DISCIPLINE DISPARITIES IN U. S. PUBLIC SCHOOLS: WHAT ROLES DO ANTI-BLACK RACISM AND WHITE SUPREMACIST BELIEFS PLAY?

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occur over the course of a Ph.D. program—some pleasant and some unpleasant. My advisors have supported me through both.

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Finally, this dissertation is dedicated to my father, Freddie W. Nicholas, Sr.—without whom I would not have even considered earning a terminal degree. I will always cherish a memory of his graduation day. He and I were standing on the pedestrian bridge that spans Emmet Street. My father had his graduation regalia over one arm and his other arm was around me. We were both beaming brightly and proud of his accomplishment–earning an Ed.D. in Higher Education Administration and Supervision from the School of Education. My father set the standard of excellence and life-long learning for our family. Daddy, you are still the wind beneath my wings

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

PAPER 1 Page

PAPER 2

PAPER 3

Linking Document

Not everything that is faced can be changed, but nothing can be changed until it is faced. (Baldwin & Peck, 2017, p. 103)

Several years ago, a member of my preliminary exam committee, Professor Stanley Trent, asked if I considered myself to be a Critical Race Theorist. After hesitating, I cautiously responded that, though I apply Critical Race Theory (CRT) to my research, I did not consider myself a critical race theorist. I now realize that attempting to create comprehensive theoretical and conceptual theories that explain why discipline disparities occur in U. S. public schools without using a CRT lens is akin to attempting to capture a panoramic, long-range landscape utilizing a lens capable of only a narrow, short-range focus. Race and racism are woven into the very fabric of U. S. systems. Their primary purpose is to maintain the dominance, wealth, and privilege of one group of individuals over others. Without the school-to-prison pipeline or some other form of reduced-cost or free labor human capital source, the free-market system would fail (Fasching-Varner et al., 2014). CRT scholar and father of racial realism theory, Bell (1992), states that

> Black people will never gain full equality in this country. Even those herculean efforts we hail as successful will produce no more than temporary "peaks of progress," short-lived victories that slide into irrelevance as racial patterns adapt in ways that maintain [W]hite dominance. This is a hard-to-accept fact that all history verifies. We must acknowledge it and move on to adopt policies based on what I call: "Racial Realism." This mindset or philosophy requires us to acknowledge the permanence of our subordinate status. That acknowledgment enables us to avoid despair and frees us to imagine and implement racial strategies that can bring fulfillment and even triumph (pp. 373-374).

I now accept the tenet of CRT that racism is a permanent fixture in U. S. culture and society. Therefore, yes, Dr. Trent, my research has led me to conclude that I am, indeed, a critical race theorist. In addition to this declaration, I also commit to figuratively taking a knee. I am writing this manuscript as Derek Chauvin, the former Minneapolis police officer responsible for the death of George Floyd, is being publicly tried and in a time during which technology provides visual evidence that Black lives just do not matter. Videos also illuminate the reactivity, fear, bias (i.e., both implicit and explicit), and vitriol of those in authority over the lives of others. Though most of these situations play out in public spaces, the aforementioned emotions and biases do not originate on streets, highways, alleys, and backyards. They are present in schools and begin with socio-cultural conditioning that results from developing and existing in an anti-Black/White supremacist social-cultural-political macrosystem (Baron & Banaji, 2006). These factors lead to the differential surveillance, selection, and processing of African American community members and students based on race. I may be taking a knee for a very long time.

Racial Discipline Disparities in the United States

During the 2015-16 school year, almost three million students were assigned one or more out-of-school suspensions (out-of-school suspensions; U. S. Department of Education Office for Civil Rights, 2018). African American students comprise 15% of public-school enrollment, yet they represent 35%, 44%, and 36% of students suspended one time, students suspended multiple times, and expelled students, respectively. The situation is no better for African American preschool students (OCR, 2016). While African American students make up less than 20% of students enrolled in public preschools, they represent almost 50% of those suspended. African American students are also disproportionately referred to law enforcement and experience

disproportionate rates of school-related arrests. African American students represent 31% of students referred to law enforcement and subjected to school-related arrests.

