Investigating Inequities in Disciplinary Practices within Shelby County Schools

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Introduction

The appropriate ways to address student misbehavior in the learning environment have been explored since before schooling became compulsory (FindLaw, 2016). Administrators have used a variety of methods to eliminate, or at least diminish, undesirable student behaviors. Examples include verbal warnings/reprimands, removing privileges such as recess or sports participation, contacting parents, time out, corporal punishment, after-school detention, restitution, in-school suspension (ISS), out-of-school suspension (OSS), expulsion, and alternative school placement. Schools have used OSS as a disciplinary consequence for more than 60 years (Allman & Slate, 2011), and despite documented concerns over its detrimental effects and despite the push to reform discipline policies and move toward a more positive approach of addressing adverse student behaviors, it is still widely used today.

What are the benefits of excluding students from school for being disruptive or breaking school rules? For misbehaving students and those who witness the consequences these students receive, does exclusionary discipline "teach all students a lesson" and restore order to the classroom and school environment? Does removing disruptive students alleviate the burden of behavior management for teachers, allowing more compliant students to learn, potentially improving academic outcomes? These are some of the reasons advocates of exclusionary discipline, such as suspending and expelling students, cite for keeping the practice in place. But what effects do these practices have on the students who have been excluded? An obvious consequence is missing instructional time, assignments, and activities, potentially yielding poorer academic performance and feelings of resentment and isolation. And research shows that Black (Anderson & Ritter, 2017; Anyon, et al., 2014; Lacoe & Manley, 2019; Gopalan & Nelson, 2019; Losen & Martinez, 2020), male (Bacher-Hicks, Billings, & Deming, 2019; Bradshaw, Mitchell, O'Brennan, & Leaf, 2010), and poor (Anyon, et al., 2014; Balfanz, Byrnes, & Fox, 2014; Gullo, 2017; Pearman II, Curran, Fisher, & Gardella, 2019; Welch & Payne, 2010) students are disproportionately affected by exclusionary disciplinary consequences.

Consequently, the current study addresses critical questions regarding disparities in discipline practices:

1. Are the severities (e.g., ISS, OSS, or expulsion) and lengths of disciplinary consequences assigned fairly?
2. Are the office disciplinary referrals (ODRs) that precipitate these consequences fairly administered?
3. Do school-level variables (e.g., grade-level served, enrollment size, student body composition, or teacher demographics) and/or student-level variables (e.g., race, gender, or poverty status) affect whether and how severely students are punished for misbehavior?

The following sections provide a brief overview of the literature on discipline disparities and their effects on student outcomes, justifying the current study: *Investigating Inequities in Discipline Practices in Shelby County Schools*.

Disproportionality in Discipline Practices: How Bad is the Problem?

Disparities in Office Disciplinary Referrals (ODRs)

Several studies have reported on the disparities in ODRs between Black students and their peers. Using three years of data from the Civil Rights Data Collection and the Arkansas Department of Education, researchers found that of the 590,750 statewide incidents in the sample, Black students were overrepresented, comprising 21% of the school enrollment across the state, but representing almost 44% of the incidents. Conversely, Latinx students' representation was proportionate to their enrollment, comprising 10% of enrollment and accounting for 9% of the incidents (Anderson & Ritter, 2020). And in an earlier study, the authors found that Black students were three more likely to receive an ODR than White students (Anderson & Ritter, 2017).

Another study found that controlling for student and classroom-level covariates, Black students had significantly greater odds of receiving a teacher-reported ODR, any type of ODR, a minor ODR, and an ODR for fighting relative to White students. Males were more than twice as likely as females to receive any ODR or a teacher-reported ODR. Additionally, Black boys had 55% greater odds of receiving a teacher-reported ODR compared to White boys (Bradshaw, Mitchell, O'Brennan, & Leaf, 2010).

Anyon and colleagues (2014) analyzed the risk factors associated with students being referred to the office, being excluded from school, and/or facing juvenile sanctions. They found disparities in ODRs based on race, gender, poverty (as evidenced by eligibility for Free or Reduced Lunch (FRL)), homelessness, English proficiency, and grade level.

Relative to White students, Latinx and Black students were 1.40 and 2.30 times as likely to receive an ODR, respectively. Boys were 2.15 times as likely as girls, poor students were 2.40 times as likely as those that did not meet this criterion. Additionally, homeless (1.28), native English speakers (1.72), students receiving special education (SPED) services (1.49), and those designated as seriously emotionally disabled (4.30) were more likely to be referred to the office than their respective counterparts (Anyon, et al., 2014). Students' risk of ODRs was higher in middle school (3.87 times) versus all other schools, and in schools with greater concentrations of Black (6.06 times) and Latinx (2.84) students.

Disparities in Consequences for ODRs

In the second part of their analysis, Anyon and colleagues (2014) sought to identify the risk factors associated with being excluded from school (out-of-school suspension (OSS) and expulsion) and/or being referred to law enforcement. After controlling for referral reasons and the intervention received, several student-level variables emerged as predictors. Black (1.55) and multiracial (1.41) students, boys (1.21), native English speakers (1.13), students in SPED (1.17), and students designated as seriously emotionally disabled (2.48) had significantly higher odds of receiving OSS relative to their respective counterparts. Regarding expulsions, only enrollment in middle school (3.45) versus elementary or high school increased students' likelihood of receiving this sanction (Anyon, et al., 2014). Last, Latinx (1.59) and Black (1.52) students had significantly higher odds of being referred to law enforcement for their ODRs relative to White students, and native English speakers were at greater risk (1.31) than were students with Limited English Proficiency (LEP).

A Florida study followed 181,897 first-time 9th-grade students from the 2000–01 school year through 2007–08. They found that Black students' suspension rates were 17

percentage points higher than that of White students and 13 percentage points higher than that of Latinx students. Additionally, Black students were suspended an average of 0.8 days longer than White students and 1.2 days longer than Latinx students. Even when controlling for the interaction between race (Black) and poverty, the student-level factors remained significant. Notably, being poor (0.14), overage for grade (0.14), Black (0.10), receiving SPED services (0.06), being proficient in English (LEP = -0.04), and Latinx (.01) were significantly related to higher suspension rates (Balfanz, Byrnes, & Fox, 2014).

Gopalan and Nelson (2019) explored the discipline gap between Black and White students and between Hispanic and White students in Indiana public schools and found that racial discipline disparities between Black and White students emerged as early as pre-kindergarten and widened with grade progression. The study examined discipline data from 2008–09 through 2013–14, which included more than 3 million students and more than 7 million annual observations. The results are described below.

Statewide, the Black-White gap in the likelihood of exclusion (suspension/expulsion) was 3.8 percentage points in prekindergarten/kindergarten, 14.4 percentage points in elementary school, and 19.1 percentage points in high school, while the Latinx-White gap progressed from 0 to 8 percentage points during the same period. Additionally, Black students received exclusions that are 0.1 to 1.4 days longer than that of White students. Within-district results followed a similar trend: Black-White gap in the likelihood of exclusion was 4.1 percentage points in pre-kindergarten/kindergarten, 15 percentage points in elementary school, and 19.8 percentage points in high school. (Gopalan & Nelson, 2019).

Not only were Black students more likely to be excluded and excluded for longer periods, the study showed that they were also more likely to receive multiple exclusions. Controlling for the number and length of exclusions received in the previous year, on average, the likelihood that Black students would receive multiple exclusions in a year relative to White students was 2 percentage points higher in pre-kindergarten/kindergarten, 8 percentage points higher in elementary/middle school, and 11 percentage points higher in high school. The authors concluded that the source of the Black-White gap in length of exclusion arose from multiple sources—the reduced likelihood of White students to ever be suspended, the reduced likelihood of White students receiving multiple suspensions, and the reduced likelihood of White students being suspended for longer durations when they were suspended (Gopalan & Nelson, 2019).

Anderson and Ritter (2020) also explored racial disparities in the severity of punishments, evidenced by the length of exclusions. This study analyzed discipline data from 2010–11 to 2012–13 among Arkansas' K-12 schools to determine the extent to which Black and Latinx students were excluded from the classroom (ISS) or school (OSS) longer than were White students, despite being cited for similar infractions. The authors investigated whether disparities existed between schools throughout the statewide as well within individual schools. They found that between schools across the state, Black students received about 0.33 extra days of punishment *per incident* relative to White students, even when controlling for students' poverty status (using Free or Reduced Lunch (FRL) as a proxy), while Latinx students received about 0.15 days *less* than White students. Within-school differences were also present, but much smaller. Black students received about 0.07 extra days of punishment per incident compared to White students attending the same school. There was no significant difference between Latinx and White students' punishment severities (Anderson & Ritter, 2020).

Detrimental Effects of Exclusionary Consequences

Learning Loss & the Achievement Gap

In collaboration with the ACLU of Southern California, the Department of Education's Center for Civil Rights Remedies (CCRR) produced a national brief describing the amount of lost instruction for each racial/ethnic group aggregated across all grades k–12. Notable findings are as follows. In 2015–16, Black secondary students lost 103 days per 100 students enrolled due to OSS, 82 days more than the 21 days per 100 students their White peers lost. Observing the interaction of race and gender revealed even larger disparities. Black male secondary students lost 132 days per 100 students enrolled. Black girls lost 77 days per 100 students enrolled – seven times the rate of White girls (Losen & Martinez, 2020).

Examining discipline data from 2011–12 and 2013–14, another national study using Stanford Education Data Archive (SEDA) and the Civil Rights Data Collection (CRDC) data reported that the racial discipline gap found between 3rd through 8th grade Black and White students corresponded with the achievement gap[1] between these groups (Pearman II, Curran, Fisher, & Gardella, 2019). For every 1-point increase in the discipline gap[2], there was a 0.02 standard deviation increase in the achievement gap. In other words, a district with a 10-point disparity in the discipline gap between Black and White students could expect to see an achievement gap that was 0.20 standard deviation larger than a district that suspended the same proportion of Black and White students (Pearman II, Curran, Fisher, & Gardella, 2019).

Even after controlling for district-level composition (percent of poor, White, and Limited English Proficient (LEP) students, total enrollment, per-pupil expenditures, rate of charter enrollment in Model 2, racial and income segregation in Model 3, racial disparities in gifted programs, IEP assignment, poverty, student-teacher ratio, and charter enrollment in Model 4, community characteristics (median income, education, female-headed household, employment status, poverty, urban status) in Model 5, and district fixed effects in Model 6, the association between the discipline and achievement gaps remained. A 1 percentage point increase in the Black-White discipline gap was associated with a 0.01 standard deviation increase in the Black-White achievement gap. Conversely, a 1-standard deviation increase in the Black-White achievement gap was associated with a 2.2 percentage point increase in the Black-White discipline gap (Pearman II, Curran, Fisher, & Gardella, 2019).

The study concluded that "Two districts that were otherwise equivalent on observable and time-invariant unobservable characteristics but that suspended differing shares of Black relative to White students would also differ, on average, in racial achievement gaps, with the achievement gap being larger in the district that suspended greater shares of Black relative to White students." (Pearman II, Curran, Fisher, & Gardella, 2019, p. 10).

In districts where they were suspended at disproportionately higher rates relative to their White counterparts, Black students' achievement levels[3] were slightly lower than that of White students. However, districts with lower-achieving Black students had suspension rates

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[1] Achievement gaps are interpretable as standard deviation differences in achievement between racial groups.
[2] Discipline gaps were measured as a risk of suspensions for White students divided by the risk of suspension for Black students.
[3] Achievement levels were estimated from a pooled meta-analytic regression and averaged across Grades 3 through 8 during the 2011–12 and 2013–14 school years, respectively.

among Black students that were more than twice as high as that of districts with higher-achieving Black students. Conversely, the racial discipline gap (i.e., White students' lower suspension rates relative to Black students) did not predict White students' achievement, nor did White students' achievement levels predict their suspension rates (Pearman II, Curran, Fisher, & Gardella, 2019). This suggests that exclusionary consequences are particularly detrimental for Black students and a major factor in the Black-White achievement gap and that a key to improving Black achievement is increasing learning opportunities.

Further evidence of the detrimental effects of suspensions on academic achievement, though not specifically focused on Black students, is shown in a Florida study that tracked the 2000–01 cohort of 9th-grade students. Findings showed that as the number of suspensions increased, the odds of dropping out increased, and the odds of graduating, and of enrolling and persisting in postsecondary education declined. In fact, one suspension decreased the odds of graduating from 75% to 52% and doubled the risk of dropping out (16% to 32%) (Balfanz, Byrnes, & Fox, 2014). After controlling for demographics, attendance, and course performance, the study showed that each additional suspension further decreased the odds of graduating high school by 20% and decreased odds of enrolling in post-secondary education by 12% (Balfanz, Byrnes, & Fox, 2014).

The study also noted the co-occurrence of suspensions with attendance and course failures. Forty-two percent of students suspended in the 9th grade were also chronically absent versus 13% of students who were not suspended. Nearly three-fourths of suspended students failed a course compared in the freshman year compared to 36% of those not suspended (Balfanz, Byrnes, & Fox, 2014).

A Charlotte-Mecklenburg Schools (CMS) study sought to estimate the impact of school discipline practices on several student outcomes. Newly drawn school boundaries meant that students who lived in the same neighborhood and attended the same school in 2001–02 were re-zoned to different schools in 2002–03. The authors took advantage of these naturally occurring experimental conditions to estimate school effects[4] on student suspensions among the 26,246 middle school students in the study, 50% of whom were affected by re-zoning. (Bacher-Hicks, Billings, & Deming, 2019).

The study showed that a 1-standard deviation increase in a school's suspension rates increased the length of time students were suspended by 0.32 days. Minority students were suspended approximately 0.5 days longer, 2.7 times longer than non-minority students, and minority males were suspended 6.1 times longer than White males and 3.4 times longer than White females (Bacher-Hicks, Billings, & Deming, 2019).

The likelihood of dropping out for students attending a school with a 1-standard deviation increase in its suspension rate was not significant overall. However, minority males were 2.2 times more likely to drop out than were White males and 3.4 times more likely than were White females. The likelihood of attending a 4-year college within one year of graduating

[4] Estimated school effects on suspensions (ISS and OSS) are calculated using data from years prior to re-zoning (i.e., 1999–00, and 2000–01). Controlling for observable student baseline characteristics, such as race, gender, special education status, LEP, grade level, and prior-year English and mathematics state test scores, the authors decompose the student-year level residuals into the components that were attributable to schools, year-to-year school-level variation, student-level idiosyncratic error.

high school was 2.1 percentage points lower overall; however, there was a significant difference between groups (Bacher-Hicks, Billings, & Deming, 2019).

The School-to-Prison Pipeline

In addition to estimating the impact of school discipline practices on student achievement and educational attainment, the previously discussed Charlotte-Mecklenburg Schools (CMS) study sought to estimate its impact on adult criminal activity. They found that students who attended a school with a 1-standard deviation increase in its suspension rate were 2.5 percentage points more likely to have ever been arrested than those that did not. Minority students were 1.6 times more likely than non-minority students to ever be arrested, while minority males were 13.1 times and 32.4 times more likely than were White males and females, respectively (Bacher-Hicks, Billings, & Deming, 2019).

The likelihood of having ever been incarcerated was 2.0 percentage points higher among these students. Minority students were 1.7 more likely to ever be incarcerated than were non-minorities, and minority males were 1.4 times and 4.1 times more likely than were White males and females, respectively (Bacher-Hicks, Billings, & Deming, 2019).

A one standard-deviation increase in a school's suspension rate resulted in a 21% increase in the number of adult arrests among students who previously attended these schools versus those that attended schools with lower suspensions rates. Minority and minority male attendees were arrested at a rate that 3.7 times that of their respective counterparts. The number of adult arrests among minority males was 13.5 times that of White females. Similarly, the number of distinct adult incarcerations increased by 23% among those who previously attended these schools. Minority adults were 4 times more likely than non-minority adults to be incarcerated at different times, while minority males were 3.6 times more likely than were White males and 11.5 times more likely than were White females (Bacher-Hicks, Billings, & Deming, 2019).

Importantly, the study shows that the total impact of school discipline on the school population had no statistically significant impact on students' academic outcomes. In other words, suspending disruptive students did not improve academic achievement for students overall (Bacher-Hicks, Billings, & Deming, 2019).

To further validate their results, the authors tested whether any of the outcomes could be explained by other school-level characteristics. They found that neither school quality (the correlation between suspension and test score effects together) nor teacher effectiveness (based on value-add modeling) nor peer characteristics (proportion of Black, Latinx, and LEP students in school, and peer baseline test scores) were significant predictors. However, they did find that school effects change when principals change schools. The results of the interaction of the prior-year school effect with whether there was a new principal the current year, illustrating that principals are a driving force in suspension rates (Bacher-Hicks, Billings, & Deming, 2019).

Predictors of Disparities

Differences in Behavior Severity

In their study, Bradshaw and colleagues (2010) considered not only the student's overall level of behavior problems and characteristics of the classroom but also the teacher's ethnicity as potential contributors to Black students' overrepresentation in ODR data. They

used a sample of almost 7,000 students enrolled in 21 K-5 schools participating in a randomized trial of School-Wide Positive Behavioral Interventions and Supports (SWPBIS). The students were nested within 381 classrooms in the 21 intervention schools, thus, the sample included 381 teachers (Bradshaw, Mitchell, O'Brennan, & Leaf, 2010).

