K-12 Educational Outcomes of Immigrant Youth," 129–52; Jennifer E. Glick, Littisha Bates, and Scott T. Yabiku, "Mother's Age at Arrival in the United States and Early Cognitive Development," *Early Childhood Research Quarterly* 24 (2009): 367–80; Kevin J.A. Thomas, "Parental Characteristics and the Schooling Progress of the Children of Immigrant and US-Born Blacks," *Demography* 46 (2009): 513–34, www.ncbi.nlm.nih.gov/pmc/articles/PMC2831345/.

28 Thomas, "Poverty among Young Children in Black Immigrant, US-Born Black, and Non-Black Immigrant Families."

29 Anne Case, Darren Lubotsky, and Christina Paxson, "Economic Status and Health in Childhood: The Origins of the Gradient," *American Economic Review* 92, No. 5 (2002): 1308–34; Daniel P. Keating and Sharon Z. Simonton, "Health Effects of Human Development Policies," in *Making Americans Healthier: Social and Economic Policy as Health Policy*, eds. James House, Robert Schoeni, Harold Pollack, and George Kaplan (New York: Russell Sage, 2008), 61–94.



IV. Data, Sample, and Measures

A. The Early Childhood Longitudinal Study, Birth Cohort

With the arrival of the new millennium, the US Department of Education launched a new research initiative designed to assess “the way America raises, nurtures, and prepares its children for school.”³⁰ The Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) follows a nationally representative cohort of children from birth until school entry, collecting extensive information about their health, development, and experiences across multiple contexts. Drawn from birth certificates using a clustered, list frame sampling design, the ECLS-B includes nearly 10,700 children within 9,850 families and is representative of the nearly 4 million children born in the United States in 2001.³¹ Four major data collections — involving home visits, parent interviews, child assessments, child-care observations, and teacher surveys — were conducted when children were approximately 9 months, 2 years, 4 years, and 5 to 6 years of age (entering kindergarten).

The strengths of the ECLS-B for addressing this study’s guiding questions include in-depth measures of the ecology of early childhood; established, developmentally informed measures of child functioning; substantial samples of children in immigrant families from several racial/ethnic groups; and extensive information about family characteristics such as country of origin, age at arrival, time in the United States, and various aspects of language use. Importantly, accommodations were made to include families whose primary language is not English.

B. Analysis Sample

The information presented in this study is based on the nearly 10,000 children in the ECLS-B with valid information about parents’ nativity status, country of origin, and child outcome data at the 9-month (n=9100), 2-year (n=8900), 4-year (n=7600), and kindergarten wave (n=6450).³² Following standard conventions, we define children of immigrants as those with at least one parent born outside of the United States or its territories. Mirroring other national estimates, the ECLS-B data indicate that 24 percent of children born in the United States in 2001 have at least one foreign-born parent.³³

Immigrant parents in the ECLS-B sample come from more than 100 countries. For analysis purposes, we categorize children of immigrants into eight groups based on parents’ region of origin: Africa, the Caribbean, Latin America, East Asia, India/South Asia, Southeast Asia, the Middle East, and Europe (see Table 1). Given our focus on children of Black immigrants, we limit our African and Caribbean samples to families in which the parent identifies the child’s race as Black (singularly or in combination with another racial category).³⁴ For children of natives (i.e., those with two US-born parents), we rely on broad racial/ethnic categories to create six comparison groups: non-Hispanic Black, non-Hispanic white, Hispanic, Asian/Pacific Islander, American Indian/Native Alaskan, and multiracial/other. Because the last three groups have small samples and are not the central focus of this analysis, we display results only for Black, white, and Hispanic children of natives.

30 Kristen Flanagan and Jerry West, *Children Born in 2001: First Results from the Base Year of the Early Childhood Longitudinal Study, Birth Cohort*, NCES 2005–036 (Washington, DC: US Department of Education, National Center for Education Statistics, 2004), 1, <http://nces.ed.gov/pubs2005/children/>.

31 Excluded from the study were children born to young mothers (under 15 years), and those who died or were adopted prior to the nine-month survey.

32 All unweighted sample sizes are rounded to the nearest 50 to comply with National Center for Education Statistics (NCES) regulations regarding restricted-use data.

33 Hernandez, Denton, and Macartney, “Children in Immigrant Families.”

34 Two groups (approximately 50 cases) were excluded from the analysis because of small sample sizes and questions about sensible groupings. First, 12 percent of parents from Africa (e.g., of European heritage in South Africa) and the Caribbean (e.g., of Indian heritage in Guyana) did not identify as Black and were therefore excluded from our Black African and Caribbean samples. Second, 10 percent of Black immigrant parents were born in a country outside of Africa or the Caribbean; with only 1 or 2 individuals from any one country, it was difficult to categorize these families in a meaningful way.

**Table 1. Race/Ethnicity and Parental Birthplace for Children Born in the United States in 2001**

Race/Ethnic Groups Based on Parents' Region of Origin	Countries Represented	Share of All Children
African immigrant	Algeria, Burkina, Cape Verde, Chad, Egypt, Ethiopia, Ghana*, Kenya, Liberia, Morocco, Nigeria*, Rwanda, Senegal, Somalia*, Sudan, Toga, Uganda, Zaire, Zambia	0.8%
Caribbean immigrant	Antigua, Bahamas, Cuba*, Dominican Republic*, Guyana, Haiti*, Jamaica*, Santo Domingo, Trinidad & Tobago, West Indies	1.9%
Hispanic immigrant	Argentina, Bolivia, Brazil, Chile, Columbia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico*, Nicaragua, Panama, Peru, Venezuela, Uruguay	14.3%
East Asian immigrant	China*, Hong Kong, Korea*, Japan, Taiwan*	1.1%
Indian Asian immigrant	India*, Bangladesh, Nepal, Pakistan*, Sri Lanka	0.8%
Southeast Asian immigrant	Burma, Cambodia, Indonesia, Laos, Malaysia, Marshall Islands, Micronesia, New Guinea, Pacific Islands, Philippines*, Singapore, Solomon Islands, Thailand, Vietnam*	1.3%
Middle Eastern immigrant	Afghanistan, Armenia, Iraq, Iran, Israel*, Jordan, Kuwait, Lebanon, Saudi Arabia, Syria, Yemen	0.8%
European immigrant	Australia, Belgium, Canada*, Czech Republic, Denmark, Finland, France, Germany*, Hungary, Ireland, Italy, Lithuania, the Netherlands, New Zealand, Poland, Portugal, Romania, Russia, Serbia, Spain, Switzerland, Ukraine, Uzbekistan, Yugoslavia	2.3%
Black native		11.9%
White native		50.1%
Hispanic native		10.0%
Asian/Pacific Islander native		0.3%
American Indian/Native Alaskan		0.5%
Multiracial native		3.4%

Notes: n = 10,600; all unweighted sample sizes are rounded to nearest 50 per NCES restricted-use data regulations. Countries denoted with an "*" account for at least 10 percent of the respondents in that region of origin category.

Source: Author calculations using the Early Childhood Longitudinal Study-Birth Cohort, 9-month—Kindergarten 2007 Restricted Use Data File, National Center for Education Statistics (NCES), US Department of Education.

C. Measures

1. Sociodemographic Variables

As mentioned, the ECLS-B collected extensive information about multiple aspects of young children's lives. We begin our analysis by describing the circumstances of Black immigrant families with young US-born children relative to other families with young children in terms of family structure, parents' educational attainment and employment status, and multiple indicators of household economic conditions (e.g., poverty rates, the ratio of household income to the poverty level, home and car ownership, and the experience of food insecurity). For all of the immigrant groups, we also present information about parents' age at arrival in the United States, citizenship status, and English use and fluency.

2. Child Outcome Variables

Our second set of analyses describes how children of Black immigrants fare relative to other children on several key indicators of health and development, including the following:

- **Mothers' prenatal/perinatal health practices.** As important predictors of children's health and development, we include indicators of whether mothers received prenatal care in their first



trimester; whether mothers smoked cigarettes, drank alcohol, or used drugs during pregnancy; and whether infants were breastfed.

- **Birth outcomes.** Health records and parent reports provided information about whether their child had low birth weight (<2,500 grams), was part of a multiple birth, required an extended stay in the hospital post-birth, or was born with a disability or chronic health issue.
- **General child health.** At each time point, parents rated their child’s overall health on a scale from 1 (“poor”) to 5 (“excellent”). Research suggests that parent ratings of child health status are a reliable predictor of health outcomes and needs.
- **Child weight status.** During the 4-year and kindergarten home visit, children’s height and weight were assessed and used to calculate their Body Mass Index (BMI). Growth charts (by age and gender) were used to identify children with a BMI above the 85th (i.e., overweight) and 95th (i.e., obese) percentile.
- **Early cognitive development.** During the 9-month and 2-year home visits, trained research staff conducted a standardized assessment of children’s early mental skills. Children were observed in play and given a series of age-appropriate tasks. Assessors rated children on their level of exploration, problem-solving skills (e.g., finding a hidden toy), verbalizations and language comprehension, and early matching and counting skills.
- **Early academic skills.** At age 4 and in kindergarten, children were tested on their early reading and math abilities. Trained research staff conducted assessments during the home visit. We used percentile scores (1–100) on these tests to indicate how children compared to their same-age peers on school readiness skills.
- **Social behavior in the classroom.** Although our primary focus is on children’s academic skills, we include information about children’s behavior in classroom settings, as this can be an important predictor of successful transitions to school. At age 4, teachers rated how often children exhibited positive behaviors (e.g., cooperating with other children) and negative behaviors (e.g., aggression). Values on these two scales ranged from 1 (“never”) to 5 (“very often”).

