EXPLORING THE RELATIONSHIPS BETWEEN HIGH SCHOOL RACIAL COMPOSITION AND STUDENTS’ LONG TERM EDUCATIONAL OUTCOMES

A Thesis in
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by
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ABSTRACT

Prior work has suggested that attending predominately White high schools rather than predominately minority high schools is advantageous for one’s educational aspirations and attainment, especially for racial/ethnic minority students. Cited reasons for this include predominately White schools having stable faculties and providing prerequisite classes for selective college acceptance and an environment where students are pushed to develop realistic educational goals. However, there is a smaller body of literature that emphasizes that because racial/ethnic minority students often have higher pro-school attitudes and college aspirations relative to Whites, attending predominately minority high schools can be advantageous for all high school students’ college aspirations, especially racial/ethnic minority students. However, there are two, broad limitations with previous research. First, there is no study that has examined the association between high school racial composition (proportion of White or non-White students) and educational aspirations and attainment for the same cohort from the time they are in high school to possible college completion as young adults. Second, because most previous work often dichotomizes high school racial composition into predominately White schools or predominately minority schools, there is little knowledge of how attending more diverse schools with either predominate White or non-White student bodies may be associated with high school students’ educational aspirations and attainment. Therefore, the first objective of this study is to examine the association between attending racially isolated White, diverse White, diverse minority, or racially isolated minority high schools and students’ educational aspirations and attainment. The second objective is to examine how these associations vary by students’ racial/ethnic backgrounds. To do this, this study uses the National Longitudinal Study of Adolescent to Adult Health (N=4474) to estimate a series of OLS and logistic regression models predicting educational aspirations, high school completion, college attendance and college completion. Estimates suggest that students, particularly Whites and Hispanics, being part of their high schools’ racial/ethnic majority can be advantageous for educational success. In addition, some models show that for Blacks, being part of their high schools’ racial/ethnic minority or majority can be advantageous for educational success.
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INTRODUCTION

Policies dating back to the Supreme Court ruling of the *Brown vs. Board of Education* Case of 1954 have been implemented to enforce racial/ethnic integration of US public schools, including high schools. As a result, Black and Hispanic students had more opportunity to attend predominately White high schools, rather than predominately minority high schools.

Studies dating back to the Coleman report have explored the relationship between high school racial composition and students’ educational outcomes and how this relationship varies by race. Studies have investigated how attending high schools with different student body racial/ethnic makeups is associated with the college aspirations (or expectations) (Frost 2007, Yun & Moreno 2006, Walemann & Bell 2010), high school completion (Mayer 1991, Balfanz & Letger 2004), college matriculation (Camburn 1990, Teeranishi & Parker 2010), and college completion (Camburn 1990) for all students. Some studies further examined how this association varies for students of different racial/ethnic backgrounds.

Broadly, this study extends beyond previous research that has been limited primarily in terms of sample representativeness and how high school racial composition has been operationalized. Study samples utilized in previous research are often representative only of particular US states (Frost 2007, Ternanishi & Parker 2010), and/or metropolitan (or urban) areas (Camburn 1990, Yun & Moreno 2004). This study analyzes data from a nationally representative sample, inclusive of those who attended schools in urban, suburban, and rural school districts. Another limitation of previous research is that studies often focused on Black-White comparisons (Walsemann & Bell 2010, Guryan 2004) or more broadly, White-non-White comparisons (Camburn 1990, Ternaishi & Parker 2010). This study includes Black and White students, but also includes and analyzes how Hispanic students fare in schools with different
racial/ethnic compositions. This is critical given that one quarter of children in the U.S. are Hispanic (Child Trends 2014).

Prior work underscores the importance of examining students who attended more diverse schools. These schools ideally emphasize multicultural understanding among students and faculty (Orfield 2009). However, prior work examining the relationship between high school racial composition and educational aspirations and attainment has either operationalized high school racial composition by the overall percentage of White (or non-White) students (as a continuous variable) or dichotomized high school racial composition into predominately White or minority high schools. Thus, there has been little examination of how attending more diverse schools with either White or non-White majority student bodies may be associated with educational aspirations and attainment (Mayer 1991, Teranishi & Parker 2004). Though there are some related studies that further operationalized high school racial composition to evaluate diverse schools in their analyses, they are descriptive (Ternanishi & Parker 2004, Balfanz & Letger 2004). Therefore, by using school-level proportions of Black and Hispanic students, this study makes another contribution by categorizing those who attended more diverse schools into two categories (diverse with a White student majority and diverse with a non-White student majority) both of which are distinct from those who attended predominately White or predominately minority schools.

An additional study contribution is that my data source allows me to examine a nationally representative sample of high schools from their high school years through early adulthood, when most Americans complete college. Thus I am able to examine students’ aspirations and their long term attainment to better understand how the racial make-up of their high school may
contribute to not only shaping how much education students want but whether they are able to attain those goals. More specifically, this study examines the following research questions:

(1) How is high school racial composition associated with all high school students’ college aspirations, high school completion, college matriculation, and college completion? I define racial composition in line with Balfanz and Legters (2004), such that I am interested in schools that fall into 1 of 4 classifications: they are either racially isolated White (10% or less Black and Hispanic), diverse-majority White White (10-49% Black and Hispanic) diverse- majority minority (50-89% Black and Hispanic) and racially isolated minority (90% or more Black and Hispanic)

(2) How does high school racial composition moderate the associations between students’ race/ethnicity and both (a) educational aspirations and (b) attainment?

(2a) Are there between-group racial/ethnic differences in educational aspirations and attainment within schools with similar levels of high school racial ethnic minority and majority students? For example, are there differences in college aspirations among White, Black and Hispanic students attending diverse-majority White schools?

(2b) Are there within-group racial/ethnic differences in educational aspirations and attainment across schools with different levels of racial/ethnic minority and majority students? For instance, are there differences in college aspirations among Black students attending racially isolated White versus racially isolated minority schools?
Using the data from the National Longitudinal Study of Adolescent to Adult Health (Add Health), I examine a cohort of 1994-1995 high school students who have been followed up over time through early adulthood. I examine how high school racial composition is associated with educational aspirations and attainment and whether high school racial composition has different implications for students from distinct racial/ethnic backgrounds.
REVIEW OF THE LITERATURE

Origins of Racial Segregation in US Schools

Despite the growing diversity in the US, racial segregation persists in US schools, including high schools (Fiel 2013, Orfield & Frankenberg 2014). Demographic and policy changes have led to a concentration of White students in predominately White schools and concentrations of Black and Latino students in predominately minority schools that are often socioeconomically disadvantaged (Orfield 2009, Fiel 2013, Orfield & Frankeberg 2014).

A fundamental demographic change that has contributed to persisting school racial segregation is surprisingly the ongoing decline of White students who make up the school aged population due to the growing Asian, Latino, and immigrant populations (Mickelson 2015, Orfield 2009). As the proportion of US white students have declined, there has been ongoing reversals of polices that enforce racial integration in US public schools (Fiel 2013, Orfield & Frankenberg 2014, Nkomo & Mickelson 2012). Also, despite federal policies tying federal funds to schools with their compliance with non-discrimination laws, the growth in policies favoring school accountability for achievement are now favored and strongly enforced while school racial segregation policies are rarely enforced (Fiel 2013). School racial segregation has also persisted due to expansion of school choice. “White flight” has been taking place in US public schools; White students do not attend their assigned public school and instead attend private or charter schools or a public school in an affluent, predominately White school district (Fiel 2013).
General Experiences of Attending Predominately White, Predominately Minority, and Diverse Schools for All Students

Previous research suggests that attending predominately White, predominately minority, and diverse high schools has different consequences for students in terms of providing educational resources and an environment positively shaping students’ attitudes toward attending and completing college (Coleman et al. 1966). These differences fuel interest in better understanding how attending these different types of schools is associated with educational aspirations and attainment of all students.