Teachers rated each students' classroom behaviors using the Teacher Observation of Classroom Adaption-Checklist (TOCA-C), with higher ratings indicating more problematic behavior. The classroom average was used to create a Disruptive Behavior score. For each 1-point increase in Disruptive Behavior scores, students' odds of receiving an ODR increased by a factor between 4.72 and 11.67 (Bradshaw, Mitchell, O'Brennan, & Leaf, 2010).

The study also explored the effects of teacher ethnicity on students' likelihood of referral. Having a Black teacher was associated with a 28% increase in the odds of receiving a major ODR; having a White teacher more than doubled students' odds of receiving a minor ODR.

Black boys with Black teachers had the greatest odds of receiving any type of ODR and of receiving a major ODR than those with White teachers. Black girls with Black teachers had marginally greater odds of receiving an ODR than when with White teachers (Bradshaw, Mitchell, O'Brennan, & Leaf, 2010). The authors posit that Black teachers tend to have a more authoritarian approach in their student interactions, consistently enforcing rules, yielding high rates of ODRs and major ODRs.

In their 2017 study, Anderson and Ritter analyzed seven years of student-level ODR data (over 1.2 million observations) from Arkansas K-12 public schools to determine whether the racial disparities in disciplinary outcomes existed within individual schools and/or whether they occurred between schools, indicating that disparities were more a function of the type of school students attended.

They found that statewide, most infractions (79.4%) were relatively subjective—disorderly conduct (29.7%), not otherwise specified (NOS) (24.9%), and insubordination (24.7%). Overall, Black-White disparities were much larger than any other subgroup disparities, and Latinx students were under-represented in terms of expulsions, even relative to White students. Statewide, Black students were 3 times as likely to receive an ODR, almost 6 times as likely to receive an OSS, and 9.5 times as likely to be sent to an alternative school as White students. Importantly, the study showed that Black students' higher rates of ODRs relative to White students only accounted for about half the difference in the rates of OSS, illustrating that Black students tended to be disciplined more harshly for their behaviors. Poor students were twice as likely to receive an ODR and about 2.9 times as likely to be given OSS as non-poor students (Anderson & Ritter, 2017).

Additionally, Black students were more than twice as likely to receive an exclusionary ODR as White students in the same grade for similar types of infractions with a similar number of previous infractions that year, while Latinx and other students were somewhat less likely. Poor students were 1.5 times as likely to receive an exclusionary ODR as non-poor students in the same grade for similar types of infractions, with a similar number of previous infractions that year (Anderson & Ritter, 2017). Within-school differences were less prominent—Black (1.03) and poor students (1.17) were only slightly more likely to receive exclusionary discipline than their respective counterparts.

Next, the researchers produced a School Severity Index (SSI), a measure of whether, on average, a school handed out longer or shorter punishments relative to the state average for

a similar infraction type for a student in the same grade with a similar number of disciplinary infractions the previous part of the school year. Among the findings was that including the school concentration of students of color increased the model's predictive power by about 2.5 times relative to those that did not, illustrating the racial breakdown of schools is an important factor in explaining discipline outcomes (Anderson & Ritter, 2017). To further explore the effects of both race and poverty concentration on discipline outcomes, the authors created four school categories based on the percentage of White students (less than 65% = Mostly-Minority) and the percentage of students eligible for Free or Reduced Lunch (FRL) (60% or more = Low Income). They found that Higher-Income Mostly-Minority schools tended to give out an extra half-day of punishment relative to Higher-Income Mostly-White schools. Low-Income Mostly-Minority schools tended to administer an extra 0.6 days relative to Low-Income Mostly-White schools. There was little difference between the length of punishment between Low- and Higher-Income Mostly-White schools. So, despite the primary economic status of the student body, schools that predominantly served minority students doled out harsher punishments to these students.

In a follow-up statewide Arkansas study, Anderson and Ritter (2020) again examined outcomes statewide and within schools and found that the magnitude and significance of the disparities between Black and White students were much larger statewide than within the same schools for each of the five most frequent infraction categories. Overall, Black students were excluded about one-third of a day longer for subjective categories like disorderly conduct (0.37) and insubordination (0.33). However, within the same school, significant disparities were only present for insubordination, with Black students receiving 0.08 more days than White students. For the vague category of "Other", statewide disparities in punishment severity were small but significant (0.16); however, differences were not significant between Black and White students attending the same school. Even for more objective incidents like fighting, Black students were treated more harshly than their White peers, resulting in disparities in punishment of 0.72 and 0.19 more exclusionary days statewide and within schools, respectively. Truancy showed the smallest disparities between Black and White students. Statewide, Black students received exclusions that were 0.08 days longer than that of their White peers. However, when attending the same school, Black students received *fewer* days (-0.07) than their White counterparts. Statewide, between-school differences illustrate that Black students may receive harsher punishments because of differing school practices. However, the persistence of within-school differences reveals that Black students are still punished more severely than their White peers in all but one case—truancy.

While examining disparities in outcomes among students with similar infraction types is an important consideration, what is of equal if not greater importance, is assessing the subjective identification and judgment of students' behaviors. In the classroom, teachers make the subjective decision about whether students' behaviors warrant a referral to the office, and if so, how to define and categorize those behaviors. Two students could exhibit very similar behaviors and a teacher has the latitude and discretion to give one student a verbal warning while sending another to the office for insubordination. Further, two students could present for insubordination and an administrator may give one after-school detention and the other ISS. This demonstrates that inequities can exist both in deciding whether behaviors are problematic as well as in how punitively to treat problematic behaviors. Therefore, disparities in students' disciplinary outcomes overall, rather than disparities in

the disciplinary outcomes based on infraction type, are better indicators of potential disproportionate treatment.

Disparate School/District Policies

As part of their previously described study of the racial disciplinary disparities among Arkansas' K-12 schools, Anderson and Ritter (2020) explored whether disparities in suspension rates existed because Black students happened to be confined to schools with more severe disciplinary practices. To this end, they divided schools into quintiles based on the concentration of Black students and analyzed the frequency and duration of various consequences within each quintile and found that schools with the greatest proportion of Black students administered more and longer suspensions. The authors concluded, "Black students overall are subject to stricter consequences, but one source of these differences appears to be differing practices across schools" (Anderson & Ritter, 2020, p. 726).

However, by only comparing differences between schools' overall suspension rates based on their racial composition, the authors missed the mark. Are Black students suspended at higher rates relative to White students because many Black students are concentrated in schools that typically have stricter discipline practices, or are Black students being disproportionately suspended regardless of a school's standard practices?

Gopalan and Nelson (2019) attempt to shed light on the issue in their study because of the entrenched nature of segregation in their state. In Indiana, about 82% of all Black students are concentrated in 35 of the state's nearly 400 districts. These 35 districts alone account for 51% of all exclusions in the state, but only 38% of the state's total student enrollment. Additionally, 16% of Black students attend schools in districts with a less than 10% Black share of students, while 38% of Black students attend schools within majority-Black districts (Gopalan & Nelson, 2019).

The authors use decomposition techniques to examine the extent to which the racial sorting of students —the persistent and systematic assignment of students to specific schools based on their race—across districts explains racial disciplinary gaps. They found that district-level differences, such as the proportion of Black, Latinx, and poor students, explained 11% to 25% of the Black-White disciplinary gap across grade levels, even after controlling for several student- and school-level characteristics. The authors concluded that Black students have been disadvantaged by nonrandom sorting across districts above and beyond the disadvantage associated with racial differences in observable student- and school-level characteristics (Gopalan & Nelson, 2019).

Gopalan and Nelson (2019) argue that while most models capture systematic differences in discipline outcomes between schools or districts, the effects of discriminatory discipline practices that do not vary over time cannot be disaggregated from the effects of other time-invariant school characteristics that could also contribute to higher rates of exclusion. For example, a school's higher rate of exclusion could be attributable to both the administrator's consistent discriminatory attitudes, as well as other structural school features that systematically contribute to higher rates of exclusion, such as a school's location in a high-crime area or its zero-tolerance discipline policy.

One way to address this issue is to compare differences in the racial disparities in suspension rates between schools based on the concentration of Black students in those schools. School practices cannot be the culprit (e.g., Black students happen to attend

stricter schools) if Black students receive stricter punishment than White students regardless of school composition, that is, both in schools with higher concentrations of Black students and in those with higher concentrations of White students.

Purpose of the Study

This study sought to answer two primary research questions: 1) Do differences exist in students' office disciplinary referral (ODR) rates and/or exclusionary ODR rates based on ethnicity and/or gender? and 2) If differences exist, what school-level factors moderate the effects of these inequities?

Definition of Variables

The variables of interest for this study are defined in Table 1.

Table 1. Variable Definitions

Variables	Definitions
Student-level	
Ethnicity	Self-identified ethnicity in this study is limited to White, Latinx (Hispanic), and Black students.
Gender	Self-identified gender selections were male and female.
School-level	
District-managed schools	Traditional, non-charter, non-alternative schools serving students kindergarten through twelfth grade.
School category	Elementary, middle, or high school.
Enrollment size	Schools with student enrollments that were above the mean among the schools with similar grade ranges were classified as having high enrollment (e.g., average enrollments among elementary schools comprising grades KK—5 encompassed one comparison group, while average enrollments among elementary schools comprising grades KK—8 were compared separately).
Concentration of poor students	The number of Direct Certified (DC) students (students certified by the state as receiving SNAP or TANF benefits or students in foster care) / the number of enrolled students.
Concentration of Black students	The number of enrolled students who self-identified as non-Latinx Black / the number of enrolled students.
Percentage of White teachers	The number of active teachers (certified teachers teaching a course in which students were enrolled this year) who self-identified as non-Latinx White / the number of active teachers.
Percentage of male teachers	The number of active teachers who self-identified as male / the number of active teachers.

Table 1. Variable Definitions cont'd

Variables	Definitions
Dependent	
Office disciplinary referrals (ODRs)	Instances in which students are sent to the administrator's office by staff for intervention or disciplinary action because of a student's perceived behavioral problems and/or staff's difficulty managing a student's behavior.
ODR rate	The unique number of students receiving ODRs / the number of enrolled students.
Black students' ODR risk ratio	Black students' ODR rate / White students' ODR rate. Reflects the risk Black students have of receiving an ODR compared to their White counterparts.
Suspension	Disciplinary action involving being excluded from school for up to 11 days. After the student serves his or her suspension, the student can return to school after the principal has met with the parent(s) or guardian(s).
Expulsion	Disciplinary action involving being excluded from school for 11 to 180 days. The number of days a student is excluded from his or her home school may result in the student being referred to an alternative school.
Exclusionary ODRs	ODRs that resulted in an out-of-school suspension or expulsion.
Exclusionary ODR rate	The unique number of students that received an exclusionary ODR / the unique number of students that received an ODR.
Black students' exclusionary ODR risk ratio	Black students' exclusionary ODR rate / White students' exclusionary ODR rate. Reflects the risk Black students have of receiving an exclusionary ODR compared to their White counterparts.
Average number of exclusionary days	The total number of suspended or expelled days issued for students' exclusionary ODRs / the unique number of students that received an exclusionary ODR.

Significant Findings by School Category

Overview

- **Are the severities (e.g., ISS, OSS, or expulsion) and lengths of disciplinary consequences assigned fairly?**
  - Black students were excluded at higher rates and for longer periods than *White* and *Latinx* students.
  - The largest disparities in exclusionary rates and length were between Black male and *White female* students.
- **Are the office disciplinary referrals (ODRs) that precipitate these consequences fairly administered?**
  - Black students had higher rates of ODRs than *White* and *Latinx* students.
  - The largest disparities in ODR rates were between Black male and *White female* students
- **Do school-level variables (e.g., grade-level served, enrollment size, student body composition, or teacher demographics) and/or student-level variables (e.g., race, gender, or poverty status) affect whether and how severely students are punished for misbehavior?**
  - Enrollment size predicted disparities in ODR rates, exclusionary ODR rates, and length of exclusions between Black *males* and their peers.
  - Grade level was a significant predictor of the rates at which Black males were referred to the office, as well as disparities in the rates and lengths of exclusion relative to their *Latina* and *White female* peers:
    - Black males had higher rates of ODRs in *elementary* and *middle* school versus high school.
    - The greatest disparities in ODRs and exclusionary ODRs were found in *elementary* school between Black males and *Latina* and *White female* students, respectively.
    - Disparities in length of exclusionary ODRs were greatest in *high school* and occurred between Black male and *White female* students.
  - Concentrations of Black students and poor students predicted the rates at which Black and Black *male* students were referred to the office, as well as disparities in the rates and lengths of exclusion relative to their peers.
  - The percentage of White teachers in schools predicted disparities in ODR rates, but only in elementary school.
  - The percentage of male teachers in schools was not a significant predictor.

Elementary School

- In *elementary schools* overall:
  - Black males had higher rates of exclusionary ODRs than did *White females*.
- Relative to those in elementary schools with more poor students*,* in *elementary schools* with *fewer poor* students:
  - Black *males* had higher rates of ODRs than *White females*.
- Relative to those in elementary schools with fewer poor students, in *elementary schools* with *more poor* students:
  - Black students and Black *males* had higher rates of *exclusionary* ODRs.
- Relative to those in elementary schools with fewer Black students, in elementary schools with *more Black* students:
  - Black students were sent to the office at higher rates.
- Relative to those in elementary schools with more Black students, in elementary schools with *fewer Black* students:
  - Black *males* had higher rates of ODRs than *White males* and *Latinas*,
  - Black *males* had higher rates of *exclusionary* ODRs than *White females* and *Latinas*, and
  - Black students and Black *males* were *excluded* longer.
- Relative to those in elementary schools with *fewer White teachers*, in *elementary schools* with *more White teachers*:
  - Black *males* had higher rates of ODRs than *White females*.
- Relative to those in elementary schools with more White teachers*,* in *elementary schools* with *fewer White teachers*:
  - Black *males* had higher rates of ODRs than *Latinas*.
- When considering the *combined* effect of the variables in the model, relative to those in middle and high school, in *elementary school*:
  - Black *males* had higher rates of ODRs,
  - Black *males* had higher rates of *exclusionary* ODRs than *White males*, and
  - Black *males* were *excluded longer* than *White females* and *Latinas*.

Middle School

- Relative to those in middle schools with fewer poor students, in *middle schools* with *more poor students*:
  - Black students were sent to the office more often, and
  - Black students and Black *males* were *excluded* more often.
- When considering the *combined* effect of the variables in the model, relative to those in elementary and high school, in *middle school*:
  - Black *males* had higher rates of ODRs,
  - Black *males* had higher rates of ODRs and *exclusionary* ODRs than *White females*,

- Black students and Black *males* were *excluded* longer, and
- Black *males* were *excluded* longer than *White females*.

High School

- Relative to those in high schools with lower concentrations of poor students, in high schools with *higher concentrations of poor students*:
  - Black students had higher rates of ODRs, and
  - Black students were *excluded* longer.
- Relative to those in high schools with fewer Black students, in *high schools* with *more Black students*:
  - Black *males* were *excluded* longer than *Latinas*.
- Relative to those in high schools with more Black students, in *high schools* with *fewer Black students*:
  - Black *males* had higher *exclusionary* ODR rates than *Latinas*.
- When considering a *combined* effect of the variables in the model, relative to those in elementary and middle school, in *high school*:
  - Black *males* had higher rates of ODR than *White females*, and Black *males* had higher rates of *exclusionary* ODR than *White males* and *White females*.

Demographics

The disciplinary outcomes of 87,357 kindergarten through twelfth-grade students attending 141 District-managed elementary, middle, and high schools during the 2018—19 school year were included in this analysis.

Student Demographics

Student demographic data were obtained from District administrative files. Parents self-identified their students' gender, ethnicity, and race. Gender was evenly distributed among the study participants—50.6% were male and 49.4% were female. Most students were from traditionally underserved ethnic groups—75.2% Black, 16.0% Latinx, and 8.9% White.

School Demographics

The District manages 88 elementary, 26 middle, and 27 high schools. Most elementary schools served students kindergarten through fifth grade; however, approximately 7% (6 out of 88 schools) of the elementary schools continued through the eighth grade. Middle schools served students grades six through eight. And although high schools traditionally serve ninth- through twelfth-grade students, 7.4% (2 out of 27) of the District's high schools comprise grades six through twelve.

Of the 141 schools in the study, 68.1% were high-poverty concentration and 61.7% had a high percentage of Black students, as evidenced by 75% or more of the K—12 students fitting these criteria. Approximately 41% (58 out of 141) of District-managed K—12 schools had high student enrollment (enrollment size above the mean for the school's grade range). Among these, 39.8% were elementary schools, half were middle schools, and 37% were high schools.