3. Mediating Variables

In our third set of analyses, we investigate the extent to which intergroup differences in child outcomes can be explained not only by sociodemographic factors but also by children’s experiences of warm and supportive parenting, access to developmentally stimulating materials (e.g., books, puzzles) and activities (e.g., reading, singing, visiting a museum), and their parents’ beliefs and expectations regarding education. In addition, we consider the role of different care and education settings that serve young children. Children’s primary care arrangements at age 4 are categorized into parental care only, home-based child care (by someone other than a parent), and center-based child care. We also calculate rates of participation in Head Start, a center-based program designed specifically to promote children’s development for which many immigrant families are eligible. (Additional details about the study data and variables are available in the Appendix).

V. Results

A. Demographic Snapshot of Black Immigrant Families with Young US-Born Children

Our first set of findings provides a descriptive snapshot of the life circumstances of young children in Black immigrant families relative to children in other major native and immigrant groups identified in the



ECLS-B data (see Table 2).³⁵ Throughout, we note dimensions on which children in African versus Caribbean immigrant families differ significantly; however, in the absence of statistically significant differences, we describe Black children of immigrants as one group.

Table 2. Parent and Family Characteristics (First Year of Life) of Children Born in the United States in 2001, by Nativity, Race/Ethnicity, and Region

	Children of Black Immigrants		Children of Other Immigrants						Children of US-Born Parents		
	African	Caribbean	Hispanic	East Asian	Indian Asian	Southeast Asian	Middle Eastern	European	Non-Hispanic Black	Non-Hispanic White	Hispanic
Primary caregiver's marital status (%)											
Married	86%	61% ^a	62% ^c	97% ^d	98% ^d	83% ^d	100% ^b	93% ^d	24% ^b	79%	49% ^c
Cohabiting	2%	18% ^a	28% ^b	1% ^d	1% ^d	9% ^b	0% ^d	6% ^d	14% ^c	10% ^c	21% ^c
Single	12%	21%	10%	2% ^b	1% ^b	8% ^b	0% ^b	1% ^b	61% ^b	10%	30%
Highest level of parent education:											
Less than a high school degree	9%	11%	32% ^b	3%	3% ^b	10%	5%	0% ^b	23% ^b	6%	19%
High school degree/equivalent	20%	34% ^a	35%	6% ^d	3% ^d	21%	10%	10%	36% ^c	20%	33%
Post-secondary education	70%	55%	33% ^b	91% ^b	94% ^b	69%	85% ^b	90% ^b	40% ^b	74%	48%
Mother employed at 9-month survey	55%	67%	48% ^b	47% ^b	34% ^b	58%	26% ^b	66%	74%	60%	65%
Employed spouse/partner	72%	69%	84% ^b	95% ^b	98% ^b	84% ^b	97% ^b	97% ^b	35% ^b	86% ^b	66%
Parent occupational prestige (Scale from 0 to 100)	45	40	37 ^b	50 ^b	52 ^b	43	45	47 ^b	40	44	40
Household income											
Ratio of income to federal poverty level	2.16	2.40	1.38 ^b	4.58 ^b	4.49 ^b	2.55	3.63	4.06 ^b	1.35 ^b	3.34 ^b	1.97
Income below the poverty level	26%	22%	42% ^b	6% ^b	9% ^b	19%	16%	5% ^b	50% ^b	13%	31%
Income below twice the poverty level	64%	56%	82% ^b	24% ^b	26% ^b	51%	36%	25% ^b	78% ^b	37% ^b	63%
Household is food insecure	7%	18% ^a	19% ^c	5% ^d	5% ^d	10%	7%	8%	18% ^c	8%	12%
Family owns home	28%	35%	28%	57% ^b	50%	45%	52%	66% ^b	23%	65% ^b	28%
Family owns car	90%	86%	82%	97% ^b	92%	93%	95%	92%	68% ^b	96% ^b	86%

Notes: ^a indicates significant difference between children of Black African and children of Black Caribbean parents at $p < 0.1$ or better. ^b indicates significant difference between other groups of children versus children of Black Immigrants overall at $p < 0.1$ or better. ^c indicates significant difference between other groups of children and children of Black African immigrants only, at $p < 0.1$ or better. ^d Indicates significant difference between other groups of children versus children of Black Caribbean immigrants only, at $p < 0.1$ or better.

Source: Author calculations using the Early Childhood Longitudinal Study-Birth Cohort, 9-month—Kindergarten 2007 Restricted Use Data File, NCES.

35 All analyses presented here incorporate NCES-computed sample weights to adjust for disproportionate sampling, survey nonresponse, and noncoverage of the target population; for additional details, see Christine Nord, Brad Edwards, Carol Andreassen, James L. Green, Kathleen Wallner-Allen, *Early Childhood Longitudinal Study, Birth Cohort, (ECLS-B), User's Manual for the ECLS-B Longitudinal 9-Month–2-Year Data File and Electronic Codebook*, NCES 2006-046 (Washington, DC: US Department of Education, National Center for Education Statistics, 2006). Reported standard errors account for the complex survey design of the ECLS-B.



1. Family Structure

Consistent with other data sources, we find that Black immigrant parents in the ECLS-B have relatively high marriage rates, although this is one area of particular difference between parents of African and Caribbean origin. At 86 percent, children of African immigrant parents are significantly more likely to have married parents than all children of natives, as well as children of Hispanic immigrants. Caribbean and Hispanic immigrants are the immigrant parents least likely to be married, but they are more likely to be married than Black native-born parents.

2. Parental Education, Employment, and Income

Turning to indicators of human capital and financial resources, we find that Black immigrant families generally rank in the middle, relative to the other immigrant and native groups included in this study. While they tend to be more advantaged than Hispanic and South East Asian immigrant families and several native groups (most notably Black natives), they are consistently less advantaged than native and immigrant parents of either Asian or European descent.

Roughly two-thirds of children in Black immigrant families have at least one parent with more than a high school education, a significantly higher share than children in Hispanic immigrant and Black native families, but lower than those in Asian, Middle Eastern, and European immigrant families. Notably, Black immigrant parents have education levels that are on par with those of white native parents.

In terms of attachment to the labor force, we, like other researchers, find that immigrant parents in general are very likely to be employed. Interestingly, mothers in Black immigrant families are more likely to be employed within their infant's first year than mothers in several other immigrant groups (including Hispanic, Indian Asian, Middle Eastern, and European). While extensive employment on the part of Black immigrant mothers may mean additional resources for their families, its impact on parent and child well-being will depend on families' options for infant care and their ability to meet their preferences for balancing work and the transition to parenthood. We also note that Black immigrant households are less likely than other immigrant households to include an employed spouse or partner. Given the high marriage rates already noted for this group, this statistic may indicate that Black immigrant fathers are more likely than fathers in other immigrant groups to be unemployed. For example, 86 percent of African immigrant parents report being married, but only 72 percent of mothers indicate that they have a spouse (or partner) who is employed. Nonetheless, Black immigrant households are still nearly twice as likely as Black native households to include an employed spouse or partner.

Group differences in occupational prestige generally follow differences in parent education. On average, Black immigrant parents tend to work in less prestigious jobs than parents from East Asia, India, and Europe but in more prestigious jobs than Hispanic immigrant parents. On average, Black immigrant parents' occupations are of a similar prestige level as native-born parents (regardless of race/ethnicity).

When it comes to financial resources and economic hardship, Black immigrant families again rank somewhere in the middle of the distribution. With income levels slightly above twice the federal poverty threshold (which is based on income adjusted for family size), Black immigrant families are more advantaged than Hispanic immigrant and Black native families, but they are not as advantaged as East Asian, Indian Asian, and European immigrants. They also have less household income (and are less likely to own a home or a car) than white native families, despite similar levels of parent education and occupational prestige. The relatively low incomes of Black immigrant families may reflect lower employment rates among Black immigrant versus white native fathers, but are also likely to be due to lower wages for Black immigrant parents.

Although African and Caribbean immigrant families appear to have similar levels of resources (at least as measured here), we find that Caribbean parents are more than twice as likely (18 percent versus 7 percent) to report experiencing household food insecurity during their child's first year. The reason for this difference is unclear from the data examined here and requires further investigation; potential factors include differences in dietary practices and food costs in settlement communities. The risk faced by Caribbean immigrant families in lacking consistent access to adequate amounts of food is similar to that experienced by Hispanic immigrant and Black native families, but higher than for most of the other groups examined in this analysis.



3. Citizenship and Language Use

In comparison to other immigrant groups, Black immigrant families have some advantages regarding citizenship status and English language proficiency (see Table 3). Approximately 40 percent of children in Black immigrant families have at least one parent who is a US citizen (either because of naturalization or the presence of a US-born parent), much higher than the rate for children in Hispanic immigrant families (25 percent). Black immigrant families are also more likely than Hispanic, East Asian, and Indian Asian immigrant families to report English as their primary language. Moreover, among those who do not consider English their primary language, a majority (two-thirds) rate themselves as fluent in reading, writing, and speaking English. Similar rates of parental English fluency were found for the other immigrant groups, with the exception of Hispanic immigrant families, who reported lower levels of English fluency. Roughly 20 percent of Black immigrant families are multilingual, speaking their heritage language at home but having strong abilities in English as well.

African and Caribbean parents tend to differ on the length of time they have spent in the United States. African parents tend to arrive at older ages and have spent less time in the country than most other immigrant groups. In 2002–03 when these data were collected, 42 percent of African immigrant parents had been in the United States five years or less; the average age of immigration for this group is 24 years. In contrast, Caribbean immigrant parents have been in the United States much longer on average: 28 percent came as a child younger than age 10.

