

Early Predictors of Racial Disparities in Criminal Justice Involvement

Based on BFI Working Paper No. 2024-44, “[Early Predictors of Racial Disparities in Criminal Justice Involvement](#),” by Andrew Jordan, Washington University in St. Louis; Ezra Karger, Federal Reserve Bank of Chicago; and Derek Neal, University of Chicago

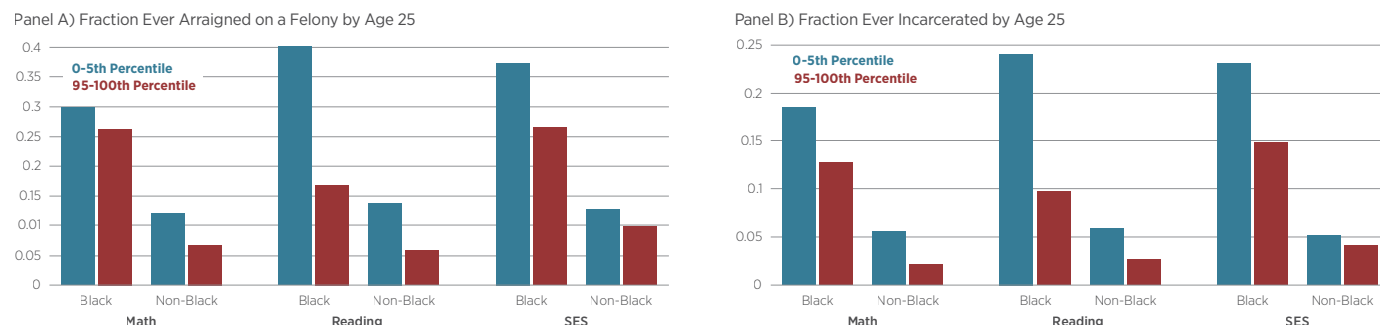
Detailed measures of early academic achievement and socioeconomic status are powerful predictors of future criminal justice involvement; however, while reforms that improve school quality and neighborhood environments are likely to reduce future racial disparities in criminal justice involvement, such improvements alone are not likely to eliminate these disparities.

Economists in recent years have produced a vast literature exploring the relationship between measures of **cognitive and non-cognitive skills** during childhood and subsequent adult outcomes, including the effect of different types of schools and teacher quality, as well as links between neighborhoods and future outcomes. In addition, many studies attempt to determine what portions of racial differences in post-secondary

education and adult labor market outcomes are predictable based on various measures of childhood environment and childhood skill acquisition.

However, fewer studies assess the extent to which racial differences in measures of youth skills and neighborhood environments predict subsequent racial differences in adult criminal justice outcomes. The

Figure 1 • Within-School Gradients for Predicted Criminal Justice Outcomes
Bottom versus Top Ventiles of Reading, Math, and Socioeconomic Status (SES): Eighth Grade Males



Note: Each bar displays an average predicted rate of criminal justice involvement for a specific sample of male students of a given race. In the left panel, each bar gives an average predicted felony arraignment rate. For example, the 0-5 percentile bar for Reading among Black male students indicates that if you (i) take the sample of all Black male eighth graders in each elementary school, (ii) select the students who are in the bottom five-percent of reading achievement within each school-specific sample, and (iii) create predicted rates of felony arraignment for these students while imputing to them the median math achievement, SES, and other characteristics of Black male eighth graders in each of their schools, the average predicted arraignment rate for this sample is 0.40. Please see the working paper for more details.

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Cognitive skills: brain functions used for thinking, paying attention, processing information, and remembering things. Some of these functions include sustained attention, auditory processing, and short-term memory.

Non-cognitive skills: Sometimes referred to as “soft skills,” these are brain functions related to motivation, integrity, and interpersonal interaction. These skills are associated with an individual’s personality, temperament, and attitudes.

authors address this question by studying data from 10 cohorts of elementary school students in Chicago public schools with a focus on male students, as males have rates of criminal justice involvement at rates nine times higher than female students. The authors map measures of both academic achievement in elementary school and neighborhood **socioeconomic status** (SES) during elementary school to adult criminal justice outcomes. Their analysis reveals the following:

- Black males in the 10 cohorts grow up in less-advantaged neighborhoods, have lower elementary achievement in reading and math, and experience worse criminal justice outcomes as young adults.
- This finding of worse criminal justice outcomes also holds for non-Black males in less-advantaged neighborhoods and with lower reading and math skills; however, importantly, this association is stronger among Black youth.
- When it comes to higher-achieving students from advantaged neighborhoods, though, the authors find few, if any, significant racial differences in criminal justice outcomes. That said, just a small fraction of Black elementary students both live in neighborhoods that are in the top percentiles of the SES distribution and score among the top percentiles of the achievement distribution.
- Among students in the middle of these distributions, significant racial differences in criminal justice outcomes persist.
- Finally, most students who both live in disadvantaged neighborhoods and struggle academically are Black, and among these students, Black students have much worse criminal justice outcomes than comparable non-Black students.

Regarding school quality, the authors examine whether the final year of elementary school—eighth

grade—has particular importance in terms of adult criminal justice outcomes. They study three dimensions of school quality and find evidence that non-cognitive dimensions of school performance impact future criminal justice outcomes. In particular:

- Holding constant student achievement in math and reading during grades three through seven, there is little evidence that better math or reading instruction during eighth grade has significant impacts on future criminal justice outcomes.
- There is some evidence that better reading instruction reduces future incarceration rates among both Black and non-Black males, but these impacts are only marginally significant.
- However, if eighth grade students from a given school go on to graduate from high school at higher-than-expected rates, given their reading and math achievement in elementary school, these same students will experience lower than expected rates of criminal justice involvement. The authors interpret this as evidence that elementary schools play an important role in developing skills and work habits that reduce dropout rates and delinquency.

Bottom line: Math and reading proficiency matter as predictors of future criminal justice involvement. However, non-academic dimensions of school quality and neighborhood environments also matter, and these factors matter more for Black youth. Policies that create schools and neighborhoods that support youth beyond the classroom are likely important tools for reducing racial disparities in criminal justice involvement, but existing disparities are so large among students in the middle of the achievement and SES distributions that there is no reason to believe that improvements in neighborhoods and schools alone are likely to eliminate these disparities.

Socioeconomic status: the social standing or class of an individual or group, often measured as a combination of education, income, and occupation.

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ABOUT OUR SCHOLAR



Derek Neal

William C. Norby Professor
Kenneth C. Griffin Dept. of Economics

THE KENNETH C. GRIFFIN
DEPARTMENT OF
ECONOMICS
THE UNIVERSITY OF CHICAGO