Teacher Demographics

Teacher demographic data were obtained from District administrative files. Teachers self-selected gender, ethnicity, and race during the application process. The demographic makeup of the District's active 2018—19 kindergarten through twelfth-grade teachers was as follows: 65.7% Black, 31.1% White, 1.7% Latinx, 74.8% female, and 25.2% male. Figures 1 and 2 illustrate teachers' ethnic and gender distribution by school category.

Figure 1. Teacher Ethnicity by School Category

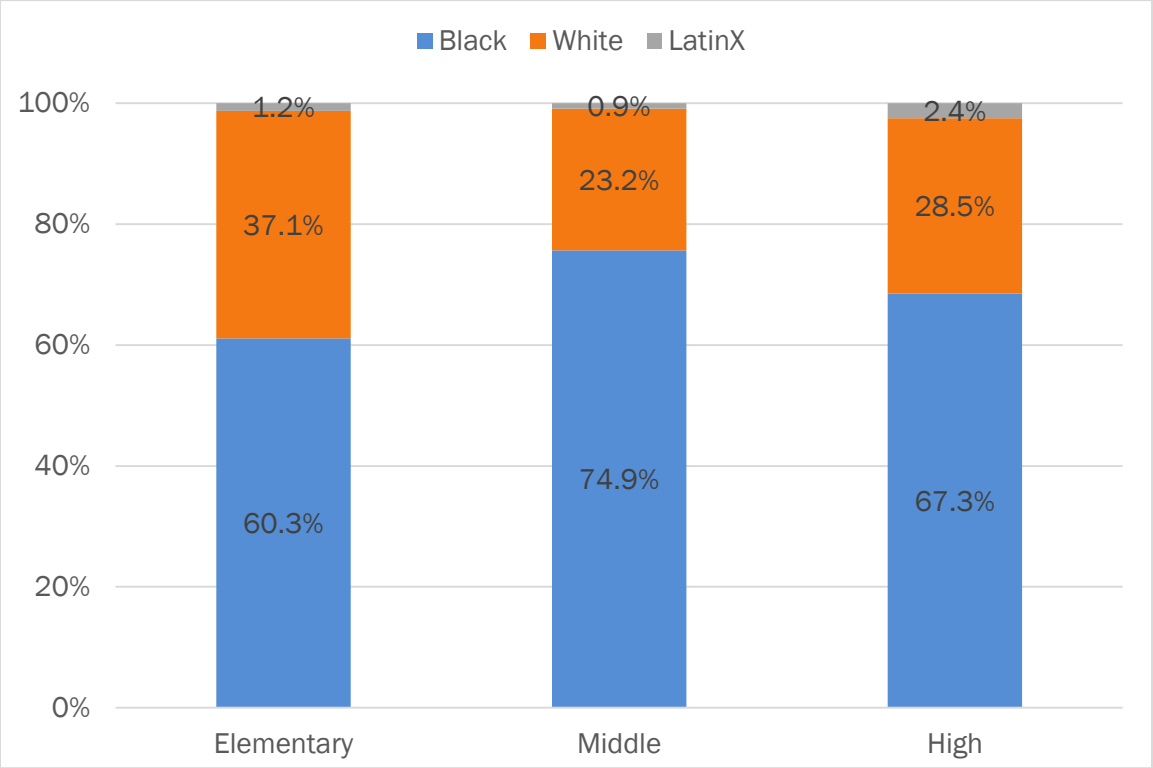
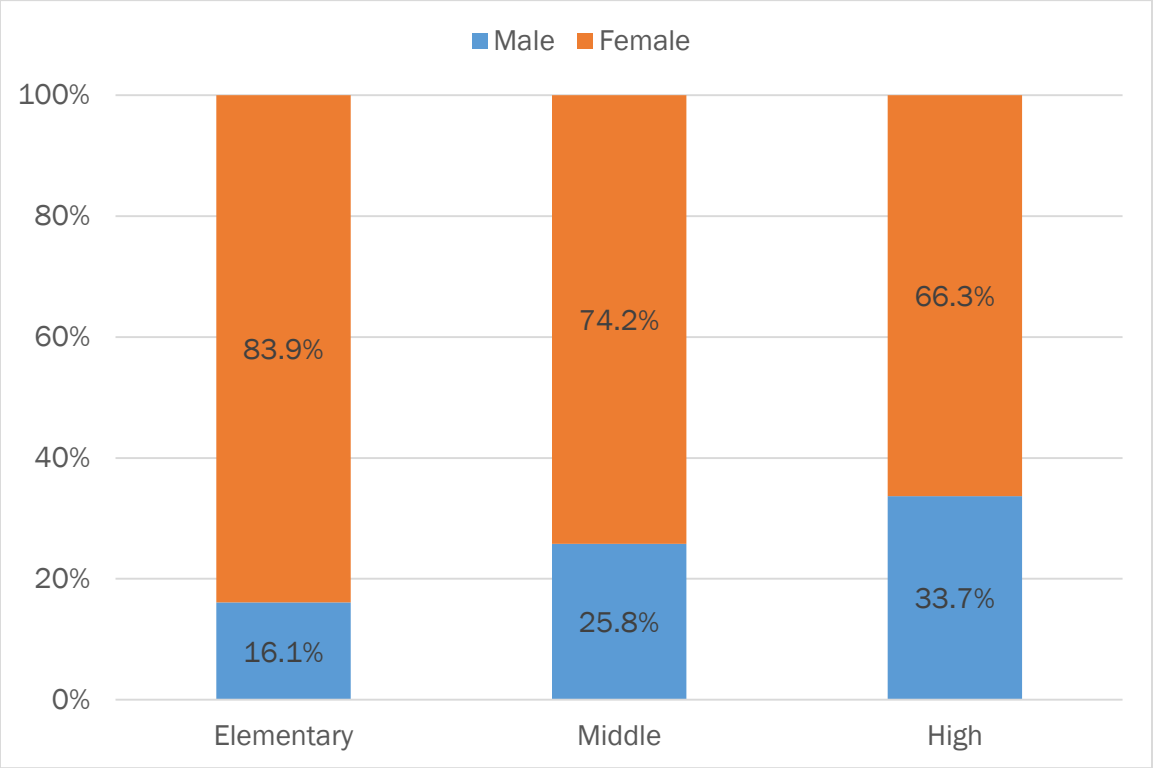


Figure 2. Teacher Gender by School Category



The study findings are divided into three categories: outcomes for students across the District overall, differences based on school category, and school-level variables that affect student outcomes. The results are presented below.

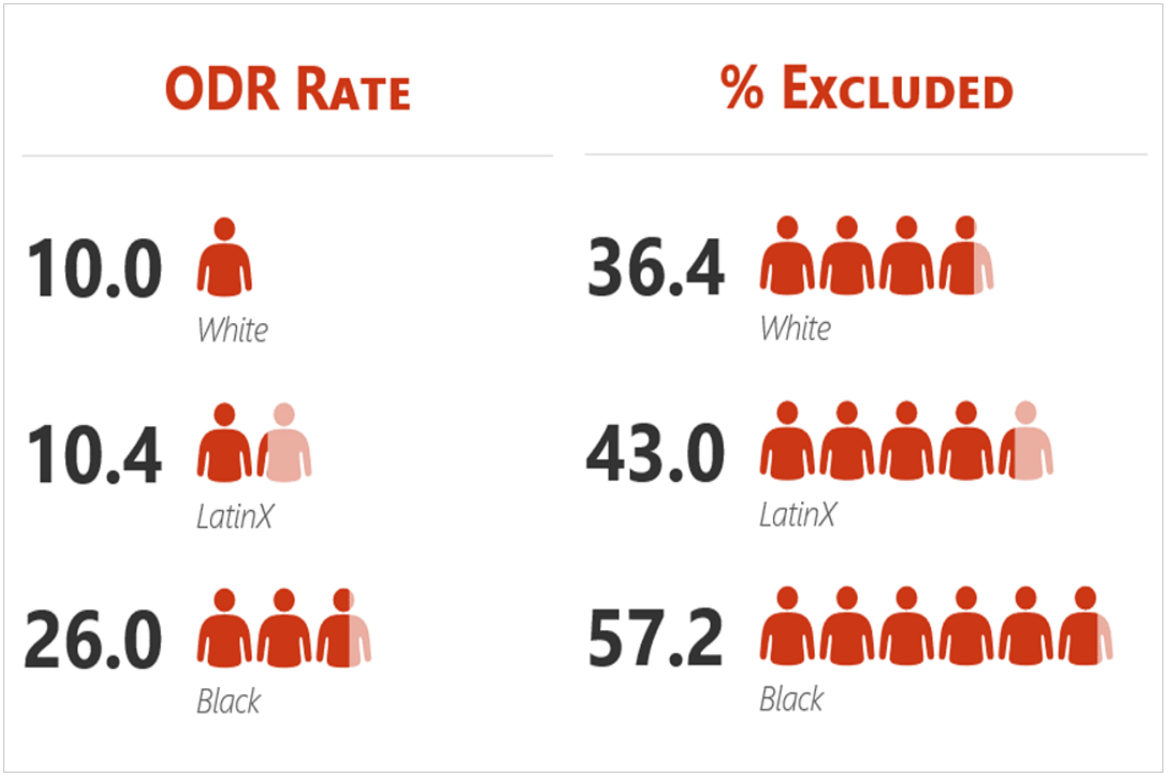
Results

District-Level Findings

Do ODR and/or exclusionary ODR rates differ based on students' ethnicity?

Office disciplinary referral (ODR) rates and exclusionary ODR rates[5] were calculated within each ethnic group. As shown in Graph 1, Black students were sent to the office at least 2.5 more often than their White and Latinx counterparts. Approximately 36% of referred White students were excluded for their ODRs compared to 43% of Latinx and 57.2% of Black students. The percentage of Black students that were subsequently suspended or expelled after receiving an ODR was 20.8% higher than for White students and 14.2% higher than for Latinx students.

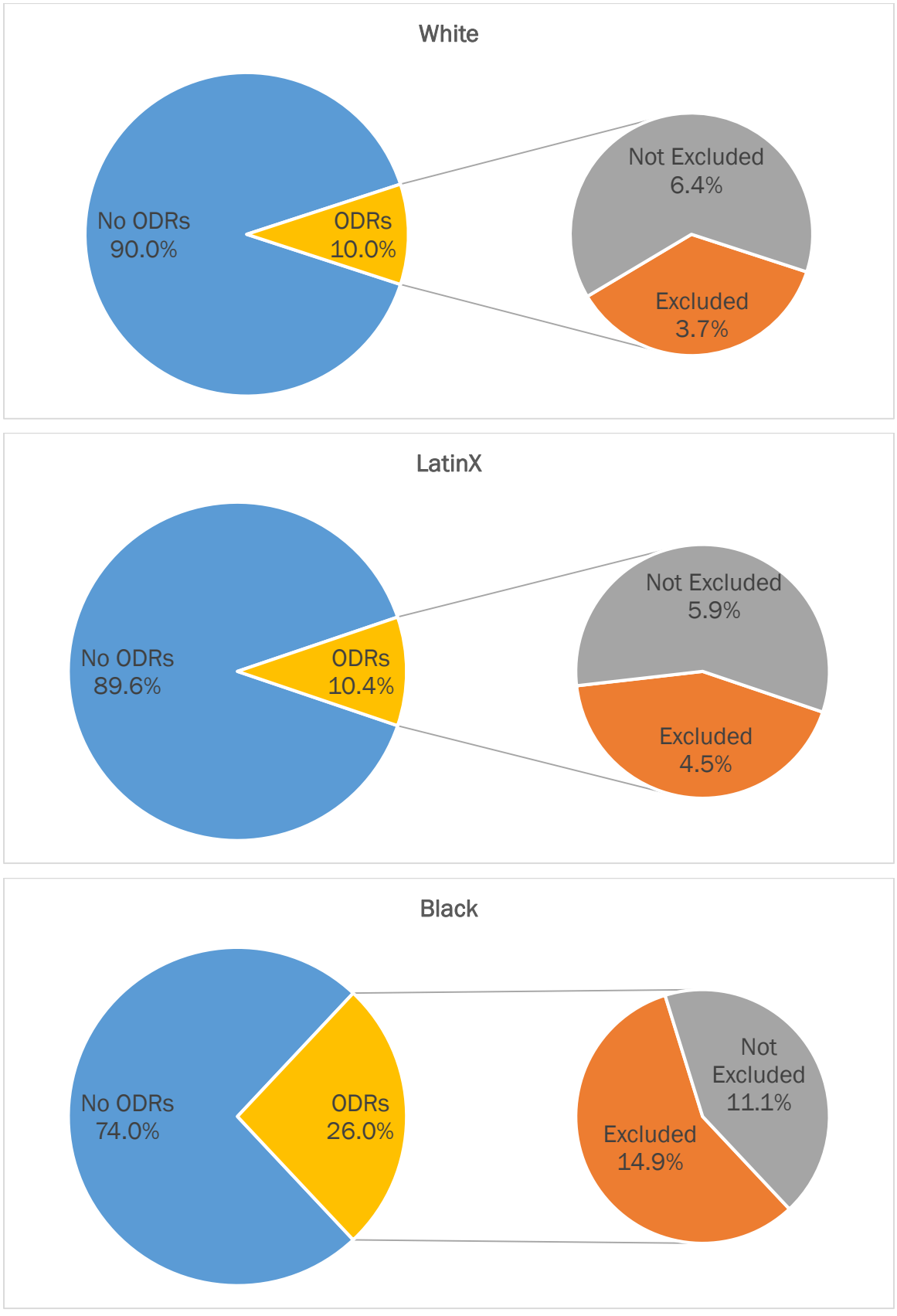
Graph 1. ODR Rate & Percentage of Referred Students That Get Excluded by Ethnicity



The pie charts in Figure 3 present the data in a slightly different way, illustrating that only 10% of Whites students received ODRs, and only slightly more than one-third of these students (3.7%) were excluded from school. A comparable rate of Latinx students—10.4%—received ODRs, and 43% of the referred Latinx population (4.5%) were subsequently suspended or expelled. Conversely, approximately one-quarter of Black students were sent to the office and 57.2% of these students were excluded from school for their ODRs — resulting in an exclusionary rate among Black students of 14.9%.

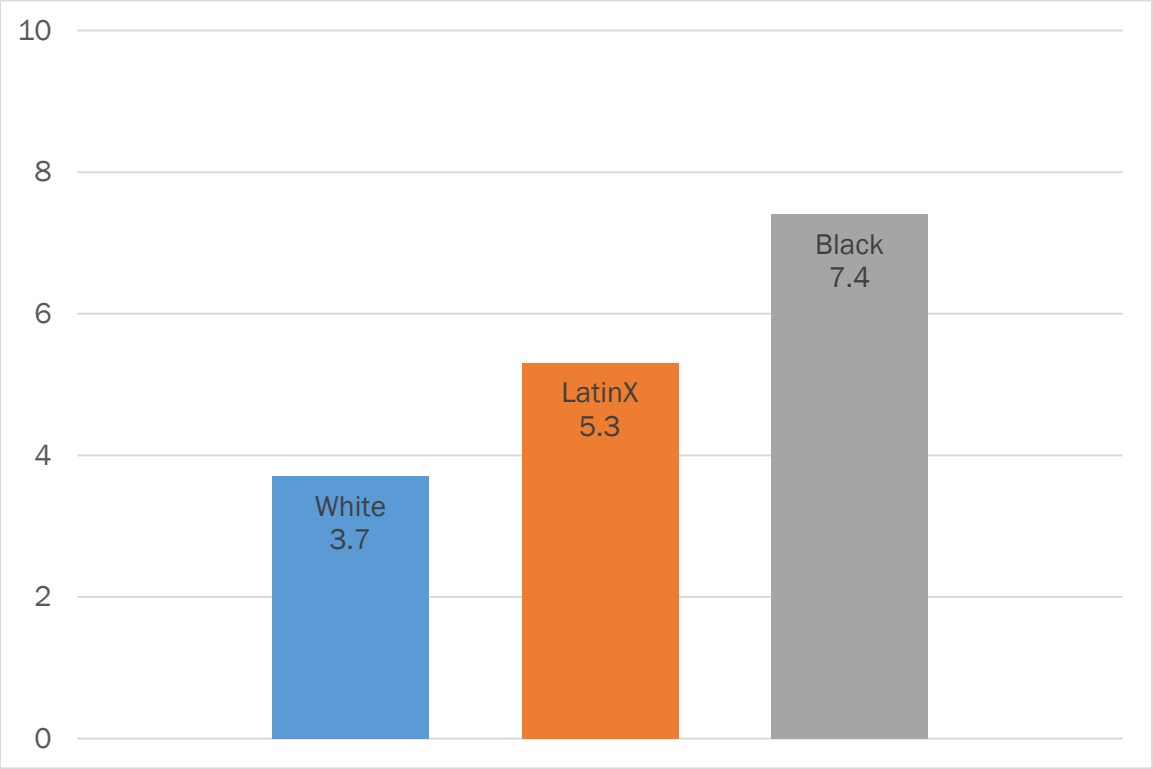
[5] The rates at which students were suspended or expelled for their ODRs. Exclusionary ODR predominantly consisted of suspensions. Among referred students, 10.1% were suspended, while only 1.3% were expelled.