Disturbingly, the assignment rate of exclusionary discipline consequences for African American students is trending upward. Between 2011 and 2016 the number of out-of-school suspensions, overall, declined. Enrollment of non-White students is increasing and expected to reach 56% by 2024 (OCR, 2016); however, enrollment rates for African American students are trending downward. For example, African American student enrollment was 18% in school year 2009-10 (OCR, 2012), 16% in school year 2012-13 (OCR, 2014), and 15% in school year 2015-16 (OCR, 2018). Although enrollment rates for African American students are trending downward, rates for out-of-school suspension are trending upward. For school years, 2011-12 and 2015-16, African American students made up 32% (OCR, 2014) and 39% (OCR, 2018), respectively, of students assigned one or more out-of-school suspensions. This figure represents a 22% increase in the proportion of African American students receiving one or more out-of-school suspensions.

Exclusion from school facilitates an education gap that is also an opportunity gap setting students up for academic failure, retention, and attrition (Skiba & Peterson, 2000). Effects of this opportunity gap extend into adulthood and manifest as reduced occupational opportunities and increased risk of incarceration (Gregory & Weinstein, 2008; Hirschfield, 2008). Schools with higher rates of exclusionary discipline experience “collateral damage” (Perry & Morris, 2014, p. 1), which negatively affects the academic achievement of suspended and non-suspended students.

Overview of The Dissertation

Disproportionate rates of exclusionary discipline are devastating to African American students, and exclusionary discipline policies and practices can have a harmful effect on all students in a school. Therefore, identifying malleable intervention targets and developing interventions to eliminate discipline disparities is an urgent task that should be undertaken with great passion. For this dissertation research, I begin with a theory-driven approach. I attempted to identify a theoretical model that would explain how and why discipline disparities occur. I discovered that Little and Welsh (2019) had developed a model that helps to explain discipline disparities by applying theories from sociology (i.e., Bourdieu's Social and Cultural Capital Reproduction Theory [Bourdieu, 1973, Nash, 1990], Broken Windows Theory [Wilson & Kelling, 1982], CRT [Bell, 1992], and Foucault's Discipline and Punish Theory [Foucault, 1995]). I argue that our understanding may be enhanced and refined by incorporating theories drawn from the field of psychology. It is important to explicate how individuals central to the discipline process (i.e., the student and teacher) are situated in the context of an anti-Black/White supremacist social-cultural-political system that impacts them directly and indirectly and how anti-Black racism and White supremacist beliefs lead to the differential surveillance, differential selection, and differential processing of African Americans. Furthermore, it is important to explicitly describe how certain personally held dispositions and attitudes of individuals such as implicit bias, stress, and stereotype threat can impact interactions and relationships. Therefore, in my first manuscript, I provide a brief background on how race was "constructed" in the U. S., theorize how anti-Black racism and White supremacist views lead to differential treatment of African Americans through differential surveillance, selection, and processing, present Little and Welsh's theory, and present a new theory which extends Little and Welsh's theory. My second

manuscript presents preliminary findings of a quantitative analysis using merged National Center for Education Statistics Common Core data (CCD, 2018) and the U. S. Department of Education's Civil Rights Data Collection data (CRDC, 2017) for 2015-16 examining the association between reputed school-level variables associated with higher rates of out-of-school suspensions. My third paper presents my final dissertation research in which I analyzed merged CRCD-CCD data for 2017-18 to examine associations between school-level variables associated with higher rates of out-of-school suspensions including proportion of African American student enrollment. In addition, I compared outcomes in rates and reporting of out-of-school suspensions for school years 2015-16 and 2017-18 to determine whether different presidential administrations were associated with any observed changes in rates and reporting of out-of-school suspensions. The following sections provide additional details on the three manuscripts.