Previous research has highlighted different mechanisms that may explain how attending either predominately White or predominately minority high schools may be associated with students’ educational aspirations and attainment. Students who attend predominately White (at least 50% White) and socioeconomically advantaged schools enjoy many advantages that students attending predominately minority schools do not have (Coleman et. al 1966). These advantages include stable faculties, environments that help students develop realistic, attainable college aspirations (Coleman et al. 1996), and the availability of more academic prerequisites for college matriculation into selective colleges (Teranishi, Allen, & Soloranzo 2004).

Despite the likely disadvantage in the lack of school resources provided to students attending a predominately minority high school, a small body of literature has highlighted how attending this type of school can also positively influence all students’ college aspirations (or expectations) (Frost 2007). Students in these school settings tend to have higher college aspirations (or expectations) and pro-school attitudes (Ainsworth-Darnell & Downey 1998, Mickelson 1990). In turn, this positively influences predominately minority schools’ normative
cultures, pushing students to aspire (and/or expect) to attend (and/or complete) (Frost 2007, Goldsmith 2004).

Although much is written about predominately White and predominately minority schools, research suggests there is a growing number of diverse, multiracial schools, where the student body is represented by at least ten percent of at least three racial/ethnic groups (Orfield 2009). Students attending these more racially/ethnically diverse schools rather than racially/ethnically homogenous schools are more likely to develop multicultural understanding, which is an important predictor of academic outcomes (Nkomo & Mickelson 2012). Unfortunately, racial/ethnic minority students are often concentrated in remedial classes, in turn isolated from White students (Orfield 2009) calling into question whether multicultural understanding among students and faculty is just an ideal and whether attending diverse schools equally pushes all student’s educational aspirations and attainment.

**Associations between High School Racial Composition and Educational Aspirations and Attainment**

Findings from previous research addressing the associations between high school racial composition and educational aspirations and attainment are not consistent. With respect to college aspirations, studies of samples in limited geographic areas suggest different findings. Yun and Kurlaender (2004) found that net of school poverty and students’ race/ethnicity aspirations to attend college rose as the proportion of White students in the school rose in a sample of students who attended one of fifty-eight high schools from three unidentified, urban school districts. This analysis tested for threshold effects of the proportion of White students in schools, but did not find them, suggesting that the estimated effect of a high school’s composition of white students on educational expectations is linear. Conversely, in an analysis of
state-level data from ninety-eight public high schools that are representative of Texas, Frost (2007) finds that the proportion of Black students in a high school has no association with college expectations while the proportion of Hispanic students in schools is negatively associated with college expectations until school-level achievement and school-level parental education are controlled. Then, an increase in both the proportion Black and Hispanic students in schools is positively associated with college expectations. This study also found that findings were largely attributable to the influence of schools with the highest proportion of Black students (at least 40%) and schools that included at least 20% of Hispanic students.

There are several reasons for the different findings of these two studies. First, both studies focus on very different samples with Yun and Kurlaender (2004) focusing on three urban school districts and Frost (2007) focused on a representative sample of all public schools in Texas regardless of whether they are located in urban, suburban and rural areas. In addition, the differences in school-level controls across studies is notable. Yun and Kurlaender only controlled for school-level socioeconomic status, whereas Frost used multiple school-level controls such as socioeconomic status, percentage of students meeting state standards and student-level controls, such as socioeconomic status, educational experiences, social support from parents and teachers.

Turning to attainment, there is more consistent evidence that attending predominately minority schools rather than predominately White schools is associated with high school completion. A descriptive analysis using the 2004 Common Core of Data about high schools across the US showed that roughly 49% of majority minority (more than 50% minority) high schools and 66% of racially isolated minority schools (more than 90% minority) had less than 60% of their freshmen to make it to their senior year, in turn, having high dropout rates (Balfanz & Legters 2004). This study also suggests, though, that this may be due to low socioeconomic
resources in schools given that their analysis of the few, predominately minority, socioeconomically advantaged, high schools found dropout rates that were similar to the rates in majority White schools (50% or less racial/ethnic minorities) (Balfanz & Legters 2004). These findings are consistent with analysis of data from over 35 years ago from students who participated in the High School and Beyond (HSB) study. Mayer (1991) found that net of students’ racial/ethnic backgrounds, attending high schools with higher proportions of Black students and higher proportions of Hispanic students was positively associated with dropping out of high school, though the finding regarding the proportion of Black students was explained by schools’ low mean socioeconomic status.

Three studies have explored whether high school segregation has implications for education after students leave high school. Two studies estimating whether high school racial composition is associated with whether a high school student matriculates into college have come to competing conclusions. Descriptive analysis of data from the California Department of Education (CDE), California Postsecondary Education Commission (CPEC), and The University of California Corporate Student database (Teranishi & Parker 2010) suggests that far fewer first time college freshmen within the UC system came from predominately minority high schools versus predominately white high schools. Conversely, analysis of older data from high school students across 968 large metropolitan schools from the HSB showed that net of students’ race, socioeconomic status, high school grades, test scores, and postsecondary plans, the percentage of White high school students is not associated with whether all students matriculate into college (Camburn 1990). These studies may yield different conclusions because their samples are very different, one analysis is descriptive and does not account for confounders, or because the studies focus on two very different historical cohorts of students.
Canburn (1990) also investigated how high school racial composition is associated with college completion (Camburn 1990). Net of student’s race, academic ability, and socio-economic status, high school type, and location, attending a school with a higher percentage of White high school students in schools was positively associated with the four-year degree attainment (Camburn 1990). The study also showed that net of controls for students’ postsecondary plans, graduates of high schools with lower percentages of White high school students were more likely to submit college applications but less likely to earn a bachelor’s degree. Additionally, twice as many students from high schools with lower percentages of White high school students (82%) left college without a degree after enrolling than did students from majority White high schools. Camburn (1990) suggests that this finding may be attributed to limited access to college preparatory classes in schools with lower percentages of white students.

In summary, previous research suggests that high school racial composition may be associated with all students’ educational aspirations and attainment. With an exception of one study, most of the previous research has shown that a higher percentage of White students (or a lower percentage of racial/ethnic minority students) within high schools is positively associated with all high school students’ college aspirations (Yun & Kurlaender 2004), high school completion (Mayer 1991, Balfanz & Letger 2004), college matriculation (Camburn 1990, Ternanshi & Parker 2010), and college completion (Camburn 1990).

Using a nationally representative cohort of high school students this study will build on prior research by thinking more critically about different levels of school diversity, comparing and contrasting racially isolated White, diverse-majority White, diverse-majority minority, and racially isolated minority schools and high school students’ educational aspirations and attainment. I also investigate whether school diversity has similar implications for aspirations
and attainment among students from diverse racial/ethnic backgrounds. This is also a topic that has received limited attention. I review existing research on why racial/ethnic minority students may do better or worse in school with different levels of diversity and the evidence about their educational success in the next two sections of my thesis.

**General Experiences of Attending Predominately White, Predominately Minority, and Diverse Schools for Racial/Ethnic Minority Students**

Previous research has cited multiple ways how attending predominately White, predominately minority, and diverse schools each can be advantageous and/or disadvantageous in distinct ways for racial/ethnic minority students’ educational aspirations and attainment. Attending predominately White high schools can be especially advantageous for racial/ethnic minority students because these schools tend to have stable faculty members, offer college prep courses, and provide an environment that pushes students to develop attainable and realistic college aspirations (Coleman et. al 1966). Unfortunately, racial/ethnic minority students attending predominately White schools may be excluded from college prep courses by being tracked into remedial and/or general courses (Southworth & Mickelson 2004) and often face negative stereotyping and discrimination from White students and faculty (Ispa-Landa & Conwell 2015, Lewis & Diamond 2015, Tyson 2011), resulting in increased depressive symptoms among racial/ethnic minority students in predominantly white schools (Walsemann et. al 2011). This suggests that the broad advantages of attending predominantly White high schools may not translate into educational success for racial/ethnic minority students.