Figure 3. ODR & Exclusionary ODR Rate by Ethnicity



Not only were Black students sent to the office more often and excluded from school more often when they were, but Black students were also excluded longer than were their White and Latinx counterparts. Figure 4 presents the average number of days out-of-school students comprising each ethnic group were excluded. Because an exclusionary referral is not classified as an expulsion unless a student has been assigned 11 or more days out of school, the averages displayed in Figure 4 illustrate that most excluded students had been suspended. However, based on the average number of days Black students were excluded, a disproportionate number of expelled students were members of this ethnic group.

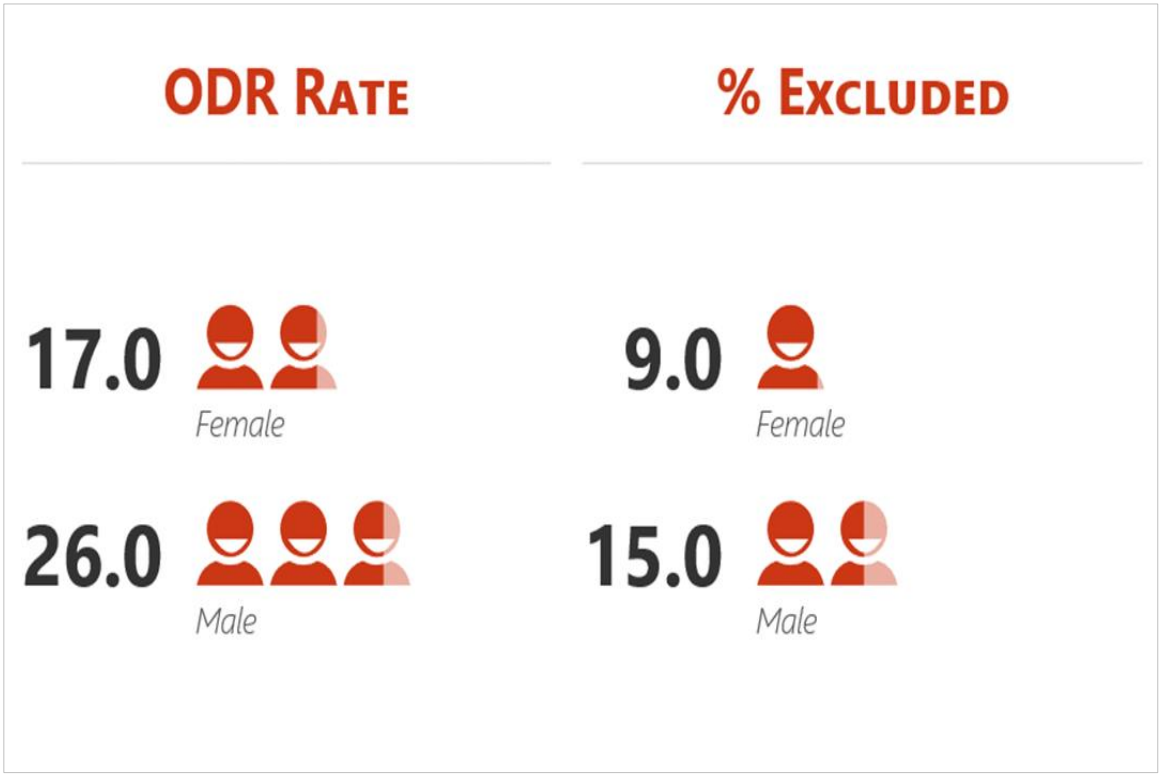
Figure 4. Average Number of Days Excluded by Ethnicity



Do ODR and/or exclusionary ODR rates differ based on students' gender?

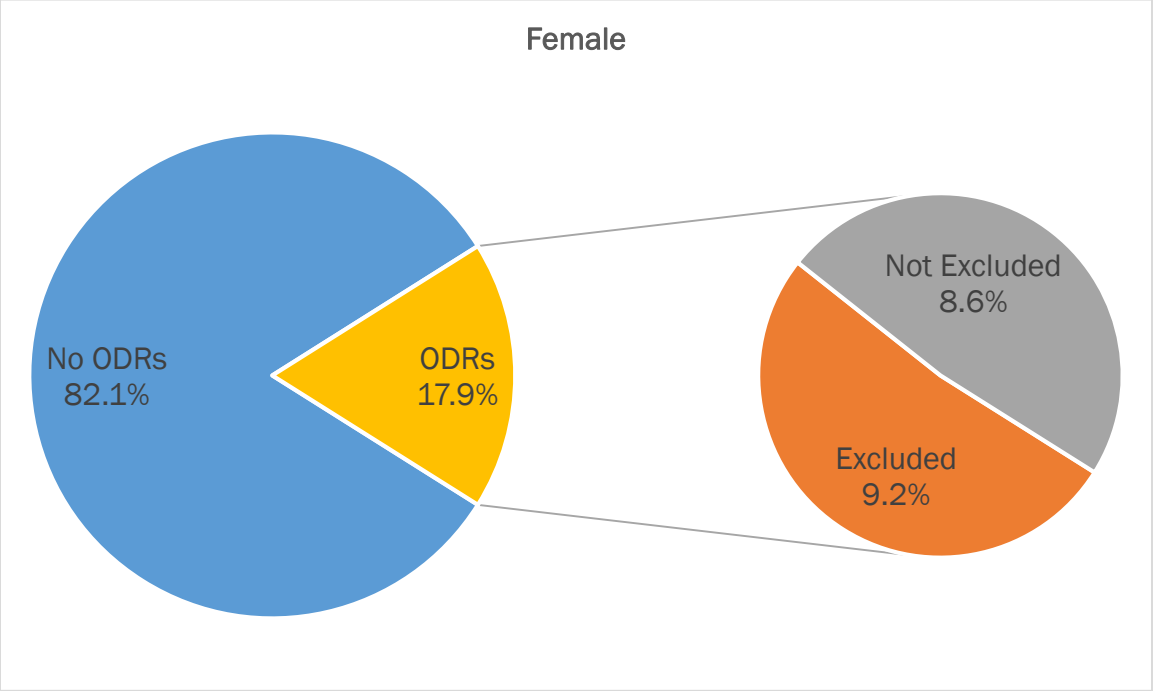
As shown in Graph 2, male students were 1.5 times more likely to be referred to the office than were female students. Similarly, the percentage of students excluded for their ODRs was 6 percentage points higher for males than for females.

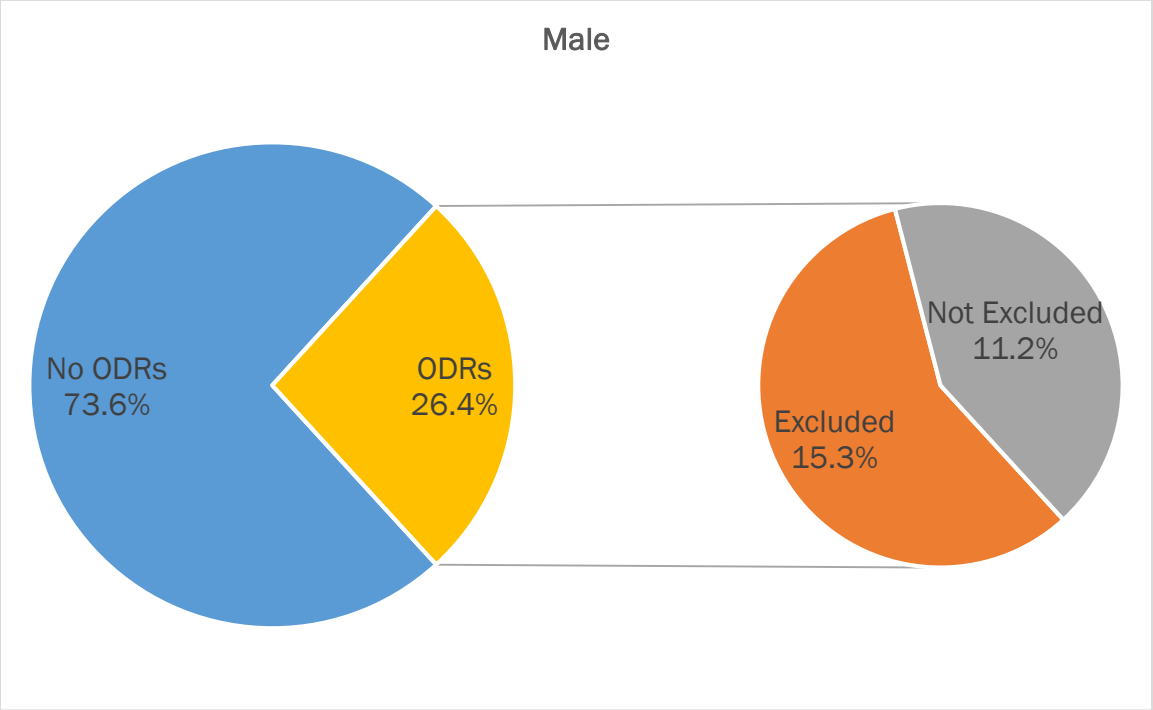
Graph 2. ODR Rate & Percentage of Referred Students That Get Excluded by Gender



As in the previous section, the pie charts in Figure 5 present a different view of gender data. Approximately 18% of the District's female students received an ODR and 51.7% of these students—9.2% of females—were subsequently issued an exclusionary ODR. Approximately 26% of male students received an ODR and 57.8% of these students—a total of 15.3% of the male population—received an exclusionary ODR.

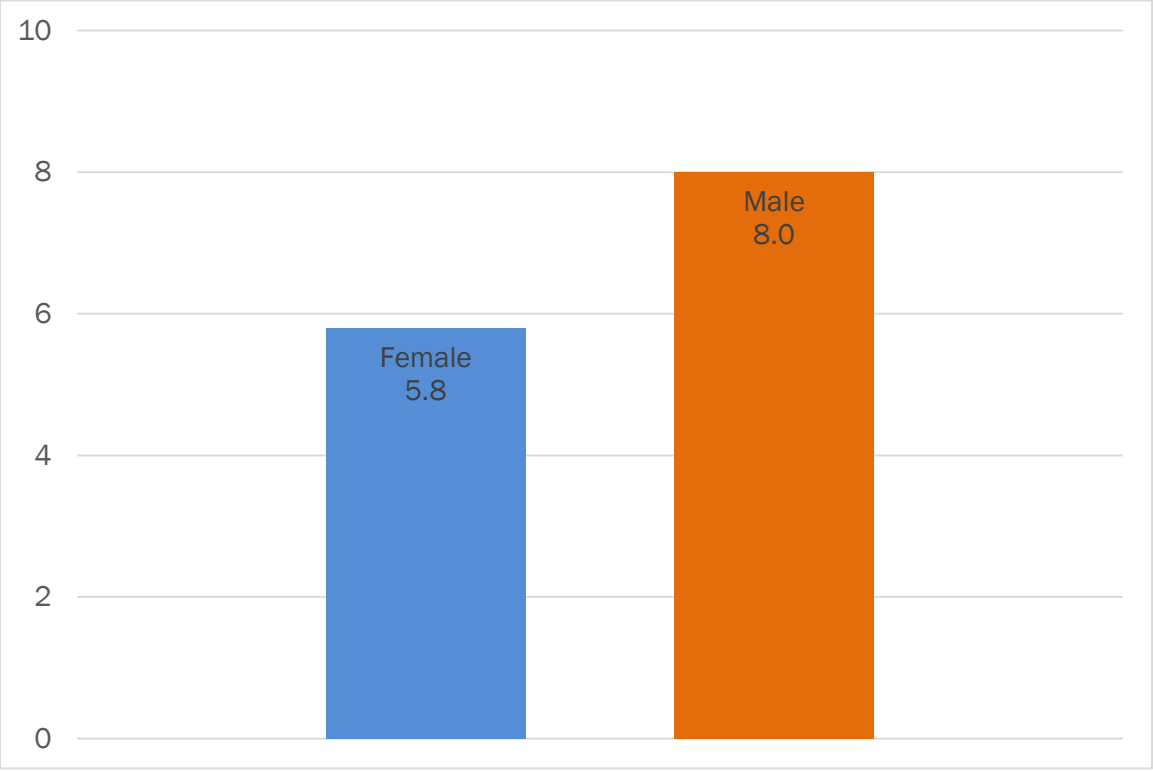
Figure 5. ODR & Exclusionary ODR Rate by Gender





While male students' ODR rates were substantially higher than their female counterparts, they were excluded at only a slightly higher rate. However, based on the average number of days excluded shown in Figure 6, when exclusionary ODRs were issued, male students were issued almost 1.5 times as many days out of school as female students. Like the disparities found among ethnic groups, the averages displayed in Figure 6 illustrate that while most excluded students had been suspended (excluded less than 11 days), the average number of days males were excluded highlight that they were more likely to have been expelled than were females.

Figure 6. Average Number of Days Excluded by Gender



Findings by School Category

Next, this study explored whether the ethnic and gender-based differences found at the District level were present based on school category. The same variables (differences in rates of ODRs and exclusionary ODRs) were the outcomes of interest.

Do ODR and/or exclusionary ODR rates differ based on students' ethnicity and/or school category?

Figure 7 illustrates several important trends. The rate at which students from all ethnic groups were referred to the office increased as students progressed through school. That is, the ODR rates among middle school students were higher than elementary school students' rates, and high school students' ODR rates were higher than both middle and elementary school students' rates. In every category, Black students were referred to the office at substantially higher rates than their White and Latinx counterparts. Additionally, it was in elementary school that Latinx students had the lowest rate of referrals.

Trends in exclusionary ODR rates reveal slightly different outcomes. The rates at which students were excluded from school for their ODRs were highest among middle school and lowest among elementary school students within every ethnic group. Middle school students from each ethnic group were more likely to be suspended or expelled for their ODRs than were high school students. Black students had the highest rates of their ODRs result in exclusion relative to their peers in other ethnic groups in every school category.

Figure 7. ODR (Including Exclusionary ODR) Rate by Ethnicity & School Category

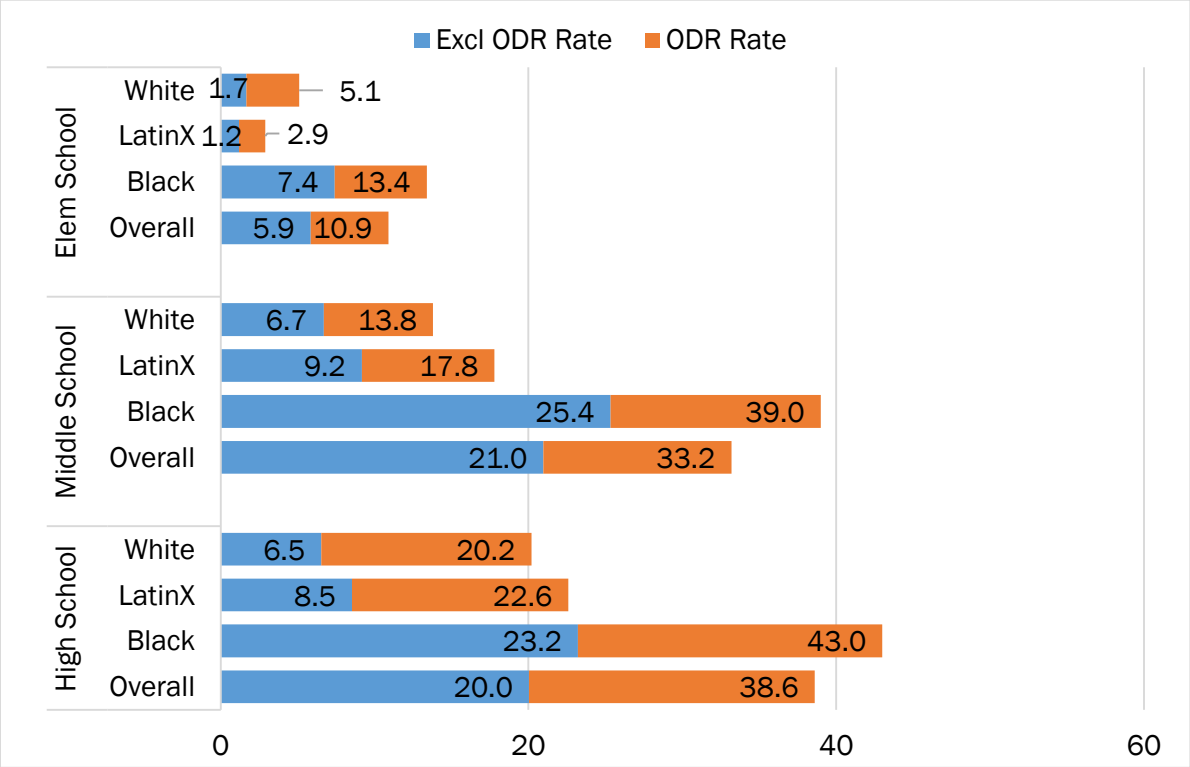


Table 2 presents the ODR and exclusionary ODR risk ratios between ethnic groups within school category. Analyses reveal that students in almost every ethnic group were at the greatest risk of disparate office referrals during elementary school. Compared to Latinx elementary students, Black elementary students' risk ratio was 4.6 times higher, while White elementary students' ratio was 1.8 times higher. Additionally, Black elementary students were 2.6 times more likely to be sent to the office than were White elementary students. This was only slightly less than Black students' risk of being referred to the office in middle school relative to their White counterparts.

