Psychological Factors in Improving Academic Performance of African American Students

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In this article, this analysis seeks to identify key factors that continue to affect academic achievement among black students. Several variables from the Education Longitudinal Study of 2002 (ELS, 2002) are used in two regression analyses to test the impact of 1) parental involvement, 2) students' confidence and aspirations for postsecondary education, 3) participation in extracurricular activities, 4) gender, and 5) the race of math and English teachers on black tenth grade student's performance on the Math and Reading Item Response Theory (IRT) standardized tests.

**Keywords:** African Americans, Latino/as, secondary education

**Introduction**

The achievement gap between white and black students in the U.S. is prevalent and has been well-documented for the past few decades. According to the National Center for Educational Statistics, white students scored an average of 26 points higher than black students in every subject on the National Assessment of Educational Progress (NAEP) tests. In the wake of President Obama's call to overhaul 2001’s No Child Left Behind Act and Secretary of Education Arne Duncan’s innovative statewide “Race to the Top” competition, understanding why there is a racial and economic achievement gap and identifying ways to close it has become increasingly important to educators and policy makers. Understanding this is important because the persistent and disproportionately lower levels of academic achievement can have a lasting and oftentimes debilitating effect on black children as they mature into adulthood.

The inability to perform well in primary and secondary school can limit black children’s options for higher education and other technical studies, essentially cutting off their potential to compete in the increasingly global job market. According to the Bureau of Labor Statistics, “millions of new jobs in the next decade will require a four-year degree; jobs in sectors as varied as education, accounting and computers.” Having a segment of society that is disproportionately undereducated is problematic, as the likelihood of being or becoming underemployed or unemployed, and subsequently living in low-income or poverty status is greatly increased. Current data supports this assertion. In 2009, 25.8 percent of blacks were impoverished, compared to 9.4 percent of whites. Perhaps more telling, 61 percent of black children live in low-income households, a significantly higher occurrence that the 27 percent of white children...
from low-income households. Living in poverty can lead to a number of other negative life outcomes including, food insecurity, higher likelihood of incarceration and limited access to healthcare among other things. It is because of this, that identifying factors that explain why the academic achievement gap exists is increasingly important.

Instead of analyzing the differences that account for why black and white students fare so differently on standardized tests, this analysis looks at individual factors that affect black students directly. By identifying key indicators that have an effect on black students, policies aimed at closing the achievement gap can be more targeted and effective.

Literature Review and Corresponding Hypotheses

In the wake of President Obama’s “responsible fatherhood” initiative—a distant relative to the more controversial marriage promotion policies that were championed by President Bush—parental involvement, especially in low income and minority households, has become central in the national dialogue regarding student academic success. In their meta-analysis of existing parental involvement literature, Xitao Fan and Michael Chen conclude that parents’ expectations and aspirations for their child have a “strong correlation” to the academic success or failure for their child. The authors preface their findings with the admission that the significance of parental involvement varies depending on how academic achievement is measured. Similarly, Wenfan Yan found that “parents of successful African American students were more likely to discuss school experiences and future plans with their teens” than the parents of black teens who were unsuccessful academically. James Heckman takes an economic approach yet reaches the same conclusion as Yan, Fan and Chen asserting that a parent’s early “investment” in the development in their child’s “cognitive and non-cognitive development” leads to success in “formal academic institutions.” While these studies offer insight to this theory, none of the studies defined academic success using the Math and Reading IRT scores. This information informs the first hypothesis in this analysis:

H1: Black students whose parents are involved and engaged in their academic lives will score higher on both the Math and Reading IRT tests.

In the 2002 study “Student attitudes, aspirations, and academic achievement, Irma Avila argues that students who see themselves as smart and academically competent are far more likely to have higher postsecondary aspirations. She goes on to claim those who do not have these sentiments, mostly black and Latino students, tend to be less successful. Similarly, Gary Miron, Jeffery Jones, and Allison Young found that “students with higher grade point averages were more likely to have higher levels of aspirations.” While Avila only focused on the link between student confidence and postsecondary education aspirations, Miron, Jones, and Young focus on the relationship between aspiration and grade point average; this analysis will focus on how confidence and aspirations affect academic performance on standardized test.

Results
H1: Black students whose parents are involved and engaged in their academic lives will score higher on both the Math and Reading IRT tests.

To test the first set of hypotheses, the following independent variables are used: “discuss school activities with parents,” “discuss college with parents,” “discuss what they are studying with parents,” and “discuss grades with parents” in both the “math score” and “reading score” regressions. The results show that, for the “discuss school activities with parents” variables, there is a statistically significant relationship ($t=-2.28$, $p$-value=.023, reject null hypothesis). This indicates that black students who discuss school activities with their parents score on average 2.60 points higher on the math standardized tests, holding all other variables constant. The other three variables—“discuss college with parents” ($t=1.60$, $p$-value=.110, fail to reject null hypothesis), “discuss what they are studying with parents” ($t=-1.04$, $p$-value=.298, fail to reject null hypothesis), and “discuss grades with parents” ($t=-1.15$, $p$-value=.252, fail to reject null hypothesis)—do not have statistically significant results.

The reading test score regression shows that there is a statistically significant relationship between students who discuss what they are studying with their parents and reading test scores ($t=-2.18$, $p$-value=.030, reject null hypothesis). The regression shows that black students who discuss what they are studying with their parents score an average of 2.20 points higher than those who do not, holding all else equal. The other variables—“discuss college with parents” ($t=-0.15$, $p$-value=.884, fail to reject null hypothesis), “discuss school activities with parents” ($t=-1.43$, $p$-value=.154, fail to reject null hypothesis), and “discuss grades with parents” ($t=-1.26$, $p$-value=.207, fail to reject null hypothesis)—are all statistically non-significant. (See Table 3 for additional results)

**Discussion and Conclusion**

The results in this regression analysis lay the foundation for a number of policy implications that can improve black student performance. In both the math and reading score regressions, at least one of the four variables used to test for parental involvement showed statistically significant results. This suggests that one way to improve black student academic performance is by encouraging more student-parent interaction within the black community. There are a number of barriers to involvement for some black parents, especially for lower income families, including lack of time, money, knowledge, or resources. With average gains of at least two points on either the math or reading standardized test—where the range of scores is limited to between 19 and 76 points—lessening or eliminated these barriers should be a priority. Similarly, the analysis illustrated the importance of getting black youth engaged and interested in higher education. The results showed that students who aspired to at least obtain a bachelor’s degree scored on average seven points higher on the reading test. For those who aspired beyond that, the test gains were even more significant. More government and state funds should go toward programs like Upward Bound that provide “fundamental support to participants in their preparation for college entrance.” Programs like these targeting black, low-income, or future first-generation college students not only have the potential to close the achievement gap but also opportunity and resource gaps that are often present between black and white students.
One contradictory result of this analysis dealt with teachers’ race and student achievement. It was interesting to see that there was a negative relationship in both the reading and math test scores for those students who had a black teacher compared to those with a white teacher. In addition to the possible explanation listed in the limitations section, other potential reasons for this finding could lie in the assumption that the black math or reading teachers who taught black students were more likely to be in urban schools with fewer resources than their suburban counterparts. Additional research that looks specifically at the training, recruitment, and retention of black math and reading teachers in urban, suburban, and rural schools is needed to understand this relationship. Additionally, the collection of data that oversamples this underrepresented group of the teaching corps would be useful and necessary to strengthen the validity of future studies in this field. Despite the negative relationship, the recruitment of black educators is still an important policy objective, as the percentage of black educators is disproportionately low, especially for black men, who only make up 2 percent of all teachers. By increasing the number of black educators, perhaps the relationship between teacher race and black student achievement will shift directions and yield the results found by Milner, Hudson, and Holmes.

Finally, the regression results show that every additional hour a black student participates in an extracurricular activity is associated with a higher score on both the Reading and Math IRT tests. These results support the notion, as expressed by Branch, Gray, Roole, and Whitaker, that black students staying engaged outside of school is important to their overall academic success. Encouraging more community based and local efforts to increase the number of black children in extracurricular activities is therefore a plausible policy option to improve achievement rates within the black community. For many black students—particularly those living in low income and urban settings—having after school activity options, besides athletic opportunities, are difficult to find. In the instances where alternative opportunities like dance, preforming and visual arts, technology, and speech and debate are available, supplying the funds to sponsor these activities is often not an option for these families. Providing subsidies or scholarships to families is therefore one way to increase black students’ participation and subsequently improve academic achievement. Another way to increase these efforts could be to provide nonprofits, counties, cities, and towns more grant opportunities for proposing creative ways to increase the number of black students who participate.

Closing the achievement gap among black and white children has proven to be a very difficult task in the United States. While there may not be one solution that will dramatically close the gap overnight, policies encouraging increased parental involvement, more participation in extracurricular activities, and encouragement of black student interest in higher education can be used in conjunction with each other to make a substantive difference for future generations.

References