Table 3. Parent and Family Characteristics for Children Born in the United States to Immigrant Parents in 2001, by Race/Ethnicity and Region

	Children of Black Immigrants		Children of Other Immigrants					
	African	Caribbean	Hispanic	East Asian	Indian Asian	Southeast Asian	Middle Eastern	European
At least one US citizen parent	42%	47%	24% ^a	53%	38%	57%	63%	46%
Mother/primary caregiver migration characteristics*								
Age at US arrival	24	17 ^a	18 ^c	20 ^c	22 ^d	18 ^c	20	18 ^c
Immigrated as child (less than 10 years old)	7%	28% ^a	17%	21% ^c	10%	22%	21%	30% ^c
Residing in US for less than 6 years	42%	22% ^a	32%	25%	53% ^d	23%	31%	25%
Residing in US for 6 to 10 years	7%	24% ^a	19% ^c	17%	15%	18% ^c	15%	11%
Residing in US for more than 10 years	51%	54%	49%	59%	31% ^d	59%	54%	65%
Primary household language is English	45%	53%	17% ^b	34% ^b	15% ^b	43%	42%	72% ^b
Mother/primary caregiver is fluent in English*	62%	72%	39% ^b	57%	60%	63%	56%	81%

Notes: ^a indicates significant difference between children of Black African and children of Black Caribbean parents at $p < 0.1$ or better. ^b indicates significant difference between other groups of children versus children of Black Immigrants overall at $p < 0.1$ or better. ^c indicates significant difference between other groups of children and children of Black African immigrants only, at $p < 0.1$ or better. ^d indicates significant difference between other groups of children versus children of Black Caribbean immigrants only, at $p < 0.1$ or better.

Source: Author calculations using the Early Childhood Longitudinal Study-Birth Cohort, 9-month—Kindergarten 2007 Restricted Use Data File, NCES.



B. The Health and Developmental Status of Young Children in Black Immigrant Families

I. Infant and Child Health

Parental and child health indicators suggest several advantages for children of Black immigrants (see Table 4). Black immigrant mothers are much less likely to smoke or use alcohol or drugs during pregnancy. They are also more likely to breastfeed their infants than US-born mothers across various racial/ethnic groups. African mothers report especially high rates of breastfeeding. Children of Black immigrants are less likely than children of Black US-born parents to be born with low birth weights and are less likely than multiracial native children to be born with a congenital anomaly or chronic health condition.

Table 4. Indicators of Health and Development (Birth to Kindergarten) for Children Born in the United States in 2001, by Nativity, Race/Ethnicity, and Region

	Children of Black Immigrants		Children of Other Immigrants						Children of US-Born Parents		
	African	Caribbean	Hispanic	East Asian	Indian Asian	Southeast Asian	Middle Eastern	European	Non-Hispanic Black	Non-Hispanic White	Hispanic
Prenatal/perinatal health											
Mother received prenatal care in first trimester of pregnancy	84%	87%	88%	93%	91%	89%	92%	95%	85%	93%	87%
Mother used alcohol or drugs in last trimester of pregnancy	4%	4%	2%	4%	2%	2%	0%	18% ^b	10% ^b	18% ^b	13% ^b
Moderate or very low birthweight	7%	8%	6%	6%	9%	9%	5%	5%	13% ^b	6%	8%
Child had extended stay in hospital post-birth	4%	15% ^a	13% ^c	12%	14% ^c	10%	6%	11%	16% ^c	12%	12%
Born with chronic health condition	2%	3%	5%	5%	7%	4%	15%	5%	7%	7%	7%
Child ever breastfed	93%	80% ^a	81% ^c	87%	90%	72% ^c	92%	88%	44% ^c	69% ^c	66% ^c
General child health status (1=poor; 5=excellent)											
At 9 months of age	4.7	4.5 ^a	4.3 ^c	4.6	4.3 ^c	4.4	4.5	4.6	4.4 ^c	4.6 ^c	4.5 ^c
At 2 years of age	4.5	4.4	4.2 ^b	4.5	4.3	4.3	4.3	4.5	4.4	4.6	4.5
At 4 years of age	4.4	4.2	4.1	4.4	4.1	4.2	4.3	4.6 ^b	4.3	4.5	4.3
During the kindergarten year	4.3	4.3	4.1 ^b	4.2	4.2	4.1	4.3	4.6 ^b	4.3	4.5	4.4
Child weight status											
Overweight at age 4	36%	39%	46% ^b	26%	22% ^b	35%	30%	35%	38%	33%	36%
Obese at age 4	20%	18%	28% ^b	15%	15%	17%	18%	15%	21%	16%	18%
Overweight in kindergarten	42%	38%	46% ^b	26%	23%	28%	47%	31%	42%	30%	37%
Obese in kindergarten	20%	17%	28% ^b	12%	9%	12%	25%	5% ^b	21%	13%	20%



	Children of Black Immigrants		Children of Other Immigrants						Children of US-Born Parents		
	African	Caribbean	Hispanic	East Asian	Indian Asian	Southeast Asian	Middle Eastern	European	Non-Hispanic Black	Non-Hispanic White	Hispanic
Cognitive and academic skills (percentile scores)											
Mental skills at 9 months	52	49	48	46	49	44	44	50	49	52	52
Mental skills at 2 years	35	40	35	57 ^b	48	41	41	61 ^b	43	58 ^b	45
Early reading skills at 4 years	57	50	32 ^b	70 ^b	72 ^b	54	54	65 ^b	42 ^b	57	43 ^b
Early math skills at 4 years	52	51	38 ^b	74 ^b	68 ^b	56	57	67 ^b	41 ^b	56	43
Early reading skills in kindergarten	60	56	37 ^b	69 ^b	77 ^b	53	56	66	43 ^b	55	47 ^b
Early math skills in kindergarten	59	50	36 ^b	73 ^b	70 ^b	54	59	66 ^b	38 ^b	57	44
Social behavior (preschool teacher rating) (1 = never, 5 = very often)											
Positive behaviors	3.7	3.8	3.8	3.9	3.9	3.8	3.6	3.8	3.8	3.9	3.8
Problem behaviors	1.8	2.1 ^a	2.1	1.8	1.7 ^d	2.0	2.1	2.0	2.2 ^c	2.1	2.2

Notes: ^a indicates significant difference between children of Black African and children of Black Caribbean parents at $p < 0.1$ or better. ^b indicates significant difference between other groups of children versus children of Black Immigrants overall at $p < 0.1$ or better. ^c indicates significant difference between other groups of children and children of Black African immigrants only, at $p < 0.1$ or better. ^d indicates significant difference between other groups of children versus children of Black Caribbean Immigrants only, at $p < 0.1$ or better.

Source: Author calculations using the Early Childhood Longitudinal Study-Birth Cohort, 9-month—Kindergarten 2007 Restricted Use Data File, NCES.

African immigrant mothers tend to rate their children as being in very good to excellent health at nine months of age and are more likely to do so than most other groups of mothers. Caribbean mothers also report fairly positive levels of child health, on par with most other groups and significantly more positive than Hispanic immigrant mothers. The parent-reported health advantage of children in Black immigrant versus Hispanic immigrant families is generally maintained through kindergarten entry. Only European immigrant mothers report significantly and consistently better child health.

But on more objective measures of child weight, children of Black immigrants do not fare as well. Data on obesity and overweight status — based on BMI measurements — reveal alarmingly high rates of unhealthy weight among children of Black immigrants. A full third of Black immigrant children are categorized as overweight at age 4 and nearly 40 percent are overweight at kindergarten entry. Obesity rates are close to 20 percent at both time points. On these indicators, children of Black immigrants fare better than only their peers in Hispanic immigrant families.

2. Early Cognitive and Academic Skills

We find that group differences in children's cognitive skills (by families' region of origin and race/ethnicity) emerge by 24 months and persist through kindergarten entry. In general, the pattern of differences we observe suggests that children of Black immigrants make gains over time relative to some of their peers, particularly those in Hispanic immigrant and Black native-born families.

As infants, children of Black immigrants score at the 50th percentile on a measure of early mental abilities, a level similar to their peers in each of the other region-of-origin and race-ethnicity groups (see Table 4). By 24 months, however, children of African and Caribbean immigrants score in the 35th and 40th percentile respectively, falling behind children in East Asian, Indian Asian, and European immigrant families,



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Cognitive and academic skills (percentile scores)											
Mental skills at 9 months	52	49	48	46	49	44	44	50	49	52	52
Mental skills at 2 years	35	40	35	57	48	41	41	61	43	58	45
Early reading skills at 4 years	57	50	32	70	72	54	54	65	42	57	43
Early math skills at 4 years	52	51	38	74	68	56	57	67	41	56	43
Early reading skills in kindergarten	60	56	37	69	77	53	56	66	43	55	47
Early math skills in kindergarten	59	50	36	73	70	54	59	66	38	57	44
Social behavior (preschool teacher rating) (1 = never, 5 = very often)											
Positive behaviors	3.7	3.8	3.8	3.9	3.9	3.8	3.6	3.8	3.8	3.9	3.8
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African immigrant mothers tend to rate their children as being in very good to excellent health at nine months of age and are more likely to do so than most other groups of mothers. Caribbean mothers also report fairly positive levels of child health, on par with most other groups and significantly more positive than Hispanic immigrant mothers. The parent-reported health advantage of children in Black immigrant versus Hispanic immigrant families is generally maintained through kindergarten entry. Only European immigrant mothers report significantly and consistently better child health.

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as well as white native families. In preschool and kindergarten, East Asian, European, and Indian Asian immigrants maintain an advantage in terms of reading and math skills over children of Black immigrants on the order of 10 to 15 percentile points. At the same time, it is notable that children of Black immigrants do not score significantly lower than children in any of the native groups. In fact, with average percentile scores above 50, children of Black immigrants score higher on measures of early reading skills (in preschool and kindergarten) than children in Hispanic immigrant, Black native, and Hispanic native families. With respect to early math skills, children of Black immigrants hold a similar advantage relative to these groups (with the exception of Hispanic children of natives, who have comparable math scores).

3. Social Behavior in the Classroom

Other studies have shown that young children of immigrants often compare favorably to their peers with native-born parents in terms of social behavior. We find evidence of this for children of Black immigrants but primarily for those of African rather than Caribbean origin. Based on reports by their preschool teachers, children in African immigrant families displayed fewer problem behaviors than children in almost any other immigrant or native group. Although teachers rated children in Caribbean immigrant families as having more problematic behaviors than those in African immigrant families, problematic behavior levels for children in Caribbean families were on par with those for children in white native families. These generally positive findings for preschool-age children in Black immigrant families contrasts somewhat with those reported in a national study of school-age children, which found that kindergarten teachers rated the behavior of children of Black immigrants less positively than children in other immigrant groups.³⁶

C. Children's Early Learning Experiences at Home and in Child Care

Our next set of results about the early childhood experiences of young children in Black immigrant families focuses on several factors that may play a role in promoting school readiness skills and may help explain racial/ethnic and nativity group differences in child outcomes. These variables include family economic well-being, the home learning environment, and children's participation in early education programs.

As noted earlier, Black immigrant families tend to have higher incomes during their child's first year than Hispanic immigrant families and Black native families but lower incomes than East Asian, Indian Asian, and European immigrant families and white native families. This general pattern appears to persist over time (see Table 5). Average family income levels over the first four years of the child's life indicate the same intergroup differences. At the same time, it is important to note that one-third of Black immigrant households report experiencing food insecurity at some point during their child's first four years. Many other immigrant and native groups experience similar levels of food insecurity. Two differences of note are that Black immigrant families face significantly more risk of food insecurity than East Asian or Indian immigrant families but less risk than Black native families.

While Black immigrant families fall in the middle of the distribution in terms of their financial and material resources, the parents rank high on measures of orientation toward education for their young children. Black immigrant parents report higher expectations for children's eventual educational attainment than every other group of parents except East Asian and Indian Asian immigrant parents. Caribbean immigrant parents are also more likely than other parents (with the exception of Black native parents) to say that preparing their child for kindergarten is a very important consideration in the decisions they make about child care. At the time of the 4-year survey, about 15 percent of Black immigrant parents expressed concerns that their child was not ready for kindergarten. This is a slightly lower percentage than reported in other native and immigrant groups, but the difference is not statistically significant.

³⁶ Crosnoe and Turley, "K-12 Educational Outcomes of Immigrant Youth," 140.



Table 5. Family Economic Conditions, Parenting Practices, and Early Learning Experiences of Children Born in the United States in 2001, by Nativity, Race/Ethnicity, and Region

	Children of Black Immigrants		Children of Other Immigrants						Children of US-Born Parents		
	African	Caribbean	Hispanic	East Asian	Indian Asian	Southeast Asian	Middle Eastern	European	Non-Hispanic Black	Non-Hispanic White	Hispanic
Average family income-to-needs ratio, birth to age 4	2.3	2.3	1.5 ^b	5.0 ^b	4.4 ^b	2.6	3.9	4.3 ^b	1.4 ^b	3.4 ^b	2.1
Family experienced any food insecurity, birth to age 4	29%	36%	50%	11% ^b	9% ^b	31%	15%	15%	53% ^b	24%	39%
Parent educational expectations at 4-year survey (ranges from 1-6)	5.2	4.9	4.6 ^b	4.8	5.2	4.5 ^b	5.1	4.5 ^b	4.2 ^b	3.9 ^b	4.1 ^b
Parent considers kindergarten preparation very important in selecting child care for their 4-year old	83%	98% ^a	89% ^d	76% ^d	81% ^d	84% ^d	74% ^d	79% ^d	91%	81% ^d	87% ^d
Parent is concerned that their 4-year old child is not ready for kindergarten	13%	15%	20%	21%	13%	26%	21%	13%	16%	17%	20%
Primary child care arrangement during year prior to kindergarten											
Parental care	16%	3% ^a	27% ^b	9%	12% ^d	21% ^d	15% ^d	9%	13% ^d	16% ^d	18% ^d
Home-based care (non-parental)	13%	11%	17%	14%	10%	25% ^b	11%	13%	19%	20% ^b	25% ^b
Center-based care	71%	87%	57% ^b	77%	77%	53% ^b	74%	78%	68% ^b	64% ^b	57% ^b
Number of years in center care, age 2 to kindergarten	1.6	1.8	1.1 ^b	1.7	1.6	1.1 ^b	1.6	1.6	1.5	1.4 ^b	1.2 ^b
Preschool caregiver's level of education (ranges from 0-22)	17.2	17.0	14.6 ^b	17.4	17.2	16.7	17.5	17.3	16.3	16.5	15.4
Child has participated in Head Start by age 4	21%	36%	29%	5% ^b	10% ^b	13% ^b	10% ^b	11% ^b	40%	10% ^b	24%
Average rating of warm, supportive parenting behavior, birth to age 4 (z-score with mean of 0)	-0.42	-0.37	-0.55	0.16 ^b	0.01 ^b	-0.22	-0.28	0.45 ^b	-0.23	0.25 ^b	-0.01 ^b
Average level of developmentally stimulating activities and materials available in the home, birth to age 4 (ranges from 1-4)	2.4	2.4	2.3 ^b	2.8 ^b	2.6 ^b	2.5	2.6	2.9 ^b	2.4	2.9 ^b	2.6 ^b

Notes: ^a indicates significant difference between children of Black African and children of Black Caribbean parents at $p < 0.1$ or better. ^b indicates significant difference between other groups of children versus children of Black Immigrants overall at $p < 0.1$ or better. ^c indicates significant difference between other groups of children and children of Black African immigrants only, at $p < 0.1$ or better. ^d indicates significant difference between other groups of children versus children of Black Caribbean immigrants only, at $p < 0.1$ or better.

Source: Author calculations using the Early Childhood Longitudinal Study-Birth Cohort, 9-month—Kindergarten 2007 Restricted Use Data File, NCES.

When it comes to early childhood education settings, children of Black immigrants are more likely than their peers in most other native and immigrant groups to attend center-based programs in the year prior



to kindergarten.³⁷ Indeed, center enrollment rates are higher for 4-year-olds in Black immigrant families (particularly those from the Caribbean) than for children in all of the native-born groups, as well as for those in Hispanic immigrant families. The fact that children of Black immigrants experience more years of center-based care between the ages of 2 and 5 than children in other immigrant families and white native families suggests that they enter center-based settings at an earlier age. High rates of center-based care enrollment among Black children of immigrants may represent an important advantage in their early development. For preschool-aged children, especially those in low-income families, center-based programs tend to provide higher-quality learning environments than home-based programs.³⁸ Few differences are observed in preschool teachers' educational qualifications, although children of Black immigrants have teachers with higher levels of education than children in Hispanic immigrant families.³⁹

The relative advantage of Black immigrant parents with respect to children's education is less evident when we examine early learning experiences in the home environment (at least as measured in the ECLS-B data we employed). Black immigrant parents tend to display fewer supportive parenting behaviors and provide fewer developmentally stimulating materials and activities to young children than East Asian, Indian Asian, and European immigrant parents and white and Hispanic native parents. On the other hand, children of Black immigrants appear to have greater access to learning materials at home than children of Hispanic immigrants.

D. What Factors Help Explain Early Academic Skill Differences between Children of Black Immigrants and Their Peers?

To better understand observed differences in the early academic skills of children of Black immigrants relative to their peers, we conducted a series of regression analyses that examine the extent to which different variables can explain (or are associated with) group disparities in children's academic scores.⁴⁰

I. Explaining Group Differences in Preschool Academic Skills

Black children of immigrants show higher preschool reading skills than Hispanic children — both those with immigrant parents and those with native-born parents — even when controlling for a variety of demographic, immigration, health, home environment, and child-care characteristics.⁴¹ In other words, differences between Black children of immigrants and Hispanic children in reading ability persist even after accounting for intergroup differences in socioeconomic status, parenting practices, the home learn-

37 Center enrollment is used as a broad indicator of exposure to early childhood education; however, it is important to note that center-based settings vary widely in their structure, mission, and quality.

38 See, for example, Susanna Loeb, Margaret Bridges, Daphna Bassok, Bruce Fuller, and Russ W. Rumberger, "How Much is Too Much? The Influence of Preschool Centers on Children's Social and Cognitive Development," *Economics of Education Review* 26 (2007): 52–66; Magnuson et al., "Inequality in Preschool Education and School Readiness," 115–57.

39 Observations of program quality were conducted for only a subsample of ECLS-B participants, which includes very few children of Black immigrants. We use providers' education as a rough proxy of quality.

40 Analyses were conducted using multiple regression techniques to predict children's skill scores from indicators of their race/ethnicity and parents' region of origin, as well as the various family, home, and child care variables that might contribute to group differences in skills.

41 For each of the four primary outcomes we analyze (reading and math skills in preschool and kindergarten), we begin with a baseline model (Model 1) that predicts children's early academic skills from their membership in a particular race/ethnic and nativity group. Model 2 takes into account several child and family demographic characteristics that are typically associated with child well-being (child age and gender, household size and structure, parent education and employment, and family income). Model 3 adds indicators of children's health and development in infancy (low birth weight, congenital anomalies, chronic health issues, and early mental skills), providing some indication of whether school readiness originates early in life or emerges over time. In Model 4 we introduce longitudinal measures of the home environment, including family economic well-being over time, parental warmth and support in interactions with children, and developmentally stimulating materials and activities. In Model 5 we add two indicators of children's exposure to early childhood education, namely, the number of years they participated in center-based care in the two to three years prior to kindergarten and whether they ever participated in Head Start. Finally, in Model 6 we add a measure of the primary caregiver's self-reported fluency in English to evaluate whether group differences in language use are associated with differences in children's academic skills, particularly for children in immigrant families. Tables with the regression results are available in the Appendix as Tables A-1, A-2, A-3, A-4, A-5 and A-6.



ing environment, early education settings, and the use of English language in the home. Black children of immigrants also show higher preschool reading skills than Black children of natives, but these differences are entirely accounted for by demographic and socioeconomic factors.

Black children of immigrants show lower reading skills than white and Asian children (in both immigrant and native families), but these differences disappear after controlling for socioeconomic factors. In other words, disadvantages in early reading for Black immigrants' children relative to other groups of children are due primarily to socioeconomic factors.

A similar pattern appears for preschool math skills, with Black children of immigrants showing significantly higher skill levels than Hispanic children even when controlling for socioeconomic status, home environment, parenting, early education settings, and home language. Once again, Black children of immigrants show lower preschool math skills than their peers in East Asian, Indian Asian, and European immigrant families, but their lower skills appear to be largely associated with differences in family demographic and socioeconomic characteristics. However, children of East Asian heritage maintain an advantage that changes little across the remaining models — even those that account for early education settings and parenting practices. Finally, differences between children of Black immigrants and children in white and Black native families diminish greatly when family socioeconomic status and other demographic variables are taken into account.

2. Explaining Group Differences in Kindergarten Academic Skills

Reading skills diverge somewhat among the various populations of children at the kindergarten level, relative to the preschool level. Black children of immigrants continue to show higher reading skill levels than Hispanic children (in both immigrant and native families) even when controlling for demographic and socioeconomic factors, the home environment, parenting practices, early education settings, and home language. Moreover, Black children of immigrants outperform both Black and white children of natives once socioeconomic controls are included. Thus, by kindergarten, children of Black immigrants appear to show a significant advantage in reading skills over the three largest demographic groups of children: Hispanic, Black, and white children of natives. Only children of Asian Indian immigrants display consistently higher reading scores than children of Black immigrants that cannot be fully explained by the variables we tested.

More of the differences in kindergarten math skills observed between children of Black immigrants and their peers appear to be related to basic socioeconomic and demographic characteristics than is the case for reading skills. Black children of immigrants have higher math scores than Black children in native families as well as Hispanic children in both native and immigrant families. But their advantage over Black and Hispanic natives' children seems to be related mostly to socioeconomic and demographic factors. After controlling for these factors, Black children of immigrants perform better on math only when compared with Hispanic children of immigrants.

Similarly, the lower math scores of Black immigrants' children relative to children in Indian Asian immigrant, European immigrant, and white native families are largely accounted for by sociodemographic differences among these groups. Only children of East Asian immigrants maintain a small advantage in kindergarten math scores once the full range of demographic, socioeconomic, family environment, and child-care factors are taken into account.

The regression models described here establish that most of the differences between children in Black immigrant families and other children in terms of reading and math scores in prekindergarten and kindergarten are related to demographic and socioeconomic factors. Once these factors are controlled for, children of Black immigrants perform on par with Black and white native-born parents and most other immigrant groups, with only a few exceptions. Children in East Asian or Asian Indian immigrant families are the two top scoring groups, and in some cases they perform better than Black children of immigrants even after demographic and socioeconomic characteristics, as well as aspects of the family environment and child care, are taken into account. At the same time, Black children of immigrants score consistently higher than Hispanic children of immigrants even when all of these factors are controlled.



3. Predictors of School Readiness among Children of Black Immigrants

We also examine differences between children in Black African and Caribbean families on these academic performance measures.⁴² These analyses also show that children of African immigrants tend to outperform children of Caribbean immigrants, particularly on preschool assessments of reading skills. The gap in preschool reading between children of African versus Caribbean immigrants emerges when controlling for children’s participation in center-based programs, suggesting that the high rate of center use by Caribbean parents helps to narrow the reading score gap between Caribbean and African children.

VI. Final Thoughts

Using national longitudinal data for a birth cohort of American children, this study aims to describe the early childhood experiences of second-generation African and Caribbean immigrants and to examine the link between these experiences and children’s early academic skills during the transition to school. Throughout, we compare the children of Black immigrant parents to their peers in other racial/ethnic groups (by parents’ region of origin), identifying areas of relative advantage and disadvantage.

We find several areas of strength for Black immigrant families that are likely to support positive outcomes for their children. Like other researchers, we find that Black immigrant parents have relatively high rates of marriage and employment and are more likely than many other immigrant groups to be fluent in English. Black immigrant mothers also report good health practices around the time of their child’s birth. Compared to US-born mothers, they are much less likely to use alcohol, tobacco, or drugs during pregnancy and much more likely to breastfeed. Breastfeeding rates are higher for African immigrants than for any of the other immigrant groups we examined. It is not surprising then that Black children of immigrants appear to enjoy relatively good health during early childhood. They face less risk of low birth weight than children of Black US-born parents and fewer birth complications than children of Hispanic immigrants. Black immigrant parents consistently report that their children are in good overall health and are more likely to do so than Hispanic immigrant parents.

Beyond making investments in health, Black immigrant parents are also strongly oriented toward education for their children. Relative to some immigrant groups (e.g., Hispanic and Southeast Asian) and all of the major native groups, Black immigrant parents report high educational expectations for their children and are very likely to enroll them in center-based care during their preschool year. Center care use is particularly high among Caribbean immigrant families, who specifically identify preparation for kindergarten as a reason for selecting this type of child care.

Black immigrant parents are also strongly oriented toward education for their children.

Our descriptive analysis also reveals potential areas of disadvantage for young children in Black immigrant families. On most indicators of economic well-being, Black immigrant families fare better than Hispanic immigrants and Black natives but still experience more disadvantage than Asian and European immigrants and white natives. More than half are poor or near poor, with annual incomes below twice the federal poverty level. In terms of child outcomes, although many advantages are observed for children of

⁴² Because the sample of Black immigrant families is relatively small in the ECLS-B (n=150), we examine a reduced list of variables, including family income, food insecurity, supportive parenting practices, the home learning environment, and participation in center-based care. These factors have generally been associated with school readiness in other populations of children, and we find here that they predict preschool and kindergarten reading skills — but not math skills — among children of Black immigrants as well.



Black immigrants in the health domain, approximately 40 percent are overweight (and nearly 20 percent are considered obese) by age 4. In this sense, children of Black immigrants compare unfavorably to children in most other immigrant groups (with the exception of Hispanics) and experience similar levels of risk for obesity as Black and Hispanic children with US-born parents.

A. Understanding Differences in School Readiness Skills between Children of Black Immigrants and Their Peers

Similar to other studies, ours finds evidence that developmental disparities across different groups defined by race/ethnicity and immigrant status begin early in life.⁴³ At age 2, children of Black immigrants score lower on a cognitive assessment than many of their peers in other groups (especially Asian and European immigrants, and white native families). However, by kindergarten, children of Black immigrants are doing relatively well in reading and math, outperforming Hispanic children in immigrant and native families as well as Black children in native families. Moreover, any disadvantage they face vis-à-vis other groups (with the potential exceptions of children in East Asian and Asian Indian immigrant families) can be largely accounted for by family socioeconomic status. When socioeconomic variables are controlled for, children of Black immigrants actually do better on reading assessments than several other groups, including white children in native families. Moreover, they fare consistently better than Hispanic immigrants' children, the largest group of children of immigrants.

Despite relatively high levels of parent education and employment, Black immigrant households often face considerable economic challenges.⁴⁴ Our findings suggest that efforts to reduce socioeconomic disadvantage in Black immigrant populations may serve as an investment in children's educational success. Another implication of this work is that strategies to promote positive outcomes among children of Black immigrants should build on identified areas of strength. For example, if recognized as a resource, children's language and literacy skills could be used to help support their development in other domains. In addition, the fact that so many Black immigrant families — a much higher percentage than has been observed for other immigrant groups — participate in early care and education programs should prompt a closer look at the quality and effectiveness of these settings for children of Black immigrants. Such programs might also serve as a valuable means of engaging with parents.

Despite relatively high levels of parent education and employment, Black immigrant households often face considerable economic challenges.

B. Understanding Variation in School Readiness Skills among Children of Black Immigrants

While our analysis of how academic skill differences across groups narrow or widen with the consideration of various factors is informative, it does not provide specific information about the extent to which certain experiences matter more for some groups than for others. In particular, more information is needed about the characteristics, resources, and practices that promote school success among children of Black immigrants, a population that has received much less research attention than other, more populous immigrant groups (e.g., Hispanic and Asian).

Within-group analyses conducted for this study suggest that Black children in immigrant families transition into kindergarten with better reading skills if their families have more income and if they experience warm and supportive parent-child interactions, have access to stimulating materials and activities at

43 Fuller et al., "The Health and Cognitive Growth of Latino Toddlers."

44 Hernandez, Denton, and Macartney, "Children in Immigrant Families."



home, and attend center-based programs during their preschool years. Above and beyond these variables, having a parent of African versus Caribbean origin is associated with better reading scores in preschool; however, by kindergarten we find no significant differences by parental region of origin. This set of findings about the importance of early learning experiences in children's home and care environments is consistent with the broader school readiness literature, and suggests that general efforts to help parents provide these opportunities may benefit children of Black immigrants.