The largest ethnic group disparities in being excluded were between Black elementary and Latinx students, with Black students being 6.2 times at greater risk. When compared to White students, Black elementary and middle school students were 4.4 and 3.8 times more likely to be excluded, respectively. Additionally, Black high school students receiving ODRs were 3.5 times more likely than White students and 2.7 times more likely than Latinx students to be excluded from school.

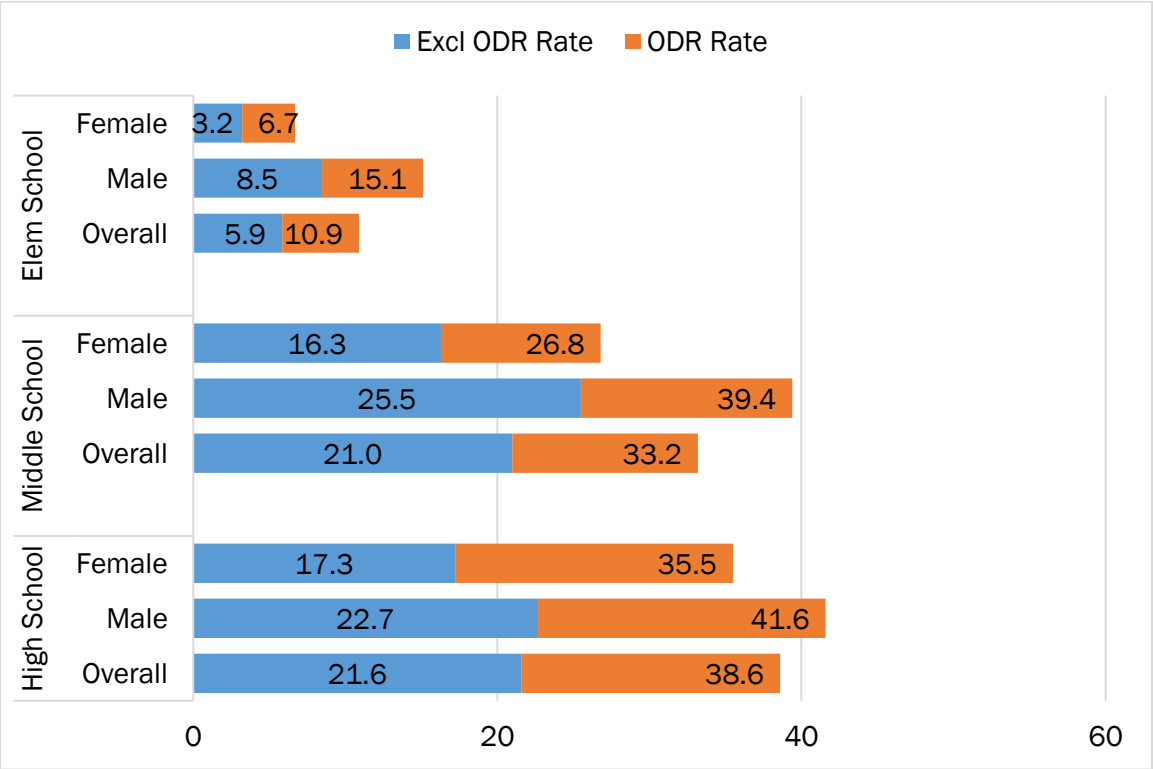
Table 2. Ethnic-Based ODR & Exclusionary ODR Risk Ratios by School Category

	Elementary School		Middle School		High School	
	ODR Risk Ratio	Excl ODR Risk Ratio	ODR Risk Ratio	Excl ODR Risk Ratio	ODR Risk Ratio	Excl ODR Risk Ratio
Black vs. White	2.6	4.4	2.8	3.8	2.1	3.5
Black vs. Latinx	4.6	6.2	2.2	2.8	1.9	2.7
White vs. Latinx	1.8	1.4	0.8	0.7	0.9	0.8

Do ODR and/or exclusionary ODR rates differ based on students' gender and/or school category?

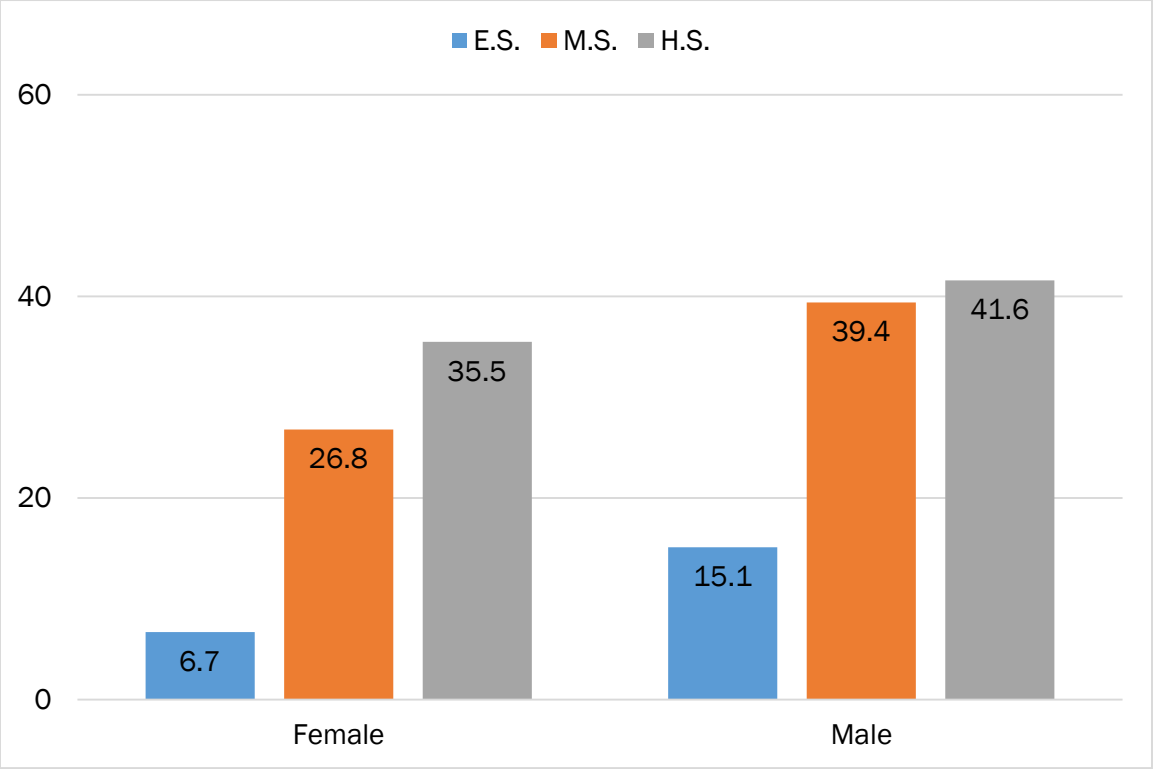
Figures 8 through 10 illustrate the gender-based disparities in ODR and exclusionary ODR rates among students as they progress through school. As shown in Figure 8, the rate of ODRs increased for both female and male students in each school category. Both female and male students' exclusionary ODR rates were lowest in elementary school. While female students' exclusionary ODR rates were slightly higher in high school (17.3) than in middle school (16.3), male students' exclusionary ODR rates peaked in middle school (25.5) and declined slightly in high school (22.7). Males were overrepresented in both ODR and exclusionary rates in every school category, yielding rates that were higher than the overall rates.

Figure 8. ODR (Including Exclusionary ODR) Rates by Gender & School Category



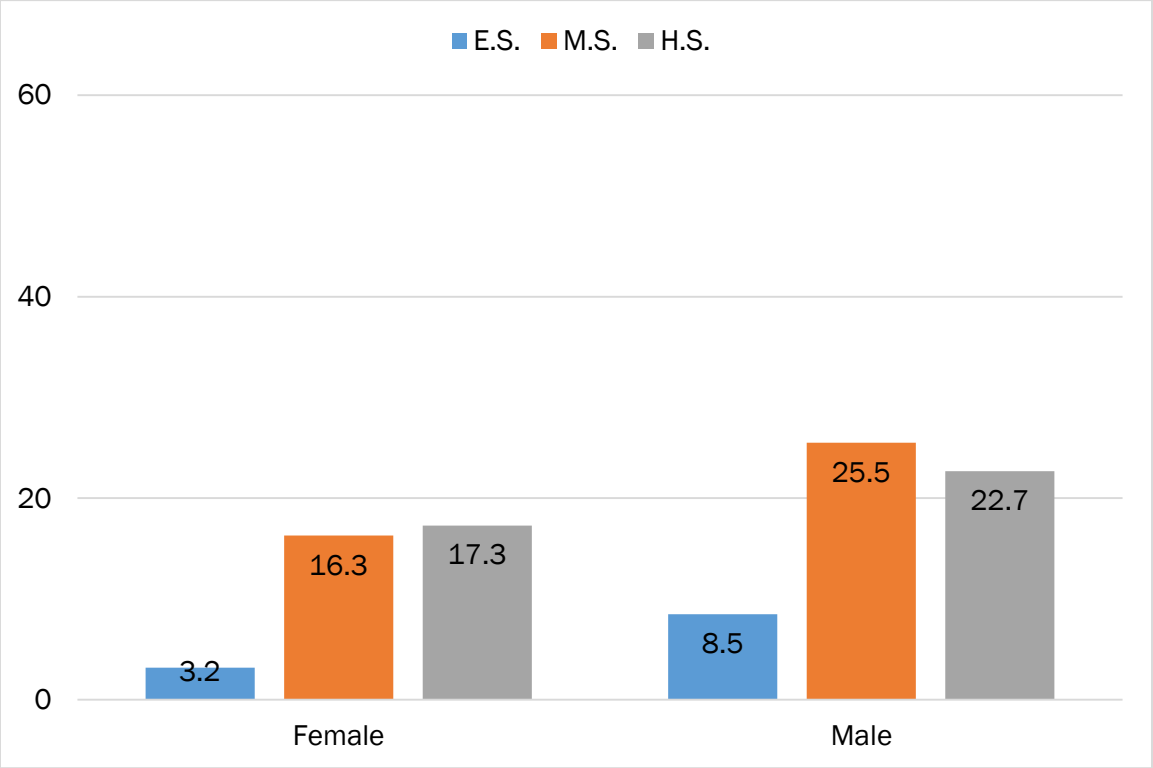
Figures 9 illustrates that when compared to their elementary school rates, female students' ODR rates increased substantially in middle and high school—4.0 and 5.3 times higher, respectively. In every school category, male students' rates remained higher than those of their female counterparts; however, the rate at which ODRs increased was not as drastic. Male students' ODR rates were 2.6 and 2.8 times higher in middle and high school, respectively, than in elementary school.

Figure 9. ODR Rate Gender Gap in School Categories



Similarly, Figure 10 shows that compared to elementary school, female students were substantially more likely to be excluded for their ODRs in middle and high school—5.1 and 5.4 times, respectively. While the rates of exclusions were consistently higher for males, the rates at which male students were excluded as they progressed through school did not increase as glaringly as female students' rates. Male students were 3.0 times more likely to be excluded for their ODRs in middle school and 2.7 times more likely in high school than in elementary school.

Figure 10. Exclusionary ODR Rate Gender Gap in School Categories



The largest gender-based disparity in ODRs within a school category existed in elementary school where males were 2.3 times more likely than were females to be referred to the office, and 2.6 times more likely to be excluded for their ODRs than were female students. See Table 4 for additional details.

Table 4. Gender-Based ODR & Exclusionary ODR Risk Ratios by School Category

	Elementary School		Middle School		High School	
	ODR Risk Ratio	Excl ODR Risk Ratio	ODR Risk Ratio	Excl ODR Risk Ratio	ODR Risk Ratio	Excl ODR Risk Ratio
Male vs. Female	2.3	2.6	1.5	1.6	1.2	1.3

These findings illustrate that although being female remains an advantage when it comes to the way students' behaviors are judged and handled throughout school, gender acts as much less of a disciplinary shield once girls are out of elementary school.

Do ODR and/or exclusionary ODR rates differ within each school category based on the interaction between students' ethnicity and gender?

Next, interactions between ethnicity and gender and its effects on ODR and exclusionary ODR rates within each school category were explored. As shown in Figure 11, in elementary school, Latina students had the lowest rates of ODRs (1.1) while Black male students by far had the highest rates—18.3. In both middle and high school, White female students had the lowest ODR rates, followed by Latina students. Conversely, Black male students had the highest rates, followed by Black females.

The rate of exclusionary ODRs followed the same trend as ODR rates. In elementary school, Latina students had the lowest rates (0.3), followed by White female students (0.5); Black male students had the highest rates of exclusionary ODRs—10.6. In both middle and high school, White female students' exclusionary ODR rates were lowest, followed by Latina students, while Black male students' rates remained highest.

Figure 11. ODR (Including Exclusionary ODR) Rate by Ethnicity & Gender by School Category

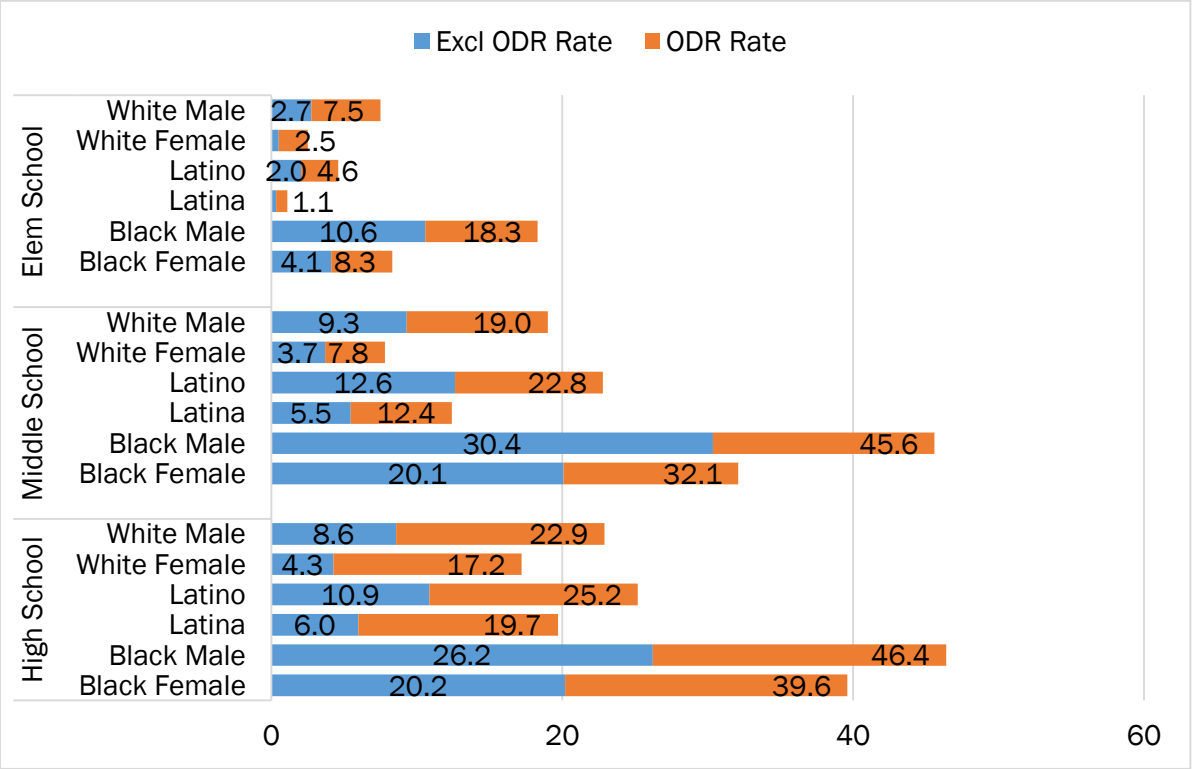


Table 5 shows that the largest disparities in ODR rates existed in middle school when Black male students were 8.2 times more likely than White female students and 5.6 times more likely than Latina students to be referred to the office. The largest disparities in exclusionary ODRs were found in elementary school when Black male students were 33.6 times more likely than Latina students and 21.2 times more likely than White female students to be excluded for their ODRs. This large disparity was namely because female students from these ethnic groups were excluded for their ODRs at rates of 0.5% and below.