Manuscript 1

In **Manuscript 1, A Formula for Discipline Disparities: Anti-Black Racism, White Supremacist Beliefs, Teacher Stress, and Negative Teacher-Student Relationships,** we examine the literature attempting to explain how and why discipline disparities occur. We present a framework developed by Little and Welsh (2019) to explain how and why racial discipline disparities occur. Little and Welsh integrate four theoretical frameworks from the field of sociology: (1) Bourdieu's Social and Cultural Capital Reproduction Theory (Bourdieu, 1973, Nash, 1990), (2) Broken Window's Theory (Wilson & Kelling, 1982), (3) CRT (Bell, 1992), and (4) Foucault's Discipline and Punish Theory (Foucault, 1975). We suggest that there are key constructs from psychology that, when added to the Little and Welsh (2019) theory, help explain why discipline disparities occur (i.e., teacher stress, implicit bias, and stereotype threat). In addition, we explicitly describe how key individuals in the process of initiating a discipline

consequence are situated within an anti-Black/White supremacist system that supports and promotes the differential treatment of African Americans through differential surveillance, differential selection, and differential processing. Further, we incorporate the role of negative interactions and how they can reinforce stereotypes and negatively impact relationships between students and teachers. Therefore, by extending and enhancing Little and Welsh's theory, we present a new theory to explain how and why discipline disparities occur that applies theories from both sociology and psychology. We introduce this theoretical and conceptual framework to help us better understand why discipline disparities occur but also to identify malleable intervention targets at multiple levels of education systems to eliminate discipline disparities for African American students.

Manuscript 2

We based the analyses for **Manuscript 2, Students Put-At-Risk: School-Level Predictors of Discipline Disparities in U. S. Public Schools,** on a study conducted by the Government Accountability Office (GAO; Nowicki, 2018) in which school-level 2013-14 CCD-CRDC data were analyzed to identify which, if any, school-level characteristics predicted higher counts of six discipline outcomes (i.e., corporal punishment, in-school suspension, out-of-school suspension, expulsion, referral to law enforcement, and school-related arrest). For the GAO study, Nowicki and colleagues chose to include the following variables: schools' percentages of student gender, race/ethnicity, interactions between student race/ethnicity and gender, students served under the Individuals with Disabilities Education Act (IDEA, 2004), students eligible for free or reduced-price lunch, school type, school level, and school personnel characteristics such as the presence of a sworn police officer or school counselor and the percentage of teachers within a school that have two or fewer years of experience. Similar to Nowicki et al., the

research findings reported in Manuscript 2 utilized data from merged CCD-CRDC data; however, we conducted analyses utilizing 2015-16 data which, at the time, was the most current data available. We also limited our variables to the exclusionary discipline consequence assigned most often—out-of-school suspension. Further, except for school type, covariates were limited to those found to be significantly associated with discipline disparities for African American male students. Though school type (i.e., charter versus traditional; Losen et al., 2016) is associated with discipline disparities, in the study reported in Manuscript 2, we chose to include only traditional/regular schools to minimize the amount of missing data and to ensure homogeneity of the sample regarding school type. In summary, we chose to examine the association between counts of students assigned out-of-school suspensions and the percent of students within schools that were African American and male, controlling for the percent of students served under IDEA, percent of free and reduced-price lunch eligible students, school level, and urbanicity (i.e., the population density of the community served by the school) to answer the following research questions:

> Q1. What is the relationship between counts of students assigned out-of-school suspension and the percentage of African American male students, controlling for percent of free and reduced-price lunch eligible students, percent of students served under IDEA, school level, and school community's population density?
>
> Q2. What is the relationship between counts of students assigned out-of-school suspension and the percentage of students eligible for free and reduced-price lunch, controlling for percent of African American male students, percent of students served under IDEA, school level, and school community's population density?

Q3. What is the relationship between counts of students assigned out-of-school suspension and the percentage of students served under IDEA, controlling for percent of African American male students, percent of free and reduced-price lunch eligible students, school level, and school community's population density?

Q4. What is the relationship between counts of students assigned out-of-school suspension and school level controlling for percent of African American male students, percent of free and reduced-price lunch eligible students, percent of students served under IDEA, and school community's population density?

Q5. What is the relationship between counts of students assigned out-of-school suspension and the school community's population density, controlling for percent of African American male students, percent of free and reduced-price lunch eligible students, percent of students served under IDEA, and school level?

Based upon the GAO (2018) study findings, we hypothesized that (1) schools with higher percentages of African American male students would report higher counts of students assigned out-of-school suspension, controlling for percent of free and reduced-price lunch-eligible students, percent of students served under IDEA, school level, and school community's population density; (2) schools with higher percentages of economically disadvantaged students and students served under IDEA would report higher counts of students assigned out-of-school suspensions; (3) schools located within communities with greater population densities would report higher counts of students assigned out-of-school suspensions; and (4) middle and high schools would report higher counts of students assigned out-of-school suspensions than primary schools.

After conducting goodness-of-fit tests and comparing coefficient and standard error results, we determined that the zero-inflated negative binomial regression model (ZINB) was the

best approach for analyzing data within the study reported in Manuscript 2. ZINB is appropriate 1) for count outcomes with non-negative integers, 2) when distributions are highly skewed, 3) when outcomes are overdispersed, 4) when heteroscedastic error terms are present, and 5) when data contains structured zeroes (Coxe et al., 2009). The merged 2015-16 CCD-CRDC dataset met all of these criteria.

Our results indicate that schools with higher percentages of African American male students and students experiencing economic disadvantage; schools in urban communities; and middle, high, and secondary schools report higher incident rates for counts of students assigned out-of-school suspension. In contrast, schools with higher percentages of students served under IDEA, schools in less densely populated communities such as towns and rural areas, and primary schools report lower incident rates for counts of students assigned out-of-school suspensions. An additional interesting finding was that schools with African American male enrollment in the middle two quartiles (i.e., 25% to 74.99%) reported the highest counts of out-of-school suspensions. Considering this finding, we hypothesized that though existing in an anti-Black/White supremacist macro-, exo-, meso-, and microsystem, teachers and school administrative staff in predominantly African American male student populations might possess greater familiarity and acceptance of African American behavioral norms resulting in lower counts of out-of-school suspension. Viewed through Bourdieu's Social and Cultural Capital Reproduction (Bourdieu, 1973, Nash, 1990) lens, within these schools, students possess their own type of collective cultural capital that teachers and administrators may value. Employing Okonofua et al.'s. Teacher-Student Interaction theory (2016), perhaps in schools with higher proportions of African American students, students and teachers are able to bond through positive cyclic interactions. Teachers in schools with higher proportions of African American

students may utilize methods in their feedback with students such as “wise feedback,” which emphasizes a teacher’s confidence in the ability of the student and conveys high standards and confidence in the student’s ability to reach that standard” (Okonofua, 2016, p. 389) or perhaps discipline policies are based on an empathetic approach in which, instead of viewing student behaviors as an attempt to disrupt learning, students’ perspectives are considered (Jennings, 2015; Okonofua, 2016). In contrast, within schools with higher proportions of White students, faculty, and staff and lower proportions of African American male students (i.e., 0 to 24.99%), African American students may feel the need to assimilate and behave in ways that reflect the dominant culture.

Manuscript 3

Informed by Little and Welsh’s theory (2019) and utilizing findings from the study reported in Manuscript 2, **Manuscript 3, The Relationship Between School Racial Composition and Out-of-School Suspensions**, examined school-level characteristics associated with significantly higher rates of students assigned out-of-school suspension. We analyzed merged 2015-16 and 2017-18 CCD-CRDC data to examine the relationship between the composition of African American male students and rates of students assigned out-of-school suspension, examine how the composition of African American male students relates to change in the rate of out-of-school suspension from 2015-16 to 2017-18, and explored other relevant school-level factors that may contribute to the composition of African American male students predicting out-of-school suspension, such as concentration of poverty, the proportion of students served under IDEA, school level, and urbanicity.

Employing zero-inflated negative binomial regression analyses to examine whether the proportion of African American male students predicts the reporting and rates of out-of-school

suspension across the two time points (i.e., 2015-16 and 2017-18) while controlling for a robust set of school characteristics, the study aimed to answer the following research questions:

Aim 1: Examine reports of the number of students assigned out-of-school suspension in 2015-16 and 2017-18.

RQ1a. What is the rate of missing data for school reports of students assigned out-of-school suspension for each year?

RQ1b. What is the incident rate of reports of students assigned out-of-school suspension for each year?

RQ1c. Is there a significant difference in the (i) missing data or (ii) rate of students assigned out-of-school suspension from one year to the next?

Aim 2: Examine the relationship between the composition of African American male students and rates of students assigned out-of-school suspension in 2015-16 and 2017-18.

RQ2. Does the proportion of African American male students predict higher incident rates of students assigned out-of-school suspension each year, when controlling for relevant school-level factors?

Aim 3: Examine how the composition of African American male students relates to the changes in reports of students assigned out-of-school suspension from 2015-16 to 2017-18.

RQ3. Does the composition of African American male students predict the (i) change in missingness or (ii) change in the incidence rate of students assigned out-of-school suspension from 2015-16 to 2017-18, when controlling for relevant school-level factors?

Though numerous studies have documented disparities in exclusionary discipline, thus far none have utilized the most current U.S. Department of Education Civil Rights Data

Collection (CRDC) data (i.e., 2017-18) and none have compared relative risk ratios across two different presidential administrations.

After examining reports of counts of students assigned out-of-school suspension in 2015-16 and 2017-18 (i.e., Aim 1), we found that the rate of missing for both years was below 3%. For 2015-16 incident rates for counts of students assigned out-of-school suspension were higher in schools in the middle two quartiles of African American male student enrollment, for schools serving students experiencing economic disadvantage; for schools located in urban communities; and for middle, high, secondary, and schools categorized as other.

Due to the low rate of missing values for counts of students assigned out-of-school suspension (i.e., less than 3%), we determined that there was no significant difference between missing data for 2015-16 and 2017-18. some of the most vulnerable populations of students is concerning.

After examining the relationship between the composition of African American male students and rates of students assigned out-of-school suspension in 2015-16 and 2017-18 (i.e., Aim 2), we found that, to an extent, the proportion of African American male students predicts higher incident rates of students assigned out-of-school suspension in both years. Students that attend schools that fell into the two middle quartiles of African American male students are at higher risk for being assigned out-of-school suspension than those in the first and fourth quartiles.

Due to the low rate of missingness for counts of students assigned out-of-school suspension (i.e., below 3%), we determined that the composition of African American male students did not predict changes in missingness and changes in incident rates for counts of students assigned out-of-school suspension from 2015-16 to 2017-18 (i.e., Aim 3).

Though the findings reported in Manuscript 3 are similar to the findings reported in Manuscript 2, school means for the percentage of African American male students and counts of students assigned out-of-school suspension were statistically significantly different between 2015-16 and 2017-18. The mean for percent of African American male student enrollment was higher and counts of students assigned out-of-school suspension were lower for 2017-18. This suggests that though the Trump administration rescinded many of the policies initiated by the Obama administration to reduce discipline disparities, the effect of Obama administration policies may have persisted. The question is for whom?

Though school reports for the maximum number of students assigned out-of-school suspension decreased from 2015-16 to 2017-18, incident rates for schools in the middle two quartiles of African American male student enrollment, for schools with higher proportions of students experiencing economic disadvantage, for schools in more densely populated areas, and for middle and high schools increased. Excluding secondary schools, students attending schools that experienced higher incident rates for counts of students assigned out-of-school suspension in 2017-18 are likely to be African American. Thus, despite decreases in overall school counts of students assigned out-of-school suspension, many African American students will be exposed to greater risk of being assigned out-of-school suspension.

The collection of data associated with discipline outcomes for 2019-20 will likely be unreliable due to school closures as a result of the COVID-19 pandemic. Therefore, we may never know the full impact of the recension of policies aimed at reducing discipline disparities for African American students. We can, however, look closer to home for the effect of administration at the state level and the recension of policies and initiatives aimed at reducing opportunity gaps, facilitating more compassionate communication with families, and making

schools more equitable. Future research can examine the effect of student-level data at the state level to determine how student-level predictors of out-of-school suspension are impacted by state-level administration policies.

This dissertation research has implications for policy and practice in several ways. First, identifying school-level factors that predict higher counts of students assigned out-of-school suspensions provides targets for intervention. Manuscript 1 presents a comprehensive theory that explains why discipline disparities exist. Manuscripts 2 and 3 use school-level data, therefore the application of our theory to the findings of those studies is limited. We can apply the theory to help explain how African American male students in schools with lower proportions of African American student enrollment may assimilate to "fit into" the dominant culture's norms. We can also apply our theory to help explain why (though still significant) the mean of counts of students assigned out-of-school suspension for the highest quartile of African American male student enrollment is lower than the means for the two middle quartiles. We suggest that in schools with higher percentages of African American male student enrollment, students enjoy increased social and cultural capital. In addition, faculty and staff may be more familiar with and accepting of African American cultural behavior norms. Students and teachers may also develop more positive relationships through cyclic positive interactions. Though we included only traditional schools, schools in the highest quartile for African American male students may also have specialized curricula and policies to support African American male students. Teachers assigned to those schools may also be a cultural match or may have adopted culturally responsive attitudes, behaviors, and pedagogy (Ladson-Billings, 2008).

Taken together, the papers that report this dissertation research open the door to new possibilities for addressing racial disparities in U.S. public schools. Manuscript 1 offers systems

level sociological theory and more micro-level psychological theory to explain how racial disparities occur in the enactment of school discipline and illuminates a variety of intervention targets at various levels of the system. Manuscripts 2 and 3 present interesting findings that schools with proportions of African American students at the lowest and highest levels have lower rates of out-of-school suspensions than those in the two middle quartiles. More research, including qualitative research, is required to understand why this occurs and understanding this may point to other intervention targets. Finally, the fact that rates of out-of-school suspension declined during the Trump administration while numbers of African American male students increased offers hope that the changes instituted during the Obama administration have survived, despite policy changes designed to erode them.

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A Formula for Discipline Disparities:

Anti-Black Racism, White Supremacist Beliefs,

Teacher Stress, and Negative Teacher-Student Interactions

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Authors' Note

This theoretical and conceptual literature review serves as Manuscript One of a three-manuscript dissertation.

Abstract

In the U. S., parallels exist between exclusionary discipline disparities for African Americans both within schools and society. African American community members are three times more likely to be killed by police than White community members (Schwartz & Jahn, 2020). African American students are three times more likely to be assigned exclusionary discipline consequences than their White counterparts (Erase Racism, 2019). Drawing from work in the field of sociology, Little and Welsh (2019) presented an integrated theory to explain discipline disparities for African American students that includes Bourdieu's Social and Cultural Reproduction Theory, Broken Windows Theory, Critical Race Theory, and Foucault's Discipline and Punish Theory. We contend that key theoretical frameworks and constructs from the field of psychology further explain why disproportionate rates of exclusionary discipline exist for African Americans. The theory proposed in this manuscript extends Little and Welsh's theory through the addition of teacher stress, implicit bias, and stereotype threat and the utilization of Bronfenbrenner's Ecological Systems Theory and Okonofua et al's. (2016) Teacher-Student Interaction Theory. Teacher-Student Interaction Theory combines Social Psychology and Social Identity Threat Theories to explain how the cyclic nature of teacher-student interactions may reinforce extant negative racial stereotypes, implicit biases, and feelings of stereotype threat experienced by students and teachers. In addition, students and teachers and the factors that directly and indirectly influence them, exist within an anti-Black/White supremacist mesosystem, exosystem, and macrosystem. Through the extension of Little and Welsh's theory, the authors hope to better explicate how and why discipline disparities occur for African American students in U. S. public schools.

keywords: discipline disparities, exclusionary discipline, racial discipline disparities

A Formula for Discipline Disparities: Anti-Black Racism, White Supremacist Beliefs, Teacher Stress, and Negative Teacher-Student Interactions:

> The root of the [W]hite man's hate is terror, a bottomless and nameless terror, which focuses on the [B]lack, surfacing, and concentrating on this dread figure, an entity which lives only in his mind. But the root of the [B]lack man's hatred is rage, and he does not so much hate [W]hite men as simply want them out of his way, and, more than that, out of his children's way. (Baldwin, 2011, pp. 71-72)

On December 5, 2020, while traveling on a dark road in Windsor, Virginia, my former Virginia State University student, Army Lt. Caron Nazario, saw flashing blue lights in his rear-view mirror. Acting out of self-preservation, Lt. Nazario slowed his vehicle, turned on his hazard lights, and traveled one minute and forty seconds to a well-lit BP gas station (Schwartz & Bowman, 2021). After hearing the conflicting demands of the officers that pulled him over and noting their heightened emotional arousal, Lt. Nazario began video recording the event on his phone. He recalled the advice of his cousin, Rachel, who was also Eric Garner's[1] cousin, a man that Lt. Nazario called uncle, "If a police officer ever confronted him, he had to stay calm, comply, never make them feel threatened," (Cox & Rosenwald, 2021, para. 8). Indeed, Lt. Nazario, still in uniform, was calm, compliant, and non-threatening toward Officers Joe

[1] Eric Garner, reputedly a "neighborhood peacemaker" was a 43-year-old African American man killed on July 17, 2014, in Staten Island when New York City police officer, Daniel Pantaleo, suffocated him to death in an illegal chokehold. In video recordings of the incident, Mr. Garner can be heard repeatedly saying, "I can't breathe." Police had been called to the scene due to a fight which Mr. Garner had reportedly ended. After police arrived they confronted Mr. Garner about selling cigarettes illegally. Though Mr. Garner's death was ruled by a medical examiner to be a homicide by suffocation; however, a grand jury decided against indicting Pantaleo on December 3rd igniting demonstrations nationwide (History, 2020).

Guiterrez and Daniel Crocker, asking, “What’s going on?” (CNN, 2021). With both officers’ service pistols trained on Lt. Nazario, the clearly agitated, more experienced field training officer (Burns, 2021), Guiterrez responded, “What’s going on is you’re fixin’ to ride the lightnin’, son!” (CNN, 2021)—a reference to state-sanctioned electrocution (Farlex Dictionary of Idioms, 2015) or tasering (The Washington Post, 2021). Although the license tag for the lieutenant’s newly purchased Chevrolet Tahoe was taped to the rear window, the less experienced officer, Crocker, had not seen it displayed (Burns, 2021). Ofc. Crocker “radioed that he was attempting to stop a vehicle with no rear license plate and tinted windows. He said the driver was ‘eluding police’ and that he considered it a ‘high-risk traffic stop’” (Burns, 2021, para 15). Ofc. Guiterrez demanded that Lt. Nazario keep his hands where he, Guiterrez, could see them, turn off the engine, and exit the vehicle. Lt. Nazario responