

# Explaining the Black-White Achievement Gap in the Context of Family, Neighborhood, and School

FPG researchers investigate factors contributing to the achievement gap and the policy implications to address them

**I**N THE UNITED STATES, Black children start school behind their White peers on standardized reading and mathematics tests, and racial disparities in achievement increase during each subsequent year of primary and secondary education. To formulate an appropriate policy response to this enduring problem, a careful and comprehensive understanding of the factors that contribute to the achievement gap is needed.

## Integrative Model of Development in Context

The *integrative model of development in context* is a framework that can help researchers explore ethnic or racial group differences in child development and achievement. The model considers ways in which social position, racism, and segregation influence children's experiences in the three crucial contexts of family, neighborhood, and school. As applied to the educational attainment and achievement gap between



Black and White children, the integrative model calls attention to disadvantages that may play out differentially at each level.

- Family: Less income, more authoritarian attitudes, less verbal stimulation
- Neighborhood: Social disorganization
- School: Lower quality instruction, lower expectations, less successful parent-teacher communications

## Addressing Methodological Gaps

To extend prior research on educational disparities, FPG investigators used the integrative contextual model to simultaneously examine family, neighborhood, and school contributors to race differences in achievement among low-income children from birth through Grade 5. By including only low-income children, the study sought to isolate the social forces tied to race that affect child development. In addition, multiple structural and functional measures provided information about the *organization* of the three contexts and the *quality* of children's experiences therein. Specifically, the study asked about the extent to which:

1. Reading and math trajectories in primary school differ for Black and White low-income children.
2. Differences in family and nonfamily experiences before entry into school or during the elementary school years account for these different trajectories.
3. Family and school characteristics after entry into school predict academic trajectories differently for Black and White children.



## Descriptive Results

Black children lived in poorer households than White children, even within the shared category of low-income families. Considering other family-related variables, Black children also were more likely to live with only one parent in early and middle childhood and had parents with more authoritarian parenting attitudes. Using a well-accepted measure of child care quality that focuses on caregiver sensitivity and responsiveness in caregiver-child interactions, Black children received less sensitive early childhood care in both home-based and more formal child care settings. At the neighborhood and school levels, Black children lived in more disadvantaged neighborhoods and attended schools with a higher proportion of poor or minority students.

### Study Design

**Data set:** The NICHD Study of Early Child Care and Youth Development (SECCYD), a 10-site longitudinal study of a diverse nonrandom sample of American youth followed from birth

**Sample:** Black (n=100) and White (n=244) low-income children

**Data points:** Ages 6, 15, 24, 36, and 54 months, and Grades 1, 3, and 5

**Methods:** Individual standardized tests, observations of families and school settings, parent and teacher reports of behavior

**Measures:** Academic achievement, demographic characteristics, childrearing attitudes, depressive symptoms, parenting, neighborhood disadvantage, child care, school characteristics, early cognitive skills

- Black-White differences in **school environments** account for up to one third of the gap.
- The poorer quality schools attended by Black children increase the gap in mathematics skills, suggesting that

**poor quality instruction** may be especially deleterious for Black children.

## Conclusions and Policy Implications

The Black-White gap in low-income children's achievement can be largely accounted for by the simultaneous consideration of family, neighborhood, and school factors. Setting-level differences completely accounted for the reading achievement gap and largely accounted for the mathematics achievement gap. The study's results provide further

## Longitudinal Results

Longitudinal analyses revealed that the Black-White achievement gap was already in place by 3 years of age. Whereas in unadjusted models White children scored higher on average than Black children at all ages in reading and mathematics, the gap in reading was statistically eliminated when family, neighborhood, and school characteristics were jointly considered. For mathematics, differences between Black and White children decreased in early elementary school and increased in later elementary school. However, Black (but not White) children demonstrated more gains over time in their mathematics skills when they experienced either smaller child-teacher ratios or higher quality instruction. Overall, the study's results indicate that:

- Even among low-income children, **race differences in achievement are large** from entry into school through the elementary school years.
- Racial differences in **family characteristics** (such as parenting in early childhood) account for up to one half to three fourths of the achievement gap.

evidence regarding the long-term impacts of racism and differential treatment on the development of children of color in the U.S. and suggest the following policy implications:

- Programs to address the achievement gap should begin early. Existing prekindergarten programs, while helpful, probably begin too late in children's development to prevent race differences in school achievement.
- During the infant, toddler, and preschool years, programs should focus on both parenting skills and high-quality child care.
- During the school years, programs should emphasize improvements in instructional quality.

### To Learn More

Burchinal, M., McCartney, K., Steinberg, L., Crosnoe, R., Friedman S.L., McLoyd, V., Pianta, R., & NICHD Early Child Care Research Network. (2011). Examining the Black-White achievement gap among low-income children using the NICHD Study of Early Child Care and Youth Development. *Child Development*, 82(5), 1404-1420.



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