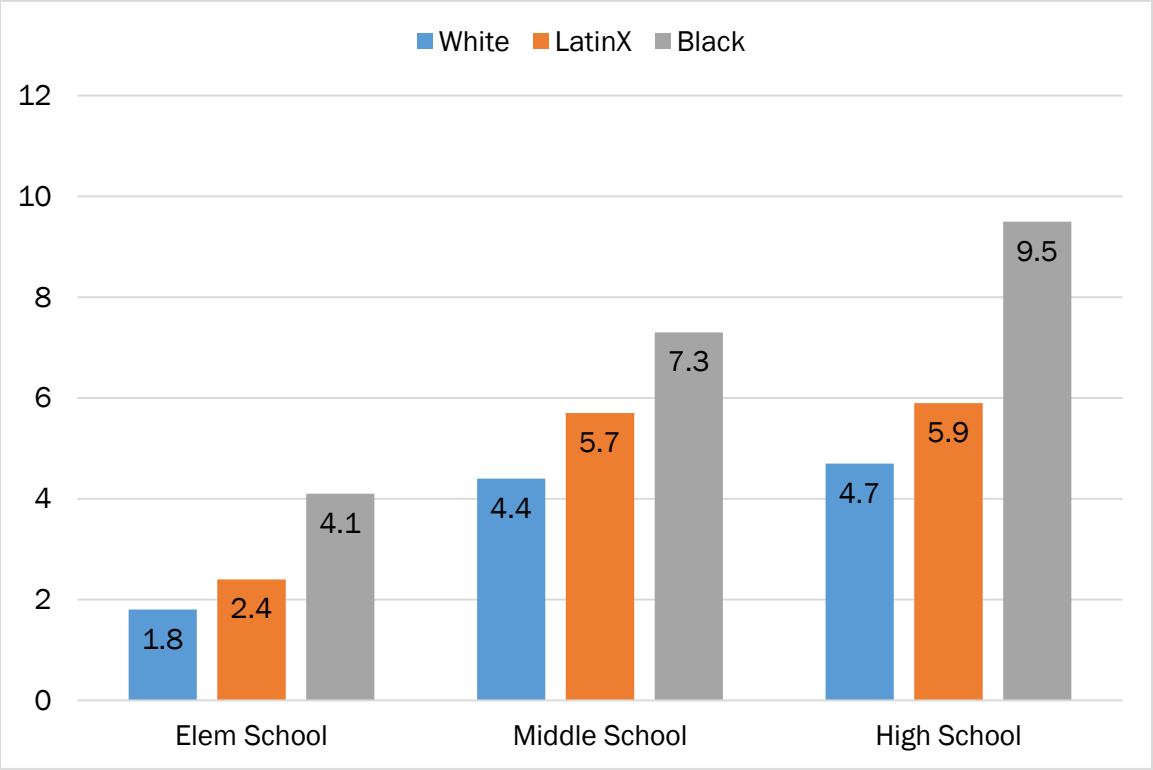
Table 5. Disparities in ODR & Exclusionary ODR Rate by Interaction between Ethnicity & Gender & School Category

	Elementary School		Middle School		High School	
	ODR Rate	Excl ODR Rate	ODR Rate	Excl ODR Rate	ODR Rate	Excl ODR Rate
BM vs. BF	0.3	2.6	1.4	1.5	1.2	1.3
BM vs. LF	0.1	33.6	3.7	5.6	2.4	4.4
BM vs. LM	2.3	5.2	2.0	2.4	1.8	2.4
BM vs. WF	0.5	21.2	5.8	8.2	2.7	6.1
BM vs. WM	0.3	3.9	2.4	3.3	2.0	3.1

Do the average number of days excluded from school differ based on students' ethnicity and/or school category?

Not only were Black students sent to the office more often and excluded from school more often when they were, but Figure 12 shows that these consequences also resulted in more days out of school for Black students than for their White and Latinx peers in every school category. Additionally, consequences became increasingly severe as Black students advanced in school, causing Black middle and high school students to be more likely to be overrepresented among the low percentage of students that were excluded because of being expelled.

Figure 12. Average Disciplinary Days by Ethnicity & School Category



As shown in Table 6, the largest disparities in the average number of days excluded among ethnic groups occurred during high school. On average, Black students were excluded from school 4.8 and 3.6 days longer than were White and Latinx students, respectively.

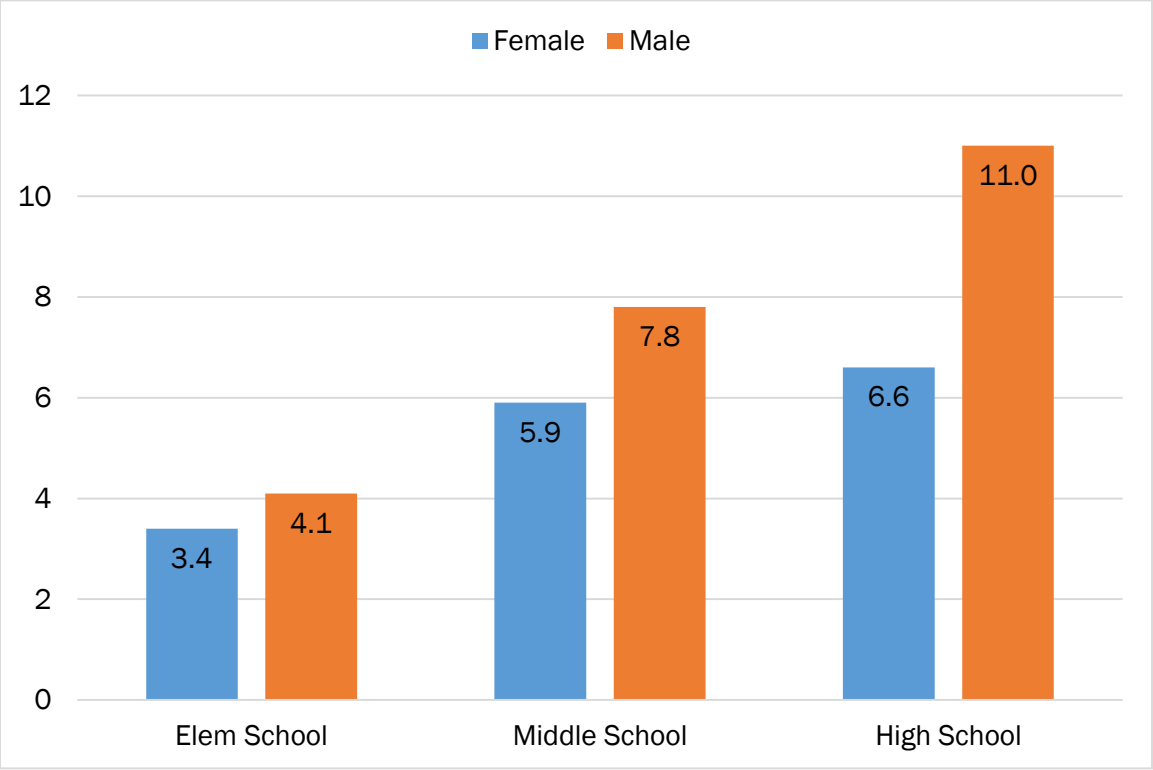
Table 6. Disparities in Average # of Days Excluded Based on Ethnicity & School Category

	Elementary School	Middle School	High School
Black vs. White	2.3	2.9	4.8
Black vs. Latinx	1.7	1.6	3.6

Do the average number of days excluded from school differ based on students' gender and/or school category?

Figure 13 illustrates that, on average, male students were excluded from school longer than their female counterparts. This was especially true in high school where males were excluded an average of 4.4 days longer. Mirroring disparities in ethnicity, consequences became increasingly severe for males as they progressed through school, making them more likely to be among the small percentage of expelled students in middle and high school relative to females.

Figure 13. Average # of Disciplinary Days by Gender & School Category



Does the average number of days excluded from school differ within each school category based on the interaction between students' ethnicity and gender?

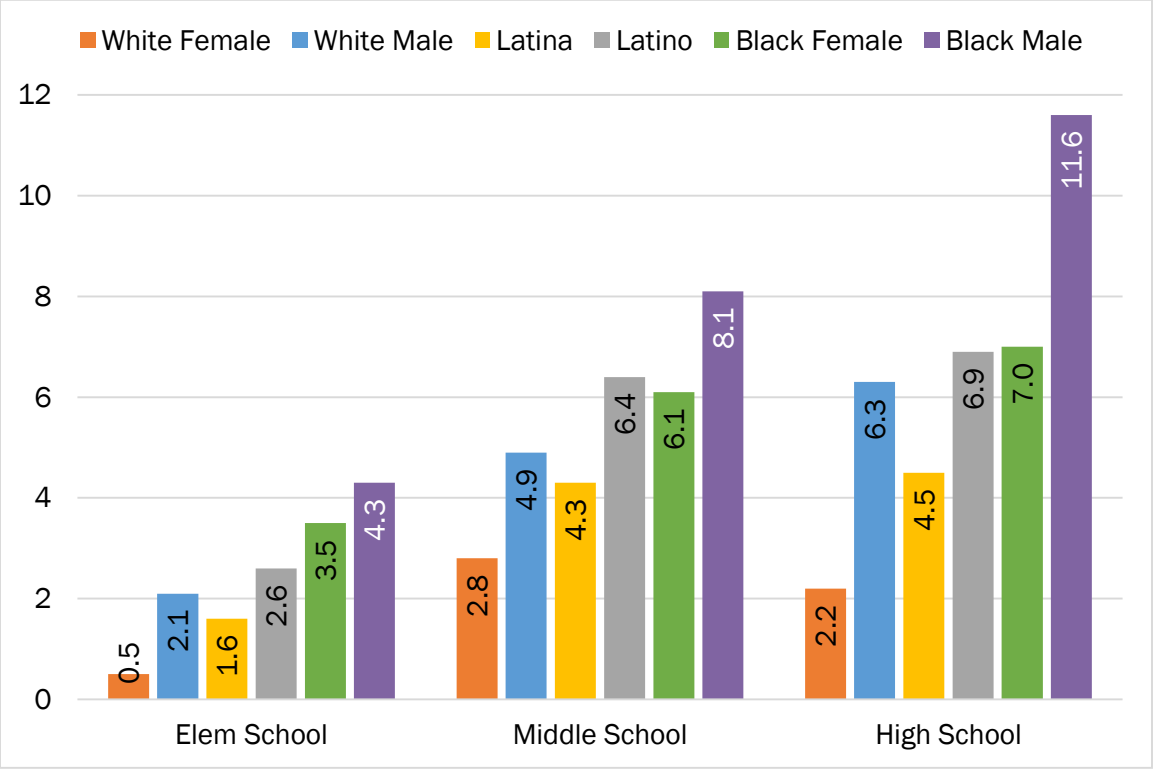
Figure 14 shows that in every grade category, White female students and Latina students had the lowest average number of days excluded, while Black male and female students had the highest.

Inequities were especially prominent in elementary school when White female students and Latina students were the least likely to be excluded, maintaining rates of 0.5% and below. Compared to Black male and female students, White female students' exclusionary days were 8.6 and 7.0 times shorter, respectively. Latina students' exclusionary days were 2.7 and 2.2 times shorter than Black male and female students' average days excluded, respectively.

In comparison to Black male and female middle school students, White female students' exclusions were 2.9 and 2.2 times shorter, respectively. Latina students' exclusionary days were 1.9 and 1.4 times shorter than Black male and female students' exclusionary days. Additionally, although substantially longer than other groups, the exclusionary time Black female students received was 1.3 times shorter than Black male students' exclusions.

In high school, the average number of days that White female students were excluded was slightly less than their middle school average. When compared to their peers, White female students were given exclusionary ODRs that were half as long as Latina students' exclusions, approximately 3.2 times shorter than Latino and Black female students' exclusions, and 5.3 times shorter than Black male students' exclusions. Additionally, Latina students' average exclusionary referrals were 2.6 times shorter than the referrals Black male students received. Last, the average number of days Black female students were excluded from school was 1.7 times shorter than that of Black male students.

Figure 14. Average Disciplinary Days by Ethnicity & Gender per Grade Category



The preliminary results revealed that the largest disparities in disciplinary outcomes existed between Black and White students, and to a lesser extent, Black and Latinx students. Gender differences were also present, and the interaction between gender and ethnicity revealed that males, and specifically Black males, were at greater risk of receiving more frequent and harsher disciplinary outcomes than their White male and female students, as well as Latino students. Therefore, this study focuses on identifying the school-level variables that potentially contributed to the disparities between these groups.

School-Level Predictors of Black Students' Disciplinary Outcomes

Ordinary least squares (OLS) multiple regression analyses were conducted to determine which school-level variables best predicted the following disciplinary outcomes among Black students: 1) Office disciplinary referral (ODR) rates, 2) ODR risk ratios, 3) Exclusionary ODR rates, 4) Exclusionary ODR risk ratio, and 5) the average number of days excluded from school.

To examine each of the five disciplinary outcomes, analyses were conducted in two steps. The first step of these analyses explored the effects of enrollment size and school category on Black and Black male students overall. Enrollment size served as a control variable because some studies suggest that it may attenuate discipline disparities (Anderson & Ritter, 2017; Pearman II, Curran, Fisher, & Gardella, 2019). Enrollment size was dummy coded to identify schools whose enrollment size was (1) greater than the mean among the schools with similar grade ranges versus (0) those that were below the mean. Because the preliminary analyses illustrated differing disciplinary practices based on school category, this variable was dummy coded to identify whether students were enrolled in middle school (1) or not (0) and whether students were in high school (1) or not (0). All other variables were continuous. Additionally, all variables were entered into the model simultaneously in each analysis.

Because the preliminary results also revealed differing outcomes based on student demographics *within* each school category, the second step of these analyses explored the effects of the predictor variables in elementary, middle, and high schools separately. In each hierarchical regression, the predictor variables were entered in three steps. Model 1 focused on student-level variables and included the concentrations of poor and Black students in schools simultaneously. Previous studies have tied these student-level variables increased risk of ODRs (Anyon, et al., 2014) as well as students receiving more and lengthier suspensions (Anderson & Ritter, Disparate use of exclusionary discipline: Evidence on inequities in school discipline from a U.S. state, 2017). Models 2 and 3 focused on teacher-level variables and included the percentages of White and male teachers in schools, respectively. Numerous studies have explored school- and student-level variables as predictors of disciplinary disparities; however, few include teacher-level variables. Bradshaw and colleagues found a relationship between teacher ethnicity and students' likelihood of receiving an ODR, although not in the expected direction (Bradshaw, Mitchell, O'Brennan, & Leaf, 2010). As argued earlier, teachers are the gatekeepers of students' behavioral outcomes. They decide whether students receive ODRs in the first place, and how to categorize their behaviors, which in turn influences the severity of the consequences they receive. Thus, considering similar teacher- and student-level variables, such as race and gender, may add insight.

In every analysis, a preliminary exploration of the results showed no issues with multicollinearity—high intercorrelations or inter-association among the predictor variables. All variance inflation factors (VIF) were less than 9 and the corresponding tolerance values were greater than 0.12.

Which school-level variables predict higher rates of ODRs among Black students?

Exploring the school-level variables associated with higher rates of office disciplinary referral (ODR)s among Black students revealed that ODR rates were higher among Black students in

middle and *high school* versus those in elementary school. Analyzing outcomes by school category shows that attending *elementary schools* with *higher concentrations of Black students* and *middle schools* with *higher concentrations of poor students* led to higher rates of ODRs among Black students. The lack of significance found when analyzing the effects of the predictor variables on ODR rates at the *high school* level demonstrates that variables other than those tested in the model were better predictors of Black students' higher rates of ODRs in this environment.

ODR rates among Black students overall. The regression tables report three pieces of data: R square (R^2), the F-ratio (F), and the standardized beta coefficients (β). R^2 represents the percentage of variance in the outcome the predictor variables explain, illustrating the strength of the relationship between the variables in the model and the outcome. The F-ratio tests the significance of R^2 and illustrates the predictive power of the variables in the model. Consequently, Table 7 shows that the full model—attending schools with larger than average enrollment size and being in middle or high school—explained 49.5% of the variance in Black students' ODR rates, which was statistically significant. β illustrates the degree of change in the outcome for every one-unit of change in the predictor variable, representing how strongly each predictor variable influences the outcome. Because the variables in this part of the model are categorical, the one-unit difference represents switching from one category to the other. Consequently, the significant βs associated with *middle* and *high* school shown in Table 7 illustrate that Black students in *middle* (β = .552) and *high school* (β = .576) had about a 0.6-point higher rate of ODRs than their Black elementary school peers.

Table 7. Regression—Black Students' ODR Rates

Variable	R^2	F	β
Model 1	.495**	44.732**	
Enrollment Size			.054
M.S.			.552**
H.S.			.576**

ODR rates among Black students within school categories. Table 8 presents the school-level variables used to test variance in ODR rates among *Black* students in each school category. The full model explained 13.9% of the variance in Black students' ODR rates in *elementary school* and 52% in *middle school*. The *concentrations of poor* and *Black students* in schools (Model 1) accounted for 12.0% of the variance in ODR rates among Black *elementary* students and 50.4% of the variance among Black *middle school* students. In *elementary* school, the significant β coefficient associated with the *concentration of Black students* in schools illustrates that for each one percentage point increase in this predictor variable, there was a .32-point increase in the rate at which Black students were referred to the office (β = .319). Stated another way, the rate of ODRs among Black *elementary* students increased approximately 3 points for every 10-point increase in the *concentration of Black students* in schools. In *middle* school, the significant β coefficient (β = .771) illustrates that for every 10-point increase in the *concentration of poor students* in schools, there was

about an 8-point increase in ODR rates among Black students. None of the variables in the model significantly predicted the variability in ODR rates among Black *high school* students.