It is noteworthy, however, that even when we account for an extensive set of variables (including child and family characteristics, household resources, and aspects of the home and care environment), our analytic models explain only 10 to 20 percent of the variation in children's reading and math scores. This implies that factors beyond those examined here play a role and should be investigated. As just one example, the ECLS-B did not collect information about families' cultural beliefs and practices, but these may be important while considering children's development and academic progress.

C. Study Strengths and Limitations

The ECLS-B is a unique data source that offers several strengths with respect to the aims of this study. Using a variety of methods (e.g., parent, caregiver, and teacher surveys; observations and direct child assessments), it provides rich longitudinal data on multiple aspects of early childhood, including information about children's experiences across multiple contexts and their functioning across multiple developmental domains. Its collection of information about parents' country of origin, age at arrival, time in the United States, and several aspects of language use allow for the study of between-group and within-group diversity among immigrant families from several regions of the world.

Despite some advantages over other data sets, the ECLS-B lacks in-depth information about experiences particularly (or uniquely) relevant for immigrants — for example, parents' experiences in their country of origin and with the migration process, acculturation and families' efforts to maintain cultural beliefs and practices, and characteristics of receiving communities, such as available resources and public attitudes. These factors are likely to shape young children's experiences and opportunities, yet their inclusion in studies of educational outcomes among children of immigrants has been almost entirely limited to older children and adolescents.

Several caveats apply to the results presented in this report. First, our findings pertain only to second-generation African and Caribbean immigrant children (as a birth cohort study, the ECLS-B contains information only about children born in the United States). It is unclear how similar or different the pattern of results would be for children who immigrate to the United States with their parents at a very young age. That said, more than 90 percent of children younger than age 6 living in immigrant households are US citizens by birth.⁴⁵ Second, the nonexperimental nature of the data precludes us from making strong statements about causality. Our analytic models include a rich set of covariates, but our ability to conduct more sophisticated analyses to address causal questions is limited by small sample sizes, especially for our key group — Black children of immigrants. So although we find clear associations among family characteristics, early learning environments, and the development of academic skills, additional work is needed to identify the causal mechanisms that explain these links.

45 Karina Fortuny, Donald J. Hernandez, and Ajay Chaudry, *Young Children of Immigrants: The Leading Edge of America's Future* (Washington, DC: Urban Institute, 2010), www.urban.org/publications/412203.html.



Future studies should intentionally include larger samples of children in Black immigrant families, which would permit more refined statistical analyses and also make it possible to identify important sources of heterogeneity (e.g., country of origin, parent education, refugee and immigration status) within this population.⁴⁶ Furthermore, longitudinal designs capturing development from early childhood through adolescence are needed to investigate whether the advantages observed for young children of Black immigrants are sustained over time, or if early gains are lost as children progress through school. One potentially important factor to consider is the extent to which Black children of immigrants encounter biased perceptions by their peers and teachers.

Future studies should intentionally include larger samples of children in Black immigrant families.

Finally, we note that discussions of school readiness have tended to focus heavily on the skills and abilities of children and the family role in contributing to these. However, another important component of school readiness is the extent to which schools and communities are ready to effectively serve and support all children. Although the current study is of the former type, we hope that the information it provides can contribute to discussions of the latter.

⁴⁶ See, for example, Donald J. Hernandez, *Changing Demography and Circumstances for Young Black Children in African and Caribbean Immigrant Families* (Washington, DC: Migration Policy Institute, 2012), www.migrationpolicy.org/pubs/CBI-Hernandez.pdf.



Appendix: Methodological Details

A. Data Source

Data for this project come from the Early Childhood Longitudinal Study-Birth Cohort (ECLS-B), a national prospective study of development for a sample of 14,000 children. Using a clustered, list-frame sampling design based on birth certificate data, the ECLS-B provides nationally representative information for the nearly 4 million infants born in the United States between January and December 2001. Several populations largely absent from other longitudinal studies of early childhood were oversampled in the ECLS-B, including children with low or very low birth weight, twins, and children of American Indian/Native Alaskan, Asian/Pacific Islander, and Chinese heritage. Excluded from the sample were children with mothers younger than age 15, as well as those who died or were adopted prior to the initial data collection.

Through home visits, parent and caregiver interviews, child assessments, and child-care observations, the ECLS-B collected in-depth information about children's experiences from birth until kindergarten entry, across multiple contexts of development. The first data collection occurred approximately 9 months after birth, with subsequent surveys conducted at ages 2, 4, and 5 years (kindergarten entry for most). An additional data collection occurred in 2007–08 to capture kindergarten year information for the subsample of children who entered school at age 6. Overall response rates for the five data collections were 74 percent, 93 percent, 91 percent, 92 percent, and 93 percent, respectively. The ECLS-B — and its companion study the Early Childhood Longitudinal Study-Kindergarten Cohort (ECLS-K), which follows a cohort of children from Kindergarten to fifth grade — are being conducted by the National Center for Education Statistics (NCES) and the Institute of Education Sciences (IES), in collaboration with numerous federal health, education, and human service agencies. Detailed information about the ECLS datasets is available on the NCES Web site: <http://nces.ed.gov/ecls/index.asp>.

B. Study Measures

Family and household characteristics. Unless otherwise noted, these measures reflect data from the 9-month parent survey (i.e., the first wave in which data were collected) and provide a picture of family circumstances during children's first year of life including indicators of family structure (whether the primary caregiver is married, cohabiting, or single).

We also include the highest level of education completed by either resident parent in our analysis and educational attainment of both parents in the descriptive work. Parents' employment behavior is captured by indicators of whether the mother was employed in the year prior to the child's birth, is employed at the time of the 9-month interview, and whether there is an employed spouse or partner in the household at 9 months. We also include the ratio of family income to the federal poverty level, which is adjusted for household size; a dichotomous indicator of household food insecurity based on items and methods outlined in the US Department of Agriculture *Guide to Measuring Household Food Security*; and indicators of home and car ownership.⁴⁷ To capture household economic conditions over time, we also create two summary variables — the *average* ratio of income to the poverty level across the first three waves of the study (9 months, 2 years, and 4 years) and a dichotomous variable indicating whether the family experienced any food insecurity across the first three waves.

Characteristics of immigrant households. In addition to information about parents' country of origin, the ECLS-B collected information about their age at arrival in the United States, citizenship status, and multiple questions about their language use. Our analysis of these characteristics reflects information for the primary caregiver (mother in the majority of cases). For families where the primary caregiver was US

47 Gary Bickel, Mark Nord, Cristofer Price, William Hamilton, and John Cook, *Guide to Measuring Household Food Security, Revised 2000* (Alexandria, VA: US Department of Agriculture, Food and Nutrition Service, 2000), www.fns.usda.gov/fsec/FILES/FSGuide.pdf.



born, information for the other (foreign-born) parent was used. The two language variables we focus on are whether or not the caregiver's primary language is English and whether the caregiver is fluent in English (based on an average self-rating of "good" or "excellent" in speaking, reading, and writing English). The second variable accounts for the fact that some parents may primarily speak their heritage language at home and with family, but also have some level of fluency in English.

Birth outcomes and indicators of child health. To assess family health behaviors we included indicators of whether mothers received prenatal care in their first trimester; whether mothers smoked cigarettes, drank alcohol, or used drugs during pregnancy; and whether infants were breastfed. In terms of child health, we include indicators of low birth weight (<2,500 grams), a multiple birth, extended stay in the hospital following birth, the presence of chronic health or medical conditions at birth, and parent ratings of overall child health at 9 months, 2 years, 4 years, and in kindergarten (1=poor, 5=excellent). Finally, we also examine group differences in children's weight at age 4 and the kindergarten year, given growing concerns about this aspect of health and its implications for development and well-being. Direct assessments of children's height and weight during the home visit were used to calculate their Body Mass Index (BMI). Using growth charts (by gender and age) and guidelines provided by the Centers for Disease Control, children with BMI above the 85th percentile were identified as overweight, and those above the 95th percentile were identified as obese.

Children's early cognitive development. The Bayley Short Form-Research Edition (BSF-R) was designed specifically for the ECLS-B and retains all of the psychometric properties of the Bayley Scales of Infant Development-II (BSID-II).⁴⁸ The mental scale of the BSF-R measures early cognitive and language development, as evidenced by memory, expressive and receptive vocabulary, reasoning, problem solving, and concept attainment (NCES 2005). The majority of children were assessed in English, although home languages were used whenever possible.

Home learning environment. To measure the early learning environment, we focus on three ways by which parents and family members might influence young children's development — their direct interactions with children, the provision of developmentally stimulating materials and activities, and the emphasis they place on education.

As part of the 9-month, 2-year, and 4-year home visits, parents were given an age-appropriate "teaching" task to complete with their child. Parent-child interactions during this activity were videotaped and later coded by trained research staff for their level of sensitivity, positive and negative regard, and cognitive stimulation. To create a composite variable of positive parenting behaviors across the three time points, we standardized the scores on each measure and then computed an average score for *warm and supportive parenting* ($M=0, SD=1$).

Parents were asked about children's access to developmentally stimulating materials (e.g., children's books, puzzles) and their engagement in developmentally supportive activities with children (i.e., reading, telling stories, singing, and visiting the library, museums, or the zoo) at 9 months, 2 years, and 4 years. For the analyses presented here, we created a composite score on *developmentally stimulating materials and activities* across these three time points

A third aspect of the home learning environment that may influence children's academic outcomes is parents' beliefs and expectations regarding education. In the 4-year old survey, parents reported how far in school they expected their child to go, and how important preparation for kindergarten (as one of a list of features) was to them in selecting care for their child.

Early care and education experiences. At each survey wave, parents provided details about the nonparental care arrangements that children experienced on a regular basis, including information about type,

48 Carol Andreassen and Philip Fletcher, *Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) Methodology Report for the Nine-Month Data Collection (2001–02), Volume 1: Psychometric Characteristics*, NCES 2005–100 (Washington, DC: US Department of Education, National Center for Education Statistics, 2005); Mark Nord, Margaret Andrews, and Steven Carlson, *Household Food Security In The United States, 2003* (Food Assistance and Nutrition Research Reports 33835, US Department of Agriculture, Economic Research Service, Washington, DC, 2004).



hours in care, and cost. Based on these data, we create an indicator variable for whether or not children are attending a center-based program in the year before they enter kindergarten (at approximately age 4 or 5, depending on year of school entry) and the number of years of center-based care between age 2 and kindergarten entry. Descriptively, we also note whether children have ever participated in Head Start, as one of the largest federal early intervention programs which serves a large proportion of ethnic and language minority children.

Children’s academic skills at the transition to school. Children’s emergent reading and mathematic skills were assessed during the preschool and kindergarten data collections using cognitive batteries from the ECLS-K.⁴⁹ We standardize assessment scores by child age and then convert them to percentile scores ranging from 1 to 100 to provide information about where children’s abilities rank relative to their same age peers.

Children’s behavior at the transition to school. Although our primary focus is on children’s academic skills in preschool and kindergarten, we include descriptive information about children’s social behavior at these two time points, as this is an important predictor of the likelihood that children will make a successful transition to school. During the preschool year, mothers and early care and education providers rated children’s behavior using a subset of items from the *Preschool and Kindergarten Behavioral Scales — Second Edition (PKBS-2)* and *Social Skills Rating System*.⁵⁰ In addition, during the kindergarten year, teachers answered a similar set of questions about children’s behavior. Two variables were constructed for the frequencies of positive behaviors and problem behaviors — both scaled from 1 (“never”) to 5 (“very often”).

49 NCES, *Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K)*. See Donald A. Rock and Judith M. Pollack, *Early Childhood Longitudinal Study — Kindergarten Class of 1998–99 (ECLS-K), Psychometric Report for Kindergarten Through First Grade* (Publication No. NCES 2002-05, NCES, Washington, DC, 2002), <http://nces.ed.gov/pubs2002/200205.pdf>.

50 Kenneth Merrell, *Preschool and Kindergarten Behavior Scales — Second Edition* (Austin, TX: PRO-ED, 2003); Frank M. Gresham and Stephen N. Elliot, *Social Skills Rating System* (Circle Pines, MN: American Guidance Service, 1990).



C. Multivariate Regression Results

Table A-1. OLS Regressions Predicting Preschool Reading Skills for Children of Black Immigrants Relative to Their Peers Born in the United States in 2001

	Preschool Reading Skills					
	Model 1: No covariates	Model 2: M1+basic demographics ^a	Model 3: M2+child developmental status at 9 months ^b	Model 4: M3+home environment, birth-PK ^c	Model 5: M4+early care and education ^d	Model 6: M5+language use ^e
Children of Black immigrants	omitted, comparison group					
Children of Hispanic immigrants	-21.44***	-15.44***	-16.22***	-16.02***	-15.00***	-15.60***
Children of East Asian immigrants	18.06***	2.403	2.015	0.0452	1.171	1.082
Children of Indian Asian immigrants	19.58***	4.576	3.741	4.367	5.318	5.308
Children of Southeast Asian immigrants	2.371	0.0188	0.510	0.244	1.776	1.702
Children of Middle Eastern immigrants	2.246	-9.954+	-9.224+	-10.14+	-9.071	-9.110
Children of European immigrants	12.90**	1.457	0.425	-3.881	-2.902	-2.700
Children of Non-Hispanic Black natives	-10.39***	-4.163	-4.470	-5.418+	-4.739	-4.305
Children of Non-Hispanic White natives	4.377+	-0.866	-1.230	-5.761*	-4.382	-3.995
Children of Hispanic natives	-8.921**	-6.487*	-6.873*	-9.688**	-8.473**	-8.103*
Children of Asian/Pacific Islander natives	3.652	4.352	5.640	1.845	4.124	4.512
Children of American Indian/Alaskan natives	-19.68***	-13.81***	-15.06***	-15.88***	-15.27***	-14.82***
Children of multiracial natives	-2.354	-2.334	-2.650	-5.154	-3.939	-3.528
Constant	52.20***	4.502	2.991	-10.09	-12.87*	-9.793
R²	0.110	0.280	0.288	0.327	0.331	0.331

Notes: Estimates are weighted by W3C0 to account for sampling design. Standard deviations appear in parentheses.

^a Demographic variables included in the model are child age (in months), child is a boy, mother is single, household size, highest level of parent education, mother employed at 9 months, spouse/partner employed at 9 months, income-to-needs ratio (based on federal poverty threshold, adjusted for family size). ^b Measures of infant developmental status include an indicator of low birth weight, an indicator of chronic health condition at birth, and the child's score on the Bayley scales of mental development, administered at the 9-month visit. ^c Home environment variables include an average income-to-needs ratio across Time 1 (9 months), Time 2 (2 years) and Time 3 (4 years); a dichotomous indicator of any household food insecurity across T1-T3; a composite of positive parenting interactions, T1-T3; and a composite score for developmentally stimulating materials and activities, T1-T3. ^d Children's experiences in early care and education programs are captured by number of years in center-based care T2-T3. ^e Measures of the child's language environment include whether the primary home language is English and the primary caregiver's fluency in spoken and written English.

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001.

Source: Author calculations using the Early Childhood Longitudinal Study-Birth Cohort, 9-month—Kindergarten 2007 Restricted Use Data File, National Center for Education Statistics, US Department of Education.

**Table A-2. OLS Regressions Predicting Preschool Math Skills for Children of Black Immigrants Relative to Their Peers Born in the United States in 2001**

	Preschool Math Skills					
	Model 1: No covariates	Model 2: M1+basic demographics ^a	Model 3: M2+child developmental status at 9 months ^b	Model 4: M3+home environment, birth-PK ^c	Model 5: M4+early care and education ^d	Model 6: M5+language use ^e
Children of Black immigrants	omitted, comparison group					
Children of Hispanic immigrants	-13.81***	-7.849**	-8.534**	-7.873**	-6.780*	-8.819**
Children of East Asian immigrants	23.08***	7.742*	8.395*	7.019*	8.045*	7.765*
Children of Indian Asian immigrants	16.65***	2.326	2.772	4.036	5.129	5.085
Children of Southeast Asian immigrants	4.624	2.241	3.959	4.018	5.445	5.157
Children of Middle Eastern immigrants	6.092	-4.756	-4.307	-5.186	-4.296	-4.594
Children of European immigrants	16.29***	4.922	5.094	2.100	2.970	3.625
Children of Non-Hispanic Black natives	-9.893***	-3.863	-4.063	-4.559	-3.843	-2.386
Children of Non-Hispanic White natives	4.576+	-0.534	-0.545	-3.750	-2.495	-1.198
Children of Hispanic natives	-7.837*	-5.608+	-6.160*	-8.119*	-6.980*	-5.733+
Children of Asian/Pacific Islander natives	5.310	5.556	7.454	4.315	6.574	7.877
Children of American Indian/Alaskan natives	-21.29***	-14.43***	-14.84***	-14.89***	-14.03***	-12.49***
Children of multiracial natives	-4.582	-4.482	-4.533	-6.533+	-5.342	-3.958
Constant	51.05***	-3.791	-4.350	-12.92+	-15.40*	-5.107
R²	0.082	0.245	0.255	0.283	0.287	0.289

Notes: Estimates are weighted by W3C0 to account for sampling design. Standard deviations appear in parentheses.

^a Demographic variables included in the model are child age (in months), child is a boy, mother is single, household size, highest level of parent education, mother employed at 9 months, spouse/partner employed at 9 months, income-to-needs ratio (based on federal poverty threshold, adjusted for family size). ^b Measures of child developmental status at 9 months of age include an indicator of low birth weight, an indicator of chronic health condition at birth, and the child's score on the Bayley scales of mental development, administered at the 9-month visit. ^c Home environment variables include an average income-to-needs ratio across Time 1 (9 months), Time 2 (2 years), and Time 3 (4 years); a dichotomous indicator of any household food insecurity across T1-T3; a composite of positive parenting interactions, T1-T3; and a composite score for developmentally stimulating materials and activities, T1-T3. ^d Children's experiences in early care and education programs are captured number of years in center-based care, T2-T3. ^e Measures of the child's language environment include whether the primary home language is English and the primary caregiver's fluency in spoken and written English.

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

Source: Author calculations using the Early Childhood Longitudinal Study-Birth Cohort, 9-month—Kindergarten 2007 Restricted Use Data File, NCES.