It also suggests that predominately minority high schools could be a positive place in some respects for racial ethnic minority students. They are less likely to experience racial/ethnic prejudice and discrimination, (Walsemann et. al 2011) and Black and Hispanic students in these schools are more likely to be placed into college prep tracks, if offered (Southworth & Mickelson
Additionally, there are advantages to attending schools with same-raced, similar-minded peers with high aspirations (or expectations) to attend (or complete) college (Frost 2007, Ainsworth-Darnell & Downey 1998).

However, there is also a chance, that similar to racial/ethnic minorities attending predominately White schools, Black and Latino students attending diverse, multiracial schools with a White student majority, can be systemically isolated from White students, by being concentrated in remedial or general education courses (Orfield 2009, Nkomo & Mickelson 2012). Thus, depending on the school, attending a diverse, multiracial, school can either be advantageous or disadvantageous for racial/ethnic minority students.

**High School Racial Composition, Students’ Racial/Ethnic Backgrounds & Educational Aspirations and Attainment**

Given the school climates in more and less diverse schools described in the previous section, do racial/ethnic minorities have higher aspirations in more or less diverse schools? Frost’s (2007) analysis of Texas public high schools found that school-level proportions of Black and Hispanic high school students did not moderate the association between students’ race/ethnicity and expectations to complete a four year college degree. Conversely, an analysis of Black and White students across forty-seven Add Health high schools suggests that compared to White males, Black males have higher college aspirations when their *classrooms* had a more even distribution of Black and White students (less segregated), net of student and school controls. The same association was not evident among girls and racial differences among boys are weakened as the distribution of Black and White students in these classrooms become more uneven, in turn, segregated (Walsermann & Bell 2010).
Together these studies suggest very little evidence that racial composition of students’ school surroundings matter for college aspirations, which is unsurprising given that college aspirations are so ubiquitous among high school students. For example, in my own analysis, about 76% of students highly expect to attend college. Of course, this does not mean that the way that school composition similarly translates into aspirations for students regardless of race actually translates into similar experiences of attainment when attending high schools with different contexts. This is a topic very few studies have explored.

Two studies that have examined how the association between high school racial composition (or segregation) and dropping out of high school varies for students from different racial/ethnic backgrounds yielded competing evidence. Guryan’s (2004) analysis of fifteen to seventeen year old Blacks in 1970 and 1980 found that, net of individual, family, district, and time controls, Blacks have had significantly lower high school dropout rates as a result of desegregation efforts (measured by indices of Black student exposure and dissimilarity across school districts) during that time period (Guryan 2004). Desegregation efforts had no association with White high school dropouts of the same age in Guryan’s (2004) study. A possible reason for this latter finding is that desegregation efforts focused on placing racial/ethnic minority students into predominantly White schools, so White students’ school assignment was not affected. In addition, it is also very likely that desegregated schools still had a majority White student body, thus White students still had more of an advantageous educational experience than their Black peers. While desegregation had a positive impact on Black students and no negative impact on white students, evidence from analysis of HSB data also suggest that attending a majority minority school is associated with dropping out of high school among White, Black, and Hispanic students (Mayer 1991). In this study, the high likelihood of dropping out among Blacks
and Hispanics is largely explained by school-level SES, but the negative estimated effect for Whites remained (Mayer 1991). Together these studies underscore that majority minority schools in the 1980s were harmful for all students, that White students’ attainment was not reduced while Black students’ attainment was improved. In essence, these decades old studies suggested that desegregation and diverse schools could help reduce high school dropout for all students. I ask if the same is true in an era where segregation has been on the rise and school accountability has increased.

The longer-term consequences of school racial composition on attainment for students from different racial/ethnic backgrounds also suggests that school racial context is important. Teranishi & Parker’s (2010) descriptive analysis of 823 California high schools showed that in majority White high schools, 40% of underrepresented minority students enrolled in college within the UC system as first time freshmen in the year after completing high school compared to 75% of White students in these schools. National estimates from students in the 1980s indicate that less than a quarter of all racial/ethnic minority students who attended poor, predominately minority high schools planned to complete a four year degree and actually obtained a four year degree (Camburn 1990). On the other hand, half of all White students who attended predominately White, higher SES high schools, planned to complete college actually obtained a four year degree (Camburn 1990). These analyses suggest that Black students are disadvantaged in both majority white schools and majority minority high schools. What is missing from these studies of attainment, though, is a look how diverse schools influence college enrollment and attainment. Hispanic youth have also received too little attention.

In summary, evidence suggests that school racial composition and diversity has similar implications for all students’ aspirations, and that desegregation had positive implications for
high school completion for Black students several decades ago, but this did not appear to carry over to college enrollment or completion. Using a nationally representative cohort of high school students, this study builds on previous research by importantly considering that racial diversity in schools may have different implications for student from different racial/ethnic backgrounds than being in racially isolated majority-majority and majority-minority schools. I also carefully consider how Hispanic youth fare in an era where there are an increasingly large segment of high school students.
DATA and METHODS

Sample

This study utilized Wave I and Wave IV (the latest available wave) restricted use data from the National Longitudinal Study of Adolescent to Adult Health (Add Health), a nationally representative sample of US adolescents in seventh through twelfth grade. Importantly, this sample is representative of schools in the US with respect to region, urbanity, school type (public/private), and race/ethnicity. The analyses draws from the Add health: (1) in-school student survey (1994-95) (2) the first wave of the in-home student survey (1994-95), (3) the Wave I parent survey, (4) the school information survey completed by the school administrator, and (5) the fourth wave of the in-home student survey (2008-09).

This study restricted its analyses to the 14,800 respondents who participated in Wave I and Wave IV who were assigned probability weights for both waves. Also, because of the low number of respondents per school who identified as Asian, Native American, or other, this study restricted the sample to those who identified as White, Black, or Hispanic (n=13,657). Because this study is interested in high school students, I also only include those who were in ninth through twelfth grade (n=9924). Lastly, this study excluded cases with missing data and 7 10-12 year olds who were outliers on age. The final sample size for this study is 4,474 respondents.

I conducted descriptive analysis to estimate whether my Add Health subsample, which is roughly only a third of the overall Add Health Wave IV sample was less representative than the full national sample. Results suggest that the study sample is more socio-economically
advantaged, has fewer males, and has more non-Hispanic Whites and Hispanics compared to the full Add Health sample\(^1\). This should be kept in mind when interpreting study results.

**Measures**

**Dependent Variables**

I investigated four main outcomes. **College aspirations** is an ordinal variable based on Wave I data, when the students are in high school. It has five categories that indicate how much a respondent wants to go to college on a scale of 1 (low aspirations) to 5 (high aspirations). I also predict three dichotomous variables based on Wave IV educational attainment data: **high school completion** (1=received a high school diploma\(^2\)), **college matriculation** (1 = attended college), and **college completion** (1 = received a BA degree).

**Key Independent Variables**

I have two primary independent variables. **High school racial composition**. This four category variable is based on the Wave I in-school survey data. Over 90,000 students were sampled, all students in all Add Health schools with permission to participate in the study. This allows me to construct a more reliable measure of school racial composition than aggregating up from the Wave I in-home data. Consistent with Balfanz and Letger’s (2004) classifications of high school racial composition, this set of dummy variables indicates the proportion of Black and Hispanic students in a student’s school: 0 to 9 percent (racially isolated White), 10 to 49 percent (diverse-majority White), 50-89 percent (diverse-majority minority), and 90-100 percent within a high school (racially isolated minority) (Orfield & Frankenberg 2014, Balfanz & Letger 2004).