Table 8. Hierarchical Regression—Black Students' ODR Rate by School Category

	Variable	R^2	F	β
	Full Model	.139*	3.341*	
	% ED			.299
E.S.	% Black			.319*
	% White Teachers			.224
	% Male Teachers			.069
	Full Model	.520*	5.689*	
	% ED			.771*
M.S.	% Black			.182
	% White Teachers			.197
	% Male Teachers			.052
	Full Model	.016	.090	
	% ED			.136
H.S.	% Black			.019
	% White Teachers			.100
	% Male Teachers			-.099

Which school-level variables predict higher rates of ODRs among Black male students?

The next analysis outcomes among Black *male* students. The results revealed that Black *male*s had higher rates of ODRs in *middle* and *high school* than those in elementary school. Exploring outcomes within each school category revealed that none of the individual variables predicted higher rates of ODRs among Black *male*s; however, in *elementary* and *middle* school, the *combined* effect of the variables created a unique environment that resulted in higher rates of referrals among Black *male*s.

ODR rates among Black males overall. As shown in Table 9, the full model explained 44.2% of the variance in Black *male* students' ODRs. Black *male*s in *middle* (β = .546) and *high school* (β = .516) had ODRs rates that were approximately 0.5 points higher than those of their peers in elementary school.

Table 9. Hierarchical Regression—Black Male Students' School-Level ODR Rate

Variable	R^2	F	β
Model 1	.442**	36.208**	
Enrollment Size			.072
M.S.			.546**
H.S.			.516**

ODR rates among Black males within school categories. In *elementary* school, the full model explained 13.2% of the variance in Black *male* students' ODR rates and 42.9% of the variance in *middle school*. The *concentrations of poor* and *Black* students (Model 1) explained 12.8% and 42.8% of the variance in Black male students' ODR rates in *elementary* and *middle school*, respectively. However, individually, none of the variables significantly predicted Black male students' ODR rates. Additionally, none of the school-level variables explained a significant proportion of the variance in, or predicted the ODR rate among, Black *male* students in *high school*. See Table 10 for details.

Table 10. Hierarchical Regression—Black Male Students' School-Level ODR Rate by School Category

Category	Variable	R^2	F	β
	Full Model	.132*	3.160*	
	% ED			.303
E.S.	% Black			.237
	% White Teachers			.133
	% Male Teachers			-.006
	Full Model	.429*	3.949*	
	% ED			.660
M.S.	% Black			.161
	% White Teachers			.107
	% Male Teachers			-.020
	Full Model	.032	. 181	
	% ED			.163
H.S.	% Black			.092
	% White Teachers			.203
	% Male Teachers			-.135

Which school-level variables predict disparities in Black male students' ODR rates relative to White male, White female, and Latina Students?

This analysis explored the predictors of disparities in ODR rates between *Black male* students and *White male*, *White female*, and *Latina* students. Findings illustrate that when enrolled in schools that were *larger* than average in size, Black *males* had higher rates of ODRs than *White male* or *Latina* students. Additionally, Black *males* were referred to the office more often than *White males* in *middle* school than when in elementary school.

Analyzing predictors within each school category reveal that in *elementary* schools with *more affluent* students, Black *males* were sent to the office at significantly higher rates than their *White male* peers. Additionally, Black *male* behavior was viewed more negatively than both *White male* and *Latina* behavior in *elementary* schools with *fewer Black students*, resulting in higher rates of ODRs.

Black *males* were disciplined at disproportionately higher rates than *White females* in *elementary* schools with *higher percentages* of *White teachers*; however, the opposite was true when it came to *Latina* students. In *elementary* schools with *fewer White teachers,* Black *males* were sent to the office at higher rates than *Latina* students.

In *middle* and *high school*, while the full model was significant, none of the individual variables predicted disparities between Black *male* and *White female* students' ODR rates, illuminating that the *combined* effects of the variables created a unique environment that adversely affected the ways Black *males* were treated, resulting in higher rates of ODRs.

Disparities in ODR rates among Black students and their peers overall. Table 11 shows that the full model explained 18.3% of the variance in ODR rates between Black and *White male* students and 6.3% of the variance between Black *male* and *Latina students*. The standardized regression coefficients β reveal that attending larger than average schools predicted a 0.4-point disparity (β = .365) between Black *and White male* students' ODR rates, and a 0.2-point disparity (β = .243) between Black *males* and *Latinas*. Additionally, being in *middle school* rather than elementary school predicted a 0.2-point disparity (β = .204) between Black *and White male* students' ODR rates.

Disparities in ODR rates among Black males and their peers in elementary school. Table 12 presents elementary students' disciplinary outcomes, comparing Black male students' rates of office referrals relative to their peers.

In *elementary* school, the full model explained 25.6% of the variance in ODR rates between Black and *White male* students. Alone, the *concentrations of poor* and *Black students* (Model 1) accounted for a significant proportion of this variance—24.7%. In fact, for every 10-point *decline* in the *concentrations of poor* and *Black* students in schools, there was about a 4-point increase in the disparity between Black and *White male* students' ODR rates.

Comparing Black male to *White female students*, the full model explained 45.2% of the variance in ODR rates in *elementary* school. The *concentrations of poor* and *Black* students in schools (Model 1) alone explained 30.3% of the variance. The percentage of White teachers in schools explained another 14.4% of the variance and was the only significant predictor. For every 10-point increase in the percentage of White teachers in *elementary* schools, there was an almost 8-point increase in the disparities in ODR rates between Black *male* and *White female* students.

The last analysis explored disparities in ODR rates between Black *male* and *Latina* students. The full model explained 31.2% of the variance between these groups. The *concentrations of poor* and *Black* students (Model 1) alone explained 22.7% of the variance, while the *percentage of White teachers* in schools (Model 2) explained another 8.4%. For every 10-point *decrease* in the *concentration of Black students* in schools, there was about an 8-point increase in the disparities between Black *male* and *Latina* students' ODR rates. Additionally, for every 10-point *decrease* in the *percentage of White teachers* in schools, disparities increased by approximately 6 points.

ODR rates between Black males and their peers in middle and high school. Table 12 presents disparities between *middle* and *high school* students' disciplinary outcomes. The full model explained 46.8% of the variance in ODR rates between Black *male* and *White female* students in *middle school* and 34% of the variance in *high school*. The

concentrations of poor and *Black students* in schools (Model 1) explained 37% and 32.4% of the variance in ODR rates between Black *male* and *White female middle* and *high school* students, respectively. However, alone, none of the variables successfully predicted variability in ODR rates between Black *male* and *White female* or *Latina* students in *middle* or *high school*.

Table 11. Hierarchical Regression—Black Male Students' ODR Risk Ratio Relative to Peers

	White Male			White Female			Latina		
Variable	R^2	F	β	R^2	F	β	R^2	F	β
Model 1	.183**	10.253**		.048	2.324		.063*	3.065*	
Enrollment Size			.365**			.167			.243*
M.S.			.204*			.118			-.052
H.S.			.067			-.033			-.060

Table 12. Hierarchical Regression—Black Male Students' ODR Risk Ratio Relative to Peers by School Category

		White Male			White Female			Latina		
	Variable	R^2	F	β	R^2	F	β	R^2	F	β
E.S.	Full Model	.256**	7.151**		.452**	17.118**		.312**	9.392**	
	% ED			-.364*			.229			.050
	% Black			-.357*			-.106			-.778*
	% White Tch			-.153			.757**			-.573*
	% Male Tch			-.053			-.070			.024
M.S.	Full Model	.071	.401		.468*	4.618*		.103	.604	
	% ED			-.514			.021			.141
	% Black			-.311			-.409			-.145
	% White Tch			-.574			.206			-.063
	% Male Tch			.188			-.365			-.269
H.S.	Full Model	.271	2.044		.340*	2.833*		.233	1.666	
	% ED			-.221			-.121			.209
	% Black			-.113			-.302			-.658
	% White Tch			.249			.240			-.309
	% Male Tch			.071			-.031			-.053

Which school-level variables predict higher rates of exclusion among Black students receiving ODRs?

Exploring the factors contributing to *exclusionary* ODR rates reveals that exclusions were higher among Black students in *middle* and *high school* compared to those in elementary school. Additionally, Black students in *every school category* were excluded more often when attending schools with *higher concentrations of poor students*.

Exclusionary ODR rates among Black students overall. Table 13 shows that the full model explained 48.2% of the variance in exclusionary ODRs among Black students. Exclusionary ODR rates were approximately 0.6 and 0.5 points higher among Black *middle* and *high school* students, respectively than those of their elementary school peers.

Table 13. Hierarchical Regression—Black Students' Exclusionary ODR Rate

Variable	R^2	F	β
Model 1	.482**	42.533**	
Enrollment Size			-.086
M.S.			.596**
H.S.			.518**

Exclusionary ODR rates among Black students by school categories. Table 14 outlines Black students' disciplinary outcomes in each school category. The overall model accounted for 22.7% of the variance among Black students' exclusionary ODR rates in *elementary school*, 70.7% of the variance in *middle school* students, and 39.5% of the variance in *high school*. The *concentrations of poor* and *Black students* in schools (Model 1) significantly contributed to the model, explaining 19.8% of the variance in *elementary school*, 62% in *middle school*, and 35.3% in *high school*. The *concentration of poor students* in schools was a significant predictor in every school category. For every 10-point increase in the *concentration of poor students* in schools, the exclusionary ODR rate among Black students increased by approximately 4 points in *elementary* and by about 8 points in *middle* and *high school*.

Table 14. Hierarchical Regression—Black Students' Exclusionary ODR Rate by School Category

	Variable	R^2	F	β
E.S.	Full Model	.227**	6.097**	
	% ED			.430*
	% Black			.254
	% White Teachers			.182
	% Male Teachers			.138
M.S.	Full Model	.707**	12.673**	
	% ED			.787*
	% Black			.310
	% White Teachers			.248
	% Male Teachers			.218
H.S.	Full Model	.395*	3.585*	
	% ED			.768*
	% Black			.271
	% White Teachers			.407
	% Male Teachers			.011

Which school-level variables predict higher rates of exclusion among Black male students receiving ODRs?

When examining outcomes among Black *male*s, the analysis revealed that exclusions were higher among Black *male*s in *middle* and *high school* than in elementary school. Analyzing outcomes among Black *male*s within each school category revealed that Black *elementary* and *middle school* students were more likely to be excluded from schools with *higher concentrations of poor student*s.

Exclusionary ODR rates among Black males overall. The full model explained 43.2% of the variance in exclusionary ODR rates among Black *male* students. Rates of exclusion were approximately 0.6 and 0.5 points higher among Black *middle* and *high school male*s, respectively, relative to their peers in elementary school (see Table 15).

Table 15. Hierarchical Regression—Black Male Students' Exclusionary ODR Rate

Variable	R^2	F	β
Model 1	.432**	34.677**	
Enrollment Size			-.065
M.S.			.589**
H.S.			.458**

Exclusionary ODR rates among Black males by school categories. Table 16 presents the findings within each school category. The *concentrations of poor* and *Black students* in schools (Model 1) contributed to the variability in *exclusionary* ODRs among Black *male elementary* and *middle school* students. These variables explained 22.4% of the variance in *elementary school* and 61.9% of the variance in *middle school*. For every 10-point increase in the *concentration of poor students* in schools, the exclusionary rate among Black *males* increased by 5 points in *elementary school* and 7 points in *high school*.

Table 16. Hierarchical Regression—Black Male Students' Exclusionary ODR Rate by School Category

	Variable	R^2	F	β
E.S.	Full Model	.224**	5.996**	
	% ED			.472*
	% Black			.187
	% White Teachers			.152
	% Male Teachers			.072
M.S.	Full Model	.619**	8.517**	
	% ED			.670*
	% Black			.256
	% White Teachers			.119
	% Male Teachers			.205
H.S.	Full Model	.335	2.775	
	% ED			.718
	% Black			.327
	% White Teachers			.469
	% Male Teachers			-.080

Which school-level variables predict disparities in Black male students' exclusionary ODR rates relative to White male, White female, and Latina students?

This analysis sought to identify the school-level predictors of higher rates of exclusionary ODRs among Black *male* students relative to *White male*, *White female*, and *Latina* students. The results revealed that Black males were more likely than *White females* or *Latinas* to be excluded for their ODRs when attending *larger* than average schools. Additionally, Black *males* were excluded at higher rates than their *Latina* peers when in *elementary school* versus middle school.

Exploring exclusionary disciplinary practices within each school category shows that Black *males* had higher rates of exclusions than *White males* in *elementary* and *high school* and higher rates than *White females* in *middle* and *high school.* However, none of the variables individually predicted disparities between the groups. This demonstrates that the *combined* effects of the variables in the model created a unique environment that contributed to the

inequities between Black and White *males* in *elementary school*, as well as between Black *males* and *White males and females* in *high school*. Additionally, Black *males* were more likely than *Latinas* to be excluded for their ODRs when attending *elementary* and *high schools* with *fewer Black students.*

Disparities in exclusionary ODR rates among Black males and their peers overall. Table 17 shows that the full model explained 12.9% and 9.1% of the variance in Black male students' *exclusionary* ODR rates relative to *White female* and *Latina* students, respectively. Attending *larger* than average schools increased the disparities in *exclusionary* ODR rates between both Black *males* and *White females* and *Latinas* by approximately 0.2 points. Additionally, being in *elementary school* rather than middle school increased disparities in exclusions between Black *males* and *Latinas* by a similar amount.

Disparities in exclusionary ODR rates among Black male elementary students. Table 17 presents elementary students' disciplinary outcomes, comparing Black male students' rates of *exclusionary* ODRs relative to that of their peers. The full model explained a significant proportion of the variance in Black *male elementary* students' exclusionary rates relative to *White male* (15.6%), *White female* (27.2%) and *Latina* (12.6%) students. The *concentrations of poor and Black students* in schools (Model 1) explained 12.1% of the variance in exclusions between Black and *White males*; however, neither of these variables individually predicted variance.

The *concentrations of poor* and *Black students* in schools (Model 1) explained 22.9% of the variance in *exclusionary* rates between Black *males* and *White females*. The *percentage of White teachers* in schools (Model 2) accounted for another 2.6% of the variance. For every 10-point *increase* in the *concentration of poor students* in schools, disparities between Black *male* and *White female elementary* students' *exclusionary* ODR rates increased by approximately 4 points. However, the gap increased by about the same amount for every 10-point *decrease* in the *concentration of Black students* in school.

The *concentrations of poor* and *Black* students in schools also explained 10.7% of the variance in exclusions between Black *male* and *Latina* students; however, only one of the variables was a significant predictor. A 10-point *decrease* in the *concentration of Black students* in *elementary* schools resulted in a 5-point increase in the disparities between Black *male* and *Latina* students' *exclusionary* ODR rates.

Disparities in exclusionary ODR rates among Black male middle and high school students. Table 17 presents *middle* and *high school* students' disciplinary outcomes, comparing Black *male* students' rates of office referrals relative to their peers. The full model explained 38.7% of the variance in *exclusionary* ODR rates between Black *male* and *White female middle school* students. The *concentrations of poor and Black students* in schools (Model 1) were the only variables that provided a significant, unique contribution to the model, explaining 28.5% of the variance. However, none of the individual variables predicted variance between Black *male* and *White female middle school* students. The model did not explain a significant proportion of the variance between Black and *White males* or between Black *males* and *Latinas* in *middle school.*

The full model explained 54.2% of the variance in the rates at which Black *male high school* students were excluded from school relative to *White males* and 53% of the variance relative to *White females.* The *concentrations of poor* and *Black students* in schools (Model

1) alone explained 46.1% of the variance between Black and *White males* and 49.9% of the variance between Black *males* and *White females*. However, individually, none of the variables predicted variability in exclusionary ODR rates between Black *males* and these two groups of *high school* students.

The last analysis compared rates of exclusion between Black *male* and *Latina high school* students. The full model explained 52.6% of the variance. The *concentrations of poor* and *Black* students in schools (Model 1) significantly contributed to the model, accounting for 52.2% of the variance alone. However, only one of the variables was a significant predictor. For every 10-point *decrease* in the *concentration of Black students* in schools, there was a 7-point increase in the gap between Black *male* and *Latina* students' *exclusionary* ODR rates.

Table 17. Hierarchical Regression—Black Male Students' Exclusionary ODR Risk Ratio Relative to Peers

	White Male			White Female			Latina		
Variable	R^2	F	β	R^2	F	β	R^2	F	β
Model 1	.041	1.947		.129**	6.757**		.091*	4.564*	
Enrollment Size			.180			.167*			.192*
M.S.			.083			.118			-.224*
H.S.			.026			-.033			-.064

Table 18. Hierarchical Regression—Black Male Students' Exclusionary ODR Risk Ratio Relative to Peers by School Category

		White Male			White Female			Latina		
	Variable	R^2	F	β	R^2	F	β	R^2	F	β
E.S.	Full Model	.156*	3.836*		.272**	7.735**		.126*	2.994*	
	% ED			-.024			.387*			.162
	% Black			-.039			-.394*			-.446*
	% White Tch			.341			.365			-.201
	% Male Tch			.058			.077			.100
M.S.	Full Model	.305	2.304		.387*	3.319*		.153	.951	
	% ED			.030			.404			.350
	% Black			-.076			-.052			-.220
	% White Tch			.511			.850			.211
	% Male Tch			-.168			-.355			-.305
H.S.	Full Model	.542**	6.519**		.530*	6.201*		.526*	6.100*	
	% ED			-.085			-.420			.086
	% Black			-.143			-.048			-.671*
	% White Tch			.584			.333			.120
	% Male Tch			-.009			.070			-.005

Which school-level variables predict lengthier exclusions from school among Black students receiving exclusionary ODRs?