Table A-3. OLS Regressions Predicting Kindergarten Reading Skills for Children of Black Immigrants Relative to Their Peers Born in the United States in 2001

	Kindergarten Reading Skills					
	Model 1: No covariates	Model 2: M1+basic demographics ^a	Model 3: M2+child developmental status at 9 months ^b	Model 4: M3+home environment, birth-PK ^c	Model 5: M4+early care and education ^d	Model 6: M5+language use ^e
Children of Black immigrants	omitted, comparison group					
Children of Hispanic immigrants	-19.40***	-12.90***	-12.35***	-11.92***	-11.13**	-11.55**
Children of East Asian immigrants	12.71***	0.360	2.581	0.877	1.301	1.228
Children of Indian Asian immigrants	20.08***	8.071+	8.807*	9.179*	9.713*	9.701*
Children of Southeast Asian immigrants	-3.348	-4.695	-3.290	-3.392	-2.437	-2.509
Children of Middle Eastern immigrants	-1.246	-9.417	-5.617	-5.732	-5.454	-5.582
Children of European immigrants	9.077*	-2.493	-2.562	-6.399	-5.881	-5.759
Children of Non-Hispanic Black natives	-13.90***	-7.963*	-6.918*	-7.680*	-7.173*	-6.914*
Children of Non-Hispanic White natives	-1.876	-7.281*	-6.717*	-10.10**	-9.498**	-9.279**
Children of Hispanic natives	-10.20***	-7.066*	-7.249*	-9.261**	-8.529*	-8.309*
Children of Asian/Pacific Islander natives	-4.677	-6.905	-7.701	-11.14	-9.372	-9.150
Children of American Indian/Alaskan natives	-22.43***	-15.96***	-15.25***	-16.22***	-14.96***	-14.69***
Children of multiracial natives	-7.708+	-9.295+	-8.575*	-11.13*	-10.49*	-10.26*
Constant	56.78***	6.498	1.477	-4.120	-3.011	-1.595
R²	0.071	0.201	0.215	0.234	0.239	0.239

Notes: Estimates are weighted by WK1C0 to account for sampling design. Standard deviations appear in parentheses.

^a Demographic variables included in the model are child age (in months), child is a boy, mother is single, household size, highest level of parent education, mother employed at 9 months, spouse/partner employed at 9 months, income-to-needs ratio (based on federal poverty threshold, adjusted for family size). ^b Measures of child developmental status at 9 months of age include an indicator of low birth weight, an indicator of chronic health condition at birth, and the child's score on the Bayley scales of mental development, administered at the 9-month visit. ^c Home environment variables include an average income-to-needs ratio across Time 1 (9 months), Time 2 (2 years), and Time 3 (4 years); a dichotomous indicator of any household food insecurity across T1-T3; a composite of positive parenting interactions, T1-T3; and a composite score for developmentally stimulating materials and activities, T1-T3. ^d Children's experiences in early care and education programs are captured number of years in center-based care, T2-T3. ^e Measures of the child's language environment include whether the primary home language is English and the primary caregiver's fluency in spoken and written English.

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

Source: Author calculations using the Early Childhood Longitudinal Study-Birth Cohort, 9-month—Kindergarten 2007 Restricted Use Data File, NCES.

**Table A-4. OLS Regressions Predicting Kindergarten Math Skills for Children of Black Immigrants Relative to Their Peers Born in the United States in 2001**

	Kindergarten Math Skills					
	Model 1: No covariates	Model 2: M1+basic demographics ^a	Model 3: M2+child developmental status at 9 months ^b	Model 4: M3+home environment, birth-PK ^c	Model 5: M4+early care and education ^d	Model 6: M5+language use ^e
Children of Black immigrants	omitted, comparison group					
Children of Hispanic immigrants	-16.42***	-10.29**	-9.629**	-8.430*	-8.181*	-10.05**
Children of East Asian immigrants	20.09***	6.726	9.650*	8.201+	8.244+	7.922+
Children of Indian Asian immigrants	18.01***	5.014	5.685	6.384	6.119	6.069
Children of Southeast Asian immigrants	1.694	-0.387	2.305	3.388	3.631	3.318
Children of Middle Eastern immigrants	6.265	-1.954	0.314	0.944	0.897	0.326
Children of European immigrants	13.91**	2.037	3.880	1.149	1.212	1.763
Children of Non-Hispanic Black natives	-14.13***	-8.128*	-7.027*	-7.086*	-6.905+	-5.743
Children of Non-Hispanic White natives	4.755+	-1.069	-0.0931	-3.138	-3.043	-2.059
Children of Hispanic natives	-8.208**	-5.646	-5.256	-6.673+	-6.478+	-5.489
Children of Asian/Pacific Islander natives	0.778	-1.638	-0.370	-3.902	-3.434	-2.429
Children of American Indian/Alaskan natives	-19.52***	-13.29***	-12.22**	-12.39***	-11.81**	-10.62**
Children of multiracial natives	-4.130	-5.634	-5.196	-7.462+	-7.298+	-6.265
Constant	52.44***	-9.447	-18.40*	-26.67**	-25.66**	-19.28+
R²	0.108	0.243	0.261	0.286	0.287	0.288

Notes: Estimates are weighted by WK1C0 to account for sampling design. Standard deviations appear in parentheses.

^a Demographic variables included in the model are child age (in months), child is a boy, mother is single, household size, highest level of parent education, mother employed at 9 months, spouse/partner employed at 9 months, income-to-needs ratio (based on federal poverty threshold, adjusted for family size). ^b Measures of child developmental status at 9 months of age include an indicator of low birth weight, an indicator of chronic health condition at birth, and the child's score on the Bayley scales of mental development, administered at the 9-month visit. ^c Home environment variables include an average income-to-needs ratio across Time 1 (9 months), Time 2 (2 years), and Time 3 (4 years); a dichotomous indicator of any household food insecurity across T1-T3; a composite of positive parenting interactions, T1-T3; and a composite score for developmentally stimulating materials and activities, T1-T3. ^d Children's experiences in early care and education programs are captured number of years in center-based care, T2-T3. ^e Measures of the child's language environment include whether the primary home language is English and the primary caregiver's fluency in spoken and written English.

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

Source: Author calculations using the Early Childhood Longitudinal Study-Birth Cohort, 9-month—Kindergarten 2007 Restricted Use Data File, NCES.



Table A-5. Regression Analysis of Predictors of Pre-Kindergarten Academic Skills Among Children of Black Immigrants Born in the United States in 2001

	Preschool Reading Skills			Preschool Math Skills		
	(1)	(2)	(3)	(4)	(5)	(6)
Children of African immigrant parents	omitted, comparison group			omitted, comparison group		
Children of Caribbean immigrant parents	-8.782	-9.243	-12.12*	-3.755	-4.025	-4.809
Child age at time of assessment (in months)	0.677	0.914	1.004+	1.427***	1.570***	1.622***
Bayley mental skills score at 9 months (percentile score)	0.166	0.142	0.0682	0.204*	0.192*	0.158
Average income-to-needs ratio, T1-T3		3.656***	2.082*		1.844*	1.753
Any experience of household food insecurity, T1-T3		-4.619	-4.101		-3.978	-2.410
Warm, supportive parenting composite score, T1-T3			8.741*			3.918
Developmentally stimulating activities composite score, T1-T3			2.236			-4.603
Number of years in center-based care, T2-T4			4.047+			2.251
Constant	14.91	-3.535	-7.794	-31.64	-41.71+	-33.88
R²	0.051	0.147	0.230	0.086	0.114	0.122
F for change in R²	3.57*	13.18***	4.42**	3.97**	2.14	0.80

Notes: Estimates are weighted by W3C0 to account for sampling design. Coefficients shown are unstandardized. Robust standard errors (estimated using jackknife method) appear in parentheses.

+ p<0.10 * p<0.05 ** p<0.01 *** p<0.001

Source: Author calculations using the Early Childhood Longitudinal Study-Birth Cohort, 9-month—Kindergarten 2007 Restricted Use Data File, NCES.

Table A-6. Regression Analysis of Predictors of Kindergarten Academic Skills Among Children of Black Immigrants Born in the United States in 2001

	Kindergarten Reading Skills			Kindergarten Math Skills		
	(1)	(2)	(3)	(4)	(5)	(6)
Children of African immigrant parents	omitted, comparison group			omitted, comparison group		
Children of Caribbean immigrant parents	-5.895	-4.494	-4.785	-3.755	-4.025	-4.809
Child age at time of assessment (in months)	0.886	0.958	1.094	1.427***	1.570***	1.622***
Bayley mental skills score at 9 months (percentile score)	0.179+	0.144	0.122	0.204*	0.192*	0.158
Average income-to-needs ratio, T1-T3		2.015*	0.565		1.844*	1.753
Any experience of household food insecurity, T1-T3		-6.772	-6.632		-3.978	-2.410
Warm, supportive parenting composite score, T1-T3			0.931			3.918
Developmentally stimulating activities composite score, T1-T3			12.82+			-4.603
Number of years in center-based care, T2-T4			0.0814			2.251
Constant	-8.973	-15.95	-50.74	-31.64	-41.71+	-33.88
R²	0.056	0.103	0.147	0.086	0.114	0.122
F for change in R²	1.73	3.83*	1.01	4.37**	3.93*	0.24

Notes: Estimates are weighted by WK1C0 to account for sampling design. Coefficients shown are unstandardized. Robust standard errors (estimated using jackknife method) appear in parentheses.

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

Source: Author calculations using the Early Childhood Longitudinal Study-Birth Cohort, 9-month—Kindergarten 2007 Restricted Use Data File, NCES.



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As a recipient of the *Changing Faces of America's Children* Young Scholars Award from the Foundation for Child Development, Dr. Crosby is conducting a project that uses national, longitudinal data to examine the role of social safety-net programs in supporting the development of young children in immigrant families.

She is also currently collaborating on two National Institutes of Health-funded grants examining the impacts of parents' nonstandard employment on child health and well-being and the mediators and moderators of Head Start program participation.

Prior to her current position, she was a postdoctoral scholar at the University of Chicago's Center for Human Potential and Public Policy from 2004-06. She received her BA in psychology from the University of North Carolina at Chapel Hill, and both her MS and PhD in human development and family sciences from the University of Texas at Austin.



Angel S. Dunbar is a PhD student in the Department of Human Development and Family Studies at the University of North Carolina at Greensboro. Her research interests include child development in ethnic minority and immigrant families, child poverty, resiliency, and social policy. She has also conducted research in the areas of attachment and maternal sensitivity, and toddler emotional knowledge and regulation.

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For more on the Young Children of Black Immigrants research initiative, please visit:

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