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\(^1\) Descriptive statistics for the full sample, descriptive statistics by students’ race/ethnicity, and by school type are in Appendix B

\(^2\) Students who did not earn a degree (=0) include those who completed a GED, earned a certificate of attendance, or did not receive a certificate, GED, or diploma.
This variable was coded as a series of dummy variables, with a value of 0 indicating that the respondent did not attend that type of school and a value of 1 indicating the respondent did attend that type of school. Another key independent variable is students’ race/ethnicity. This variable is coded as a series of three dummy variables indicating whether a student is White (reference), Black, or Hispanic.

Control Variables

I include both individual-level and school-level control variables. Individual-level control variables include gender (male=1), age at Wave I (ranging from 13 – 19), grade-level at Wave I (ranging from 9th – 12th grade), parent’s education level (ranging from eighth grade or less to professional degree beyond bachelor’s degree) and family income, measured in 1994-5 US dollars. Statistical testing revealed that income was best modeled by including the square root of income in the model. I also control for students’ nativity (US born=1, not US born=0), and primary language spoken at home (English=1, other language=0).

I also control for 4 important school-level variables. A school’s average mothers’ education level indicates the average level of maternal education (ranging from less than eighth grade to professional training beyond four-year college degree) to indicate schools’ socioeconomic status. I also control for the average school-level student expectations to complete college based on a scale of one (no chance) to eight (it will happen). This study also controlled for urbanity (urban, rural, or suburban), and school sector (public, private, or Catholic).

Analytic Strategy

All analyses are weighted using the appropriate survey weight provided by Add Health. My analysis precedes in three steps. First in Table 1, I present average college aspirations as well
as the proportion of Add Health respondents who completed high school, attended college and completed college by race/ethnicity (Panel 1), school composition (Panel 2) and then by both school composition and race/ethnicity (Panels 3-6).

I then move to presenting results from two multivariate models for educational aspirations and attainment in Tables 2A and 2B. Model 1 shows how high school racial composition is related to each outcome net of race/ethnicity, individual-level and school-level controls. The second model includes all variables in Model 1 and an interaction between high school racial composition and students’ race/ethnicity to show how high school racial composition differentially influences within-racial/ethnic and between-racial/ethnic disparities in educational aspirations and attainment. In supplementary models, I switched out the reference category for the interaction models to make the full range of within- and between-group comparisons.

I estimated OLS regression models predicting college aspirations and logistic regression models predicting high school completion, college matriculation, and completion. Because those who do not complete high school have not earned the educational credential necessary for college admission, models predicting college enrollment and completion are constrained to a sub-sample of high school graduates (n=4016).

To simplify presentation of results from Model 1 and Model 2 in Tables 2A and 2B, I calculated predicted probabilities of each indicator of educational aspirations and attainment holding all control variables at their mean value. I then graphed these estimates in Figures 1 –8 noting all statistically significant within- and between-group comparisons in educational outcomes. In Figures 1 - 4 this includes between-group comparisons of the estimated effect of high school racial composition on educational aspirations and attainment. In Figures 5 – 8 this
includes all within- and between-group racial/ethnic comparisons of how high school racial composition is associated with educational aspirations and attainment
RESULTS

Descriptive Analysis

Table 1 displays variation in educational aspirations and attainment by race/ethnicity, high school racial composition, and the combination of high school racial composition and race/ethnicity.

Findings from Column A indicate that attending schools with higher proportions of Black and Hispanic students is associated with higher college aspirations of all students, and this relationship holds for all three racial/ethnic groups. Panel 1, Column A shows that all students attending racially isolated minority high schools have higher average college aspirations than those attending all other schools with lower concentrations of Black and Hispanic students though differences are small. Whites attending racially isolated minority schools interestingly have higher average college aspirations than Whites attending all other schools. I also find that Hispanics attending racially isolated minority schools have higher average college aspirations than Hispanics attending diverse-majority minority schools, though differences are small.

Panel 4, Column A shows that among those who attend diverse-majority minority schools, Blacks have higher average college aspirations than their White peers, but the difference is small. However Panel 6, Column A shows that among those who attend racially isolated minority schools, both Blacks and Hispanics have lower average college aspirations than their White peers, though again differences are small.

Though Panel 1, Column B does not show any associations between high school racial composition and high school completion, Panels 3-6 shows how this association varies by both high school racial composition and students’ racial/ethnic backgrounds. Broadly, these findings
## Table 1. Weighted Descriptive Analysis for College Aspirations, High School Completion, College Matriculation, and College Completion

<table>
<thead>
<tr>
<th></th>
<th>College Aspirations, N=4474</th>
<th>High School Completion, N=4474</th>
<th>College Matriculation, N=4016</th>
<th>College Completion, N=4016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel 1: High School Racial Composition</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Racially Isolated White Schools</td>
<td>4.370318 (0.05)</td>
<td>0.9082</td>
<td>0.7649 (0.05)</td>
<td>0.3864 (0.05)</td>
</tr>
<tr>
<td>Diverse-Majority White Schools</td>
<td>4.418691 (0.09)</td>
<td>0.8792</td>
<td>0.7475</td>
<td>0.3869 (0.09)</td>
</tr>
<tr>
<td>Diverse-Majority Minority Schools</td>
<td>4.329042 (0.09)</td>
<td>0.8693</td>
<td>0.6402 (0.09)</td>
<td>0.2693 (0.09)</td>
</tr>
<tr>
<td>Racially Isolated Minority Schools</td>
<td>4.591722 (0.06)</td>
<td>0.8747</td>
<td>0.766</td>
<td>0.3317</td>
</tr>
<tr>
<td><strong>Panel 2: Student’s Race/Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>4.379053 (0.04)</td>
<td>wh0.8982</td>
<td>0.7653</td>
<td>wh0.3942</td>
</tr>
<tr>
<td>Black</td>
<td>4.478325 (0.05)</td>
<td>bh0.8945</td>
<td>0.6844</td>
<td>bh0.3018</td>
</tr>
<tr>
<td>Hispanic</td>
<td>4.406809 (0.24)</td>
<td>0.8296</td>
<td>0.6764</td>
<td>0.301</td>
</tr>
<tr>
<td><strong>Panel 3: Attending Racially Isolated White Schools, by Race/Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>4.367517 (0.05)</td>
<td>wh0.9102</td>
<td>0.7633</td>
<td>0.3855</td>
</tr>
<tr>
<td>Black</td>
<td>4.597485 (0.11)</td>
<td>bh0.9788</td>
<td>0.8485</td>
<td>0.4319</td>
</tr>
<tr>
<td>Hispanic</td>
<td>4.336108 (0.21)</td>
<td>wh,bh0.737</td>
<td>0.781</td>
<td>0.3952</td>
</tr>
<tr>
<td><strong>Panel 4: Attending Diverse-Majority White Schools, by Race/Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>4.418479 (0.59)</td>
<td>wh0.9102</td>
<td>0.7633</td>
<td>0.4131</td>
</tr>
<tr>
<td>Black</td>
<td>4.473957 (0.08)</td>
<td>bh0.9788</td>
<td>0.6934</td>
<td>bh0.2732</td>
</tr>
<tr>
<td>Hispanic</td>
<td>4.318842 (0.1)</td>
<td>wh,bh0.737</td>
<td>0.6632</td>
<td>bh0.3694</td>
</tr>
<tr>
<td><strong>Panel 5: Attending Diverse-Majority Minority Schools, by Race/Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>bw4.085971 (0.18)</td>
<td>bw0.7955</td>
<td>0.7382</td>
<td>0.3161</td>
</tr>
<tr>
<td>Black</td>
<td>bw4.432227 (0.11)</td>
<td>bw0.906</td>
<td>0.5742</td>
<td>bw0.2698</td>
</tr>
<tr>
<td>Hispanic</td>
<td>4.366549 (0.16)</td>
<td>bw0.7893</td>
<td>0.6641</td>
<td>bw0.239</td>
</tr>
<tr>
<td><strong>Panel 6: Attending Racially Isolated Minority Schools, by Race/Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>bw4.771463 (0.30)</td>
<td>bw0.3817</td>
<td>0.9611</td>
<td>0.0227</td>
</tr>
<tr>
<td>Black</td>
<td>bw4.53199 (0.06)</td>
<td>bw0.9011</td>
<td>0.8065</td>
<td>0.3821</td>
</tr>
<tr>
<td>Hispanic</td>
<td>bw4.679742 (0.02)</td>
<td>bw0.8633</td>
<td>0.6956</td>
<td>0.2579</td>
</tr>
</tbody>
</table>

a-Descriptive analysis for college aspirations is based on weighted averages with standard errors in parentheses
b-Descriptive analysis for high school completion is based on weighted column percentages
c-Descriptive analysis for college matriculation is based on weighted column percentages, also sub-samples for high school graduates
d-Descriptive analysis for college completion is based on weighted column percentages, also sub-samples for high school graduates
e-For Panels 1 and 2: * indicate significant comparisons .() is the reference group (otherwise all are comparable to each other)
f-For Panels 3-6: b-Black, h-Hispanic, w-White, indicates significant within race, between school comparisons. Also, bw-Black-White, wh-White-Hispanic, bh-Black-Hispanic, indicates significant within school, across race comparisons. () is the reference group (otherwise all comparisons are comparable to each other)
show that attending racially isolated White and diverse-majority White schools may be positively associated with high school completion for Whites and attending diverse-majority minority or racially isolated minority schools may be positively associated with high school completion for Blacks and Hispanics. Lower proportions of Whites attending diverse-majority minority schools completed high school than Whites attending diverse-majority White or racially isolated White schools respectively. Furthermore, a stark, lower proportion of Whites attending racially isolated minority schools completed high school than Whites attending all other types of schools.

Additionally, Panel 3, Column B shows that a substantial, lower proportion of Hispanics attending racially isolated White schools completed high school than Blacks and Whites at these schools. Also, Panel 4, Column B shows that a substantially lower proportion of Hispanics attending diverse-majority White schools complete high school relative to Whites at these schools. However, a substantially higher proportion of Blacks attending diverse-majority minority schools complete high school than Whites at these schools. Furthermore, a higher proportion of both Blacks and Hispanics (versus White) attending racially isolated minority schools complete high school.

Findings from Column C show that although attending high schools with a larger proportion of Blacks and Hispanics may be negatively associated with all high school graduates matriculating into college, this relationship works somewhat differently for Blacks. Panel 1, Column C shows that a substantially lower proportion of all high school graduates from diverse-majority minority schools matriculate into college than those who graduated from racially isolated White schools. Interestingly, a somewhat higher proportion of Blacks at racially isolated minority schools matriculate into college than Blacks who graduated from diverse-majority minority schools.
The main negative association between graduating from high schools with larger proportions of Blacks and Hispanics and college completion seen for all students is exacerbated among Whites, and graduating from high schools with lower proportions of Blacks and Hispanics is positively associated with Blacks’ college completion. Panel 1, Column D shows that a substantially lower proportion of all high school graduates from diverse-majority minority schools complete college relative to those who graduated from racially isolated White and diverse-majority White schools. In addition, a v lower proportion of Whites who graduated from racially isolated minority high schools complete college than Whites who graduated from all other types of high schools with lower proportions of Black and Hispanic students. Interestingly, a higher proportion of Blacks who graduated from racially isolated White high schools completed college than Blacks at diverse-majority White schools and diverse-majority minority schools. However, a substantially higher proportion of Whites who graduated from diverse-majority White schools complete college than their Black peers attending these types of schools.

**Multivariate Models Predicting Educational Aspirations and Attainment.**

Tables 2A and 2B show two multivariate models (Models 1 and 2 respectively) estimating college aspirations, high school completion, college matriculation, and college completion. The first model in Table 2A presents estimates for each outcome, accounting for high school racial composition and students’ racial/ethnic backgrounds, net of student and school-level controls. The second model in Table 2B presents estimates for each outcome, accounting for all variables in Model 1(Table 2A) and interactions between high school racial composition and students’ racial/ethnic backgrounds.
| Table 2A. Weighted Estimates from OLS and Logit Regression Models Predicting Outcomes |
|-----------------------------------------------|------------------|-----------------|------------------|------------------|
|                                               | A. College       | B. High School  | C. College       | D. College       |
|                                               | Aspirations      | Completion      | Matriculation    | Completion       |
|                                               | (N=4474)         | (N=4474)        | (N=4016)         | (N=4016)         |
| **Model 1: Main Effect of High School Racial Composition** |                 |                 |                  |                 |
| **HS Racial Composition (ref= Racially isolated minority schools)** |                 |                 |                  |                 |
| Racially Isolated White School               | 0.0301           | 0.696†          | -0.330           | 0.0880           |
|                                           | (0.146)          | (0.417)         | (0.267)          | (0.366)          |
| Diverse-Majority White School               | -0.0236          | 0.353           | -0.491*          | 0.0429           |
|                                           | (0.146)          | (0.330)         | (0.217)          | (0.320)          |
| Diverse-Diverse-Majority Minority School    | -0.00753         | 0.557†          | -0.414*          | 0.0540           |
|                                           | (0.133)          | (0.300)         | (0.185)          | (0.288)          |
| **Race (ref=White)**                        |                 |                 |                  |                 |
| Black                                        | 0.134            | 0.559*          | -0.248           | -0.139           |
|                                           | (0.0840)         | (0.237)         | (0.180)          | (0.166)          |
| Hispanic                                     | 0.0255           | -0.372          | 0.0524           | -0.0884          |
|                                           | (0.143)          | (0.308)         | (0.268)          | (0.204)          |
| Constant                                     | 2.875**          | -1.830          | -1.645           | -6.849***        |
|                                           | (0.406)          | (1.312)         | (1.086)          | (1.331)          |

*Source: National Longitudinal Study of Adolescent to Adult Health 1994/95-2008/09*

*p < .05*, *p < .01**, *p < .001***

*Notes:*

* All models account for students’ racial/ethnic backgrounds and the following controls: age, gender, English Speaking, US Born, parent’s education, parent reported income, school level SES, school level expectation to attend college, schools’ urbanity (urban, suburban, rural), and school type (private, public, Catholic)
Main Associations of High School Racial Composition

Model 1a predicting college aspirations in Table 2A and Figure 1 both indicate that there are no statistically significant associations between high school racial composition and all students’ aspirations to attend college. On average, all students predicted aspirations to attend college is uniformly high across different school types. In addition, Model 1b predicting high school completion in Table 2A and Figure 2 show no statistically significant associations between high school racial composition and high school completion. However, there are marginally significant findings from in Model 1b, Table 2A (not shown in Figure 2). Estimates suggest that attending diverse-majority minority high schools is associated with a higher probability of completing high school relative to attending racially isolated minority high schools.

Model 1c predicting college matriculation among high school graduates in Table 2A shows that there are significant associations between high school racial composition and whether high school graduates matriculate into college. Relative to students attending racially isolated minority schools, those attending diverse-majority minority (b= -.491, p<.05) and diverse-majority White high schools (p=<= -.414, p<.05) have lower estimated probabilities of college matriculation. Figure 3 better depicts these findings and highlights the relatively similar, higher predicted probabilities of college matriculation for those in diverse-majority White and diverse-majority minority schools relative to those in racially isolated minority schools.

Model 1d predicting college completion in Table 2A along with Figure 4 shows that there is no association between high school racial composition and whether high school graduates
complete college\(^3\). This finding contradicts prior work that indicated that high school racial composition is associated with whether students eventually complete college. Furthermore, Figure 4 shows that the predicted probability that high school graduates will complete college is uniform across high school types.

![Figure 1. Predicted College Aspirations by HS Racial Composition](image)


*Notes:*
Adjusted models include students’ racial/ethnic backgrounds and the following controls: age, gender, English Speaking, US Born, parent’s education, parent reported income, school level SES, school level expectation to attend college, schools’ urbanity (urban, suburban, rural), and school type (private, public, Catholic)

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\(^3\) When estimating the same model estimating educational attainment, there are also no associations between the different thresholds of high school racial composition and educational attainment.

Notes:
Adjusted models include students’ racial/ethnic backgrounds and the following controls: age, gender, English Speaking, US Born, parent’s education, parent reported income, school level SES, school level expectation to attend college, schools’ urbanity (urban, suburban, rural), and school type (private, public, Catholic)

Notes:
Reference group for comparison: (*) students who attend racially isolated minority schools, findings presented in graph are at least at the p<.05.

Adjusted models include students’ racial/ethnic backgrounds and following controls: age, gender, English Speaking, US Born, parent’s education, parent reported income, school level SES, school level expectation to attend college, schools’ urbanity (urban, suburban, rural), and school type (private, public, Catholic)

Notes:

Reference group for comparison: (*) students who attend racially isolated minority schools, findings presented in graph are at least at the p<.05.

Adjusted models include students’ racial/ethnic backgrounds and following controls: age, gender, English Speaking, US Born, parent’s education, parent reported income, school level SES, school level expectation to attend college, schools’ urbanity (urban, suburban, rural), and school type (private, public, Catholic)
High School Racial Composition as a Moderator of the Association between Students’ Race/Ethnicity and their Educational Aspirations and Attainment

Model 2a in Table 2B suggests that the association race/ethnicity and college aspirations is not uniform in different school racial contexts. These findings are better depicted in Figure 5.

Within-school comparisons of students of different racial/ethnic backgrounds suggest that Blacks have slightly higher predicted college aspirations than Whites in racially isolated White, diverse majority white and diverse majority minority schools. In addition Hispanics attending diverse-majority minority schools are estimated to have higher predicted college aspirations relative to their White peers in these schools. However, Blacks attending racially isolated minority schools are predicted to have lower predicted college aspirations relative to their Hispanic peers.

Between-school differences in predicted college aspirations among students from the same racial-ethnic group suggest that Whites attending racially isolated minority schools have higher predicted college aspirations than same-race peers attending diverse-majority minority schools. Also, Hispanics attending racially isolated minority schools are estimated to have higher predicted college aspirations than Hispanics attending diverse-majority White schools.

Model 2b in Table 2B shows how the association between high school racial composition and high school completion varies within-schools across different racial/ethnic groups and across schools within racial/ethnic groups. These results are better depicted in Figure 6.

Within school-type comparisons of students from different racial/ethnic backgrounds suggest that in Hispanics attending diverse-majority White high schools are estimated to have a lower predicted probability to complete high school relative to their White and Black peers. Furthermore, Blacks attending diverse-majority White schools have a higher predicted
probability to complete high school than their White peers. In addition, Blacks attending diverse-majority minority schools have a higher predicted probability to complete high school than their White peers. Furthermore both Blacks and Hispanics attending isolated minority schools (Blacks: b=2.775, p<.01, Hispanics b=2.097, p<.01) have higher predicted probabilities of completing high school than their White peers.

In addition, comparisons within racial/ethnic groups across schools show that compared to Whites attending racially isolated minority schools, White students attending all other school types (\(^4\)RIW: b=2.846, p<.01, MW: 2.598, p<.01, MM: b=2.167, p<.01) have a higher predicted probability to complete high school. Also shown in Figure 6, Hispanics attending diverse-majority minority schools have a higher predicted probability to complete high school than Hispanics attending diverse-majority White schools.

Figure 7 depicts all within- and between-group comparisons from Model 2c in Table 2B. Within school comparisons of high school graduates from different racial/ethnic backgrounds suggest that Whites attending diverse-majority White schools have a higher predicted probability to matriculate into college than Blacks at these schools. In addition, both Whites and Hispanics graduating from diverse-majority minority high schools have higher predicted probabilities to matriculate into college than their Black peers.

Between school comparisons of students from the same racial/ethnic background show that Black students graduating from racially isolated White high schools have a higher predicted probability of matriculating into college than Blacks graduating from diverse-majority minority high schools. However, Blacks graduating from diverse-majority minority high schools have a

\(^4\) RIW-Racially Isolated White, MW-Majority White, MM-Majority Minority, RIM-Racially Isolated Minority
lower predicted probability to matriculate into college than Blacks graduating from racially isolated minority schools.

My final model predicts college completion and is depicted in Figure 8. The only within-school racial difference in college completion is that Black and Hispanic high school graduates in racially isolated minority schools (Blacks: b=3.065, p<.05, Hispanics b=3.038, p<.05) have higher probabilities of college completion than their White peers at these schools. The only statistically significant within racial/ethnic group comparison indicates that, relative to White high school graduates from racially isolated minority high schools, those who graduated from high schools with fewer concentrations of racial/ethnic minority students (RIW: b=3.428, p<.05, MW: 3.233, p<.05, MM: b=3.234, p<.01) have a higher probability of college completion.

---

5 The same model estimating for educational attainment shows that with respect to Whites who attend racially isolated minority schools, Blacks(b=1.211, p<.01) and Hispanics(b=1.149, p<.01) attending racially isolated schools have higher educational attainment.

6 The same model estimating for educational attainment shows that with respect to Whites who attend racially isolated minority schools, Whites who attend racially isolated White schools (b=1.087, p<.01), majority White schools (b=.979, p<.01) and majority minority schools (b=1.214, p<.01) have higher educational attainment.
Table 2B. Weighted Estimates from OLS and Logit Regression Models Predicting Outcomes

<table>
<thead>
<tr>
<th>HS Racial Composition(ref= Racially isolated minority schools)</th>
<th>A. College Aspirations (N=4474)</th>
<th>B. High School Completion (N=4474)</th>
<th>C. College Matriculation (N=4016)</th>
<th>D. College Completion (N=4016)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Racially Isolated White School</td>
<td>-0.360</td>
<td>2.846**</td>
<td>-2.165</td>
<td>3.248*</td>
</tr>
<tr>
<td></td>
<td>(0.285)</td>
<td>(0.662)</td>
<td>(1.322)</td>
<td>(1.342)</td>
</tr>
<tr>
<td>Diverse-Majority White School</td>
<td>-0.373</td>
<td>2.598**</td>
<td>-2.281†</td>
<td>3.233*</td>
</tr>
<tr>
<td></td>
<td>(0.287)</td>
<td>(0.649)</td>
<td>(1.320)</td>
<td>(1.338)</td>
</tr>
<tr>
<td>Diverse-Majority Minority School</td>
<td>-0.585*</td>
<td>2.167**</td>
<td>-1.985</td>
<td>3.234*</td>
</tr>
<tr>
<td></td>
<td>(0.301)</td>
<td>(0.727)</td>
<td>(1.344)</td>
<td>(1.370)</td>
</tr>
<tr>
<td>Race (ref=White)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>-0.404</td>
<td>2.775***</td>
<td>-2.005</td>
<td>3.065*</td>
</tr>
<tr>
<td></td>
<td>(0.297)</td>
<td>(0.592)</td>
<td>(1.366)</td>
<td>(1.415)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.0836</td>
<td>2.097**</td>
<td>-1.743</td>
<td>3.038*</td>
</tr>
<tr>
<td></td>
<td>(0.303)</td>
<td>(0.762)</td>
<td>(1.384)</td>
<td>(1.330)</td>
</tr>
<tr>
<td>Racially Isolated White School * Black</td>
<td>0.639*</td>
<td>-0.905</td>
<td>2.514†</td>
<td>-2.747†</td>
</tr>
<tr>
<td></td>
<td>(0.319)</td>
<td>(1.480)</td>
<td>(1.411)</td>
<td>(1.453)</td>
</tr>
<tr>
<td>Racially Isolated White School * Hispanic</td>
<td>0.00129</td>
<td>-2.606*</td>
<td>2.563†</td>
<td>-2.700†</td>
</tr>
<tr>
<td></td>
<td>(0.359)</td>
<td>(1.211)</td>
<td>(1.489)</td>
<td>(1.418)</td>
</tr>
<tr>
<td>Diverse-Majority White School * Black</td>
<td>0.583*</td>
<td>-2.444***</td>
<td>1.916</td>
<td>-3.310*</td>
</tr>
<tr>
<td></td>
<td>(0.310)</td>
<td>(0.659)</td>
<td>(1.379)</td>
<td>(1.431)</td>
</tr>
<tr>
<td>Diverse-Majority White School * Hispanic</td>
<td>-0.308</td>
<td>-2.844***</td>
<td>1.444</td>
<td>-3.180*</td>
</tr>
<tr>
<td></td>
<td>(0.441)</td>
<td>(0.752)</td>
<td>(1.426)</td>
<td>(1.347)</td>
</tr>
<tr>
<td>Diverse-Majority Minority School * Black</td>
<td>0.754*</td>
<td>-1.577*</td>
<td>1.242</td>
<td>-3.192*</td>
</tr>
<tr>
<td></td>
<td>(0.333)</td>
<td>(0.784)</td>
<td>(1.412)</td>
<td>(1.446)</td>
</tr>
<tr>
<td>Diverse-Majority Minority School * Hispanic</td>
<td>0.389</td>
<td>-1.482†</td>
<td>1.855</td>
<td>-3.195*</td>
</tr>
<tr>
<td></td>
<td>(0.329)</td>
<td>(0.815)</td>
<td>(1.371)</td>
<td>(1.415)</td>
</tr>
<tr>
<td>Constant</td>
<td>3.123**</td>
<td>-4.027*</td>
<td>0.159</td>
<td>-9.949***</td>
</tr>
<tr>
<td></td>
<td>(0.544)</td>
<td>(1.538)</td>
<td>(1.811)</td>
<td>(1.982)</td>
</tr>
</tbody>
</table>

Source: National Longitudinal Study of Adolescent to Adult Health 1994/95- 2008/09  *p <.05, ** p<.01, *** p<.001

Notes:
* All models account for students’ racial/ethnic backgrounds and the following controls: age, gender, English Speaking, US Born, parent’s education, parent reported income, school level SES, school level expectation to attend college, schools’ urbanity (urban, suburban, rural), and school type (private, public, Catholic)

Notes:
Labels indicate within-race between school comparisons in college aspirations observed in supplementary analyses.
- Significantly different from Blacks: p<.05
- Significantly different from Whites: p < .05
- Significantly different from Hispanics: p<.05

Labels indicate within school, across different racial/ethnic group comparisons in college aspirations observed in supplementary analyses
- Black and Whites within school are significantly different < .05
- Whites and Hispanics within school are significantly different: p<.05
- Blacks and Hispanics within school type are significantly different: p<.05

() indicates reference groups

Adjusted models include following controls: age, gender, English Speaking, US Born, parent’s education, parent reported income, school level SES, school level expectation to attend college, schools’ urbanity (urban, suburban, rural), and school type (private, public, Catholic)
Figure 6. Predicted Probability of HS Completion by HS Racial Composition & Students’ Race/Ethnicity


Notes:
Labels indicate within-race between school comparisons in high school completion observed in supplementary analyses.
b- Significantly different from Blacks: p<.05
w- Significantly different from Whites: p <.05
H-Significantly different from Hispanics: p<.05

Labels indicate within school, across different racial/ethnic group comparisons in college aspirations observed in supplementary analyses
Bw-Blacks and Whites within school are significantly different<.05
Wh- Whites and Hispanics within school are significantly different: p<.05
Bh- Blacks and Hispanics within school type are significantly different: p<.05
() indicates reference groups

Adjusted models include following controls: age, gender, English Speaking, US Born, parent’s education, parent reported income, school level SES, school level expectation to attend college, schools’ urbanity (urban, suburban, rural), and school type (private, public, Catholic)

Notes:
Labels indicate within-race between school comparisons in college matriculation observed in supplementary analyses.
b- Significantly different from Blacks: p<.05
w- Significantly different from Whites: p <.05
H- Significantly different from Hispanics: p<.05

Labels indicate within school, across different racial/ethnic group comparisons in college aspirations observed in supplementary analyses
Bw- Blacks and Whites within school are significantly different<.05
Wh- Whites and Hispanics within school are significantly different: p<.05
Bh- Blacks and Hispanics within school type are significantly different: p<.05
() indicates reference groups

Adjusted models include following controls: age, gender, English Speaking, US Born, parent’s education, parent reported income, school level SES, school level expectation to attend college, schools’ urbanity (urban, suburban, rural), and school type (private, public, Catholic)

Notes:
Labels indicate within-race between school comparisons in college completion observed in supplementary analyses.
b- Significantly different from Blacks: p<.05
w- Significantly different from Whites: p <.05
H-Significantly different from Hispanics: p<.05

Labels indicate within school, across different racial/ethnic group comparisons in college aspirations observed in supplementary analyses
Bw-Blacks and Whites within school are significantly different<.05
Wh- Whites and Hispanics within school are significantly different: p<.05
Bh- Blacks and Hispanics within school type are significantly different: p<.05
() indicates reference groups

Adjusted models include following controls: age, gender, English Speaking, US Born, parent’s education, parent reported income, school level SES, school level expectation to attend college, schools’ urbanity (urban, suburban, rural), and school type (private, public, Catholic)
DISCUSSION

An important contribution of this paper was to evaluate how high school racial composition may be associated with students’ college aspirations, high school completion, college matriculation, and completion as well as how this association varies for students of different racial/ethnic backgrounds. To do this, this study analyzed a relatively recent cohort of respondents from when they are high school students to when they are young adults. Much of the previous research in this area investigated and/or only found a linear rather than non-linear association between high school racial composition (school level proportion of White and/or racial/ethnic minority students) and educational aspirations and attainment. Thus this study made another important contribution by examining the non-linear associations between attending four different types of high school racial composition (racially isolated White, diverse-majority White, diverse-majority minority, and racially isolated minority) and students’ educational aspirations and attainment. This study shows how attending predominately White, predominately minority, or diverse, multiracial high schools can advantageous or disadvantageous for one’s educational aspirations and attainment, and how these experiences may vary for students of different racial/ethnic backgrounds.

This study suggested that high school racial composition is directly associated with whether all students complete high school and whether all students matriculate into college. Consistent with prior literature, this study showed that all students attending high schools with lower concentrations of Black and Hispanic students are positively associated with completing high school. Furthermore, this finding is consistent with the perspective that claims students attending high schools with lower concentrations of Black and Hispanic students is advantageous because many, but not all, these schools are socio-economically advantaged, thus more able to
provide student resources that encourage educational success (Yun & Moreno 2004, Mickelson & Nkomo 2012, Coleman et al. 1966). However, contradicting prior literature, this study also suggested that all students attending high schools with lower concentrations of Black and Hispanic students is negatively associated with matriculating into college. A possible explanation for this finding is that students at predominately minority schools may matriculate into college, but may not complete college. To determine this, this finding warrants further investigation, by further disaggregating students by those who matriculated into college but did not finish and those who matriculated into college and finished.

This study strongly suggested that the associations between high school racial composition and college aspirations vary for students of different racial/ethnic backgrounds. The most notable finding was that whether Blacks were part of their schools’ racial/ethnic majority (diverse-majority minority high schools) or minority (racially isolated White and diverse-majority White schools), they are estimated to have higher predicted college aspirations than their White peers. This further substantiates prior work that showed that Blacks have higher college aspirations and pro-school attitudes than Whites (Ainsworth-Darnell 1998, Frost 2007, Mickelson 1990). Also, Hispanics attending racially isolated minority schools are estimated to have higher college aspirations than those attending diverse-majority White schools. Also, Hispanics enrolled in diverse-majority minority high schools were estimated to have higher college aspirations than their White peers. This further substantiates the implication that marginalized racial/ethnic minority students can be more educationally successful in predominately minority schools or diverse-minority majority schools, due to having similar minded, same-raced peers (Goldsmith 2004, Nkomo & Mickelson 2012). Lastly, this study also suggested that Whites attending predominately minority schools are estimated to have higher
college aspirations than those attending schools with lower proportions of Black and Hispanic students. This finding is partially consistent with prior work that showed that all students attending predominately minority high schools, regardless of race, have higher college aspirations (Frost 2007). Furthermore, these findings substantiate a prior implication that because racial/ethnic minority students have higher college aspirations, this mindset is dominant in schools where they make the majority (Goldsmith 2004).

In addition, this study strongly suggested that the associations between high school racial composition and high school completion varies for students of different racial/ethnic backgrounds. A notable finding is that Whites who attend racially isolated minority schools are estimated to have a lower probability of completing high school compared to Whites attending schools with lower concentrations of racial/ethnic minority students. Furthermore, both Blacks and Hispanics attending racially isolated minority schools are estimated to have a higher probability to complete high school than their White peers. Prior work showed that similar to Whites, Blacks and Hispanics in predominately minority schools are likely to dropout, but this was primarily explained by these schools being socio-economically disadvantaged; this is not the case for Whites (Mayer 1991). Thus, this finding is consistent with prior work, and implies that students having same-raced peers may also be important for Whites. Also consistent with this implication, another finding showed that Hispanic students attending diverse- majority minority schools are estimated to have a higher probability of completing high school than those attending majority White schools.

Also, this study strongly suggested that the associations between high school racial composition and college matriculation varies for students of different racial/ethnic backgrounds. A notable finding is that both Blacks attending racially isolated White schools and or racially
isolated minority schools are estimated to have a higher probability to matriculate into college than Blacks attending diverse-majority White and diverse-majority minority schools. These particular findings are consistent with prior work that showed that similar percentages of underrepresented minorities graduated from predominately White and predominately minority high schools matriculated into college (Ternaishi & Parker 2010). However, unlike prior work, this study showed that Blacks attending diverse schools either with a White or racial/ethnic minority majority, can be disadvantageous for matriculating into college. Additionally, Whites attending diverse-majority White high schools are estimated to have a higher probability of matriculating into college than their Black peers. This finding is also consistent with prior work showing that a greater percentage of Whites who graduated from diverse majority White high schools matriculated into college than their underrepresented minority peers (Ternaishi & Parker 2010).

Furthermore, this finding is consistent with the implication supported by prior work that racial/ethnic minority students attending schools with mostly White student bodies may be at a disadvantage rooted in racial biases of White students and faculty, possibly deterring them away from college (Lewis & Diamond 2015, Walsemann et. al 2011, Nkomo & Mickelson 2012). Interestingly, Whites attending diverse-majority minority high schools are estimated to have a higher probability of matriculating into college than their Black and Hispanic peers, which contradicts prior work. A possible explanation for this finding is the diverse, majority minority schools in this sample have fifty to sixty percent of Black and Hispanic students that make up their student bodies, which may be atypical from other majority minority schools that could put White students at more of an advantage compared to Blacks and Hispanics.
Lastly, this study strongly suggested that the associations between different high school racial composition and college completion vary for students of different racial/ethnic backgrounds. I find that White students in high schools with lower concentrations of Black and Hispanic students are estimated to have a higher probability to complete college than those in racially isolated minority high schools. These findings are consistent with prior work that Whites attending predominately minority schools are less likely to complete college than their same-raced peers attending predominately White schools (Camburn 1990). In addition, both Black and Hispanic students attending racially isolated minority high schools are estimated to have a higher probability to complete college than their White peers. These findings are inconsistent with prior work that indicated otherwise (Camburn 1990). A possible reason for this inconsistency could be that my analyses were inclusive of students from all types of metro areas, rather than focusing on students in large metro areas. Together these findings implicate that having same-raced peers is also an important advantage for Whites as well as racial/ethnic minorities to be educationally successful.
LIMITATIONS

There are several limitations to consider. An important limitation is that my study sample is not fully representative of Add Health respondents. The sample is not even a third of the Add Health respondents who participated in the fourth wave and my analysis of differences between the study sample and the Add Health sample suggests that my sample is more advantaged than what one would expect in a nationally representative study. This may produce some bias in my estimates of educational aspirations and attainment. Another limitation is that needs to be addressed is the operationalization of college matriculation. For college matriculation, there is no way of knowing whether respondents were originally enrolled in a two year or a four year college program. A final limitation is how school racial composition was measured. Particularly, many of the diverse majority minority schools where White students in the sample attended composed of about fifty to sixty percent of racial/ethnic minority students, which could put White students at an advantage. Although this technically makes these schools diverse- majority minority, these schools may be atypical from the educational experiences of those who attend the same type of school with greater proportions of minority students.
CONCLUSIONS

In conclusion, evidence from this study shows that the associations between high school racial composition and students’ educational aspirations and attainment are complex. Some evidence suggests that attending predominately White schools (which many not all, are socially advantaged) can be advantageous for all students and particularly White and Black students. However, other evidence implied that attending predominately minority schools can also be advantageous for all students and particularly, Black, Hispanic, and even White students in distinct ways. This is not to say that racial segregation of schools is good, considering the historical, racially discriminatory roots of it. However, because of the significance of race in the US is reflected in its schools, it is not only important for schools to be able to provide numerous resources to its students but also to provide a culturally inclusive environment for students to be educationally successful.
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<th>Whites (N=2072)</th>
<th>Blacks (N=940)</th>
<th>Hispanics (N=832)</th>
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Weighted Descriptive Statistics, Full Sample and by School Racial Context

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APPENDIX B: SUPPLEMENTARY ANALYSES FOR EDUCATIONAL ATTAINMENT


Notes:
Adjusted models include students’ racial/ethnic backgrounds and following controls: age, gender, English Speaking, US Born, parent’s education, parent reported income, school level SES, school level expectation to attend college, schools’ urbanity (urban, suburban, rural), and school type (private, public, Catholic)
Notes:
Labels indicate within-race between school comparisons in educational attainment observed in supplementary analyses.
b- Significantly different from Blacks: p<.05
w- Significantly different from Whites: p <.05
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Mayer, S.E. (1991). How much does a high school’s racial and socioeconomic mix affect


http://doi.org/10.1353/csd.2006.0059