The last outcome explored was the average *length of exclusions* among Black students. Findings illustrate that Black students were excluded from school longer when attending *smaller* than average schools and during *middle* and *high school*. Analyzing Black students' outcomes within school categories reveals that Black students were at greater risk of receiving lengthier exclusions when attending schools with *lower concentrations of Black students* in *elementary* grades and when attending *high schools* with *higher concentrations of poor students*. Although the *concentrations of poor and Black students* in schools significantly contributed to the model in *middle school*, individually, none of the variables predicted lengthier exclusionary ODRs. This shows that the *combined* effect of the variables created a unique environment that resulted in Black students receiving more severe punishments in *middle school*.

Length of exclusionary ODR rates among Black students overall. As shown in Table 19, the full model explained 34.8% of the variance in the average number of days Black students were excluded. When Black students were enrolled in *smaller* than average schools, exclusions were 0.20 days longer than when in larger schools. Additionally, Black students were excluded 0.25 days longer in *middle school* and 0.56 days longer in *high school* than when in elementary school.

Table 19. Hierarchical Regression—Average # of Excluded Days Among Black Students

Variable	R^2	F	β
Model 1	.348**	24.404**	
Enrollment Size			-.203*
M.S.			.253**
H.S.			.555**

Length of exclusionary ODR rates among Black students by school categories. Table 20 shows that the full model explained 18.7% of the variance in the average number of days Black students were excluded in *elementary school*, 41.4% of the variance in *middle school*, and 35.7% of the variance in *high school*. The *concentrations of poor* and *Black students* in schools significantly contributed to the model for *elementary* (14.9%) and *high school* (31.4%) students. For every 10-point *decrease* in the *concentration of Black students* in schools, the length of exclusions increased by approximately 3 days among Black *elementary* students and approximately 7 days among Black *high* school students.

The *concentrations of poor* and *Black students* in schools significantly contributed to the middle *school* model (31%); however, individually, none of the individual variables predicted lengthier exclusionary ODRs.

Table 20. Hierarchical Regression—Average # of Excluded Days Among Black Students by School Category

	Variable	R^2	F	β
	Full Model	.187*	4.763 *	
	% ED			.239
E.S.	% Black			-.328*
	% White Teachers			-.360
	% Male Teachers			.076
	Full Model	.414*	3.713*	
	% ED			.553
M.S.	% Black			.396
	% White Teachers			.330
	% Male Teachers			.215
	Full Model	.357*	3.054*	
	% ED			.660*
H.S.	% Black			.163
	% White Teachers			.264
	% Male Teachers			.181

Which school-level variables predict lengthier exclusions from school among Black male students receiving exclusionary ODRs?

Next, the study examined predictors of the amount of time Black *males* were excluded from school. Findings showed that Black *males* were excluded longer when attending *smaller* than average schools and when in *middle* and *high school* versus elementary school. Analyzing outcomes within each school category revealed that *lower concentrations of Black students* in schools predicted lengthier exclusions among Black *male elementary* students. Additionally, although Black *males* attending *middle* schools with *lower concentrations of poor* and *Black students* were excluded longer, alone, neither of these variables predicted variance in length of exclusions. This illustrates that the *combined* effects of the variables in the model created a unique environment that adversely affected the ways Black *male middle school* students were disciplined

Length of exclusionary ODRs among Black males overall. As shown in Table 21, the full model explained 37.1% of the variance in the length of Black *male* students' exclusions. Attending *smaller* than average schools increased the length of exclusions among Black *males* by about 0.17 days. Exclusions were about 0.24 days longer among *middle school* Black *males* and 0.59 days longer among those in *high school* relative to their elementary school peers.

Table 21. Hierarchical Regression—Average # of Excluded Days Among Black Male Students

Variable	R^2	F	β
Model 1	.371**	26.966**	
Enrollment Size			-.167*
M.S.			.239**
H.S.			.592**

Length of exclusionary ODRs among Black males by school categories. The overall model explained only 16.3% of the variance in the average number of days Black *male elementary* students were excluded; however, it explained 42.3% of the variance in *middle school*. The *concentrations of poor* and *Black students* in *elementary school* accounted for 13.3% of the variance in *elementary school* and 32% of the variance in *middle school*. Exclusions among Black *male elementary* students were approximately 4 days longer for every 10-point *decrease* in the *concentration of Black students* in schools. However, none of the individual variables predicted variance in *middle school*. Further, in *high school*, the full model did not explain a statistically significant proportion of the variance. See Table 22 for details.

Table 22. Hierarchical Regression—Average # of Excluded Days Among Black Male Students by School Category

	Variable	R^2	F	β
E.S.	Full Model	.163*	.4.051*	
	% ED			.230
	% Black			-.361*
	% White Teachers			-.340
	% Male Teachers			.040
M.S.	Full Model	.423*	3.848*	
	% ED			.637
	% Black			.504
	% White Teachers			.491
	% Male Teachers			.141
H.S.	Full Model	.329	2.698	
	% ED			.684
	% Black			.025
	% White Teachers			.242
	% Male Teachers			.120

Which school-level variables predict disparities in Black male students' average number of days excluded from school relative to White male, White female, and Latina students?

The last analysis explored school-level predictors of *disparities in the length of exclusions* for Black *males* relative to *White male*, *White female*, and *Latina* students. When attending *smaller* than average schools and when attending *elementary* versus middle school, Black *males* were at greater risk of receiving lengthier exclusions than *White females* and *Latinas*.

Findings within school categories reveal that Black *males* attending *elementary schools* with *higher concentrations of poor* and *Black students* were excluded longer than *White female* and *Latina* students. However, alone, neither of these variables predicted the length of exclusions. This illustrates that in *elementary school*, the *combined* effects of the variables in the model contributed to an environment in which Black *males* were excluded longer than *White females* or *Latinas*. Additionally, when Black *males* attended *middle schools* with *higher concentrations of Black students*, they were given lengthier exclusions than *White female* students.

Disparities in the length of exclusionary ODRs among Black males and their peers overall. As shown in Table 23, the full model explained a significant proportion of the variance in the length of exclusions between Black *males* and both *White females* (9.6%) and *Latinas* (9.1%). Attending *smaller* than average schools resulted in a 0.25-day gap in the amount of time Black *males* and *White females* were excluded, and a 0.20-day gap between Black *males* and *Latinas*. Additionally, being in *elementary* school predicted disparities of approximately 0.2 days between the amount of time Black *males* and both *White females* and *Latinas* were excluded.

Disparities in the length of exclusionary ODRs among Black male elementary students and their peers. Table 24 shows that the full model explained a significant proportion of the variance in the average number of days Black *males* were excluded relative to *White female* (15.4%) and *Latina* (11%) *elementary* students. The *concentrations of poor* and *Black students* in schools (Model 1) alone explained 15.4% of the variance between Black *male* and *White female* students and 9.8% of the variance between Black *male* and *Latina* students. However, individually, none of the variables predicted variance between students in any group.

Disparities in the length of exclusionary ODRs among Black male middle and high school students and their peers. Table 24 also shows disparities in *middle* and *high school* students' disciplinary outcomes. The overall model explained 41.1% of the variance in the average number of days Black *males* and *White females* were excluded in *middle school*. The *concentrations of poor* and *Black students* in schools (Model 1) accounted for 22.9% of the variance. Specifically, a 10-point increase in the *concentration of Black students* in schools predicted disparities of about 6 days in the length of exclusions between Black *male* and *White female* students. None of the variables in the model accounted for, or predicted variance between, Black *male* students' length of exclusions relative to the peers in *high school*.

Table 23. Hierarchical Regression—Black Male Students' Average # of Days Excluded Relative to Peers

	White Male			White Female			Latina		
Variable	R^2	F	β	R^2	F	β	R^2	F	β
Model 1	.097*	4.928*		.096*	4.876*		.091*	4.578*	
Enrollment Size			-.187*			-.249*			-.199*
M.S.			-.012			-.170*			-.217*
H.S.			.239*			-.023			-.038

Table 24. Hierarchical Regression—Black Male Students' Average # of Days Excluded Relative to Peers by School Category

		White Male			White Female			Latina		
	Variable	R^2	F	β	R^2	F	β	R^2	F	β
E.S.	Full Model	.103	2.373		.154*	3.778*		.110*	2. 563*	
	% ED			.110			.246			.326
	% Black			.227			.196			.124
	% White Tch			-.026			-.007			.107
	% Male Tch			.003			.019			.090
M.S.	Full Model	.303	.530		.411*	3.658*		.241	1.671	
	% ED			.273			.148			.236
	% Black			.260			.616*			.242
	% White Tch			.284			.349			.408
	% Male Tch			.106			.318			.351
H.S.	Full Model	.538	2.236		.220	1.548		.288	2.229	
	% ED			.488			.406			.112
	% Black			.376			.366			.743*
	% White Tch			.247			.227			.367
	% Male Tch			.098			.001			.078

Summary

Tables 25 through 30 summarize the school-level variables that predicted disparities in disciplinary outcomes among Black students and between Black students and their *White male, White female,* and *Latina* counterparts. An "X" indicates that when schools were *higher* in a given predictor variable, students in the associated demographic were higher in the outcome variable. Conversely, a "-X" indicates that when schools were *lower*, students were higher on the outcome variable. For a binary variable like enrollment size, an "X" indicates that the school had a larger than average enrollment size, whereas a "-X" indicates that the school was smaller than average. For the categorical variables *middle* and *high* school, and "X" indicates that the school should be categorized as labeled, whereas a "-X" indicates that the school should be categorized as elementary.

Disparities in ODR Rates

Tables 25 and 26 identify the school-level variables that predicted higher rates of ODRs, Black *males* had higher rates of ODRs than did *White males* and *Latinas* when attending schools with *larger* than average enrollment size. Being in *middle* and *high school* predicted higher rates of ODRs among Black students and among Black *male* students. Additionally, Black *males* had higher rates of ODRs than did *White males* in *middle school*.

Table 25. Comparison of Predictor Variables—ODR Rates

Outcomes	Enrollment size	Middle school	High school
ODR rate			
Black students		X	X
Black males		X	X
Black males vs. White males	X	X	
Black males vs. White females			
Black males vs. Latinas	X		

Elementary School

Attending *elementary school* with *higher percentages of affluent* students (i.e., *lower concentrations of poor students)* predicted higher ODR rates for Black *males* relative to *White males*.

Higher concentrations of Black students in schools predicted higher rates of ODRs among Black *elementary* students. However, attending *elementary schools* with a *more ethnically diverse* student body population (i.e., those with *lower concentrations of Black students*) predicted higher rates of ODRs for Black *males* relative to *White males* and *Latinas*.

Higher percentages of White teachers in *elementary school* predicted higher rates of ODRs for Black *males* relative to *White females*; however, when *fewer White teachers* were present, ODR rates were higher for Black *males* than for *Latinas*.

The *combined* effects of the variables in the model predicted higher rates of ODRs among Black *elementary school males.*

Middle and High School

Attending *middle schools* with *higher concentrations of poor students* predicted higher rates of ODRs among Black students.

The *combined* effects of the variables predicted higher rates of ODRs among Black *males* and between *Black males* and *White females* in *middle school*. The variables also predicted higher rates of ODRs for Black *males* relative to *White females* in *high school.*

Table 26. Comparison of Predictor Variables—ODR Rates by School Category

Outcomes	School Category	Overall	Poverty concentration	Concentration of Black students	% of White teachers	% of male teachers
Elementary School	Black students			X		
	Black males	X				
	Black male vs. White male		-X	-X		
	Black male vs. White females				X	
	Black males vs. Latinas			-X	-X	
Middle School	Black students		X			
	Black males	X				
	Black male vs. White male					
	Black male vs. White females	X				
	Black males vs. Latinas					
High School	Black students					
	Black males					
	Black male vs. White male					
	Black male vs. White females	X				
	Black males vs. Latinas					

Disparities in Exclusionary ODR Rates

Tables 27 and 28 identify the school-level variables that predicted *exclusionary* ODR rates. School size predicted disparities in *exclusionary* ODR rates between Black *males* and both *White female* and *Latina* students. When attending *larger* schools, Black *males* were *excluded* more often for their ODRs than were *White females*. However, in *smaller* schools, Black *males* were more likely to be *excluded* for their ODRs than *Latinas*. Being in *middle* and *high school* predicted higher rates of *exclusion* among Black students and among Black *male* students. Additionally, in *elementary school*, Black *males* had a greater risk of being *excluded* from school for their ODRs than *Latinas*.

Table 27. Comparison of Predictor Variables—Exclusionary ODR rates by School Category

Outcomes	Enrollment size	Middle school	High school
Exclusionary ODR rate			
Black students		X	X
Black males		X	X
Black males vs. White males			
Black males vs. White females	X		
Black males vs. Latinas	-X	-X	

Elementary School

Attending *elementary schools* with *higher concentrations of poor students* predicted higher rates of *exclusionary* ODRs among Black students, among Black *male* students, and between Black *males White females*.

Attending *elementary schools* with *fewer Black students*, predicted higher rates of exclusion for Black *males* relative to both *White female* and *Latina* students.

The *combined* effects of the variables in the model predicted the greater risk of Black *males* being *excluded* relative to *White females* in *elementary* school.

Middle and High School

Attending *schools* with *higher concentrations of poor students* predicted higher rates of *exclusionary* ODRs among Black students in *middle* and *high school*. This was also true among Black *male middle school* students.

Attending *high schools* with *fewer Black students* predicted higher rates of exclusion for Black *males* relative to *Latinas*.

The *combined* effects of the variables in the model predicted Black *male* students' increased likelihood of being *excluded* relative to *White female middle school* students. The variables also predicted higher ODR rates between Black *males* and *White male* and *female high school* students.

Table 28. Comparison of Predictor Variables—Exclusionary ODRs by School Category

Outcomes	School Category	Overall	Poverty concentration	Concentration of Black students	% of White teachers	% of male teachers
Elementary School	Black students		X			
	Black males		X			
	Black male vs. White male	X				
	Black male vs. White females		X	-X		
	Black males vs. Latinas			-X		
Middle School	Black students		X			
	Black males		X			
	Black male vs. White male					
	Black male vs. White females	X				
	Black males vs. Latinas					
High School	Black students		X			
	Black males					
	Black male vs. White male	X				
	Black male vs. White females	X				
	Black males vs. Latinas			-X		

Disparities in Average Length of Exclusionary ODRs

Tables 27 and 28 identify the school-level variables that predicted the length of exclusions.

Attending *smaller* schools predicted disparities in length of exclusions among Black students, among Black *males*, and between Black *males* and students in *every comparison* group. Being in *middle* and *high school* predicted lengthier exclusions among Black students and among Black *males*. Being in *high school* predicted lengthier exclusions for Black *males* relative to *White males* while being in *elementary* school predicted lengthier exclusions for Black *males* relative to *White female* and *Latina* students.

Table 29. Comparison of Predictor Variables—Average # of Days Excluded by School Category

Outcomes	Enrollment size	Middle school	High school
Avg # of days excluded			
Black students	-X	X	X
Black males	-X	X	X
Black males vs. White males	-X		X
Black males vs. White females	-X	-X	
Black males vs. Latinas	-X	-X	

Elementary School

Attending *elementary* schools with a *more ethnically diverse* student body population predicted longer exclusions among Black students and Black *male* students.

The *combined* effects of the variables in the model predicted lengthier exclusions for Black *males* relative to *White female* and *Latina* students.

Middle and High School

Last, attending *high schools* with *higher concentrations of poor students* predicted lengthier exclusions among Black students.

Attending *high schools* with *higher concentrations of Black students* predicted longer exclusions for Black *males* relative to *Latinas*

The *combined* effects of the variables in the model predicted lengthier exclusions among Black students and between Black *male* and *White female* students in *middle school.*

Table 30. Comparison of Predictor Variables—Length of Exclusionary ODRs by School Category

Outcomes	School Category	Overall	Poverty concentration	Concentration of Black students	% of White teachers	% of male teachers
Elementary School	Black students			-X		
	Black males			-X		
	Black male vs. White male					
	Black male vs. White females	X				
	Black males vs. Latinas	X				
Middle School	Black students	X				
	Black males	X				
	Black male vs. White male					
	Black male vs. White females	X				
	Black males vs. Latinas					
High School	Black students		X			
	Black males					
	Black male vs. White male					
	Black male vs. White females					
	Black males vs. Latinas			X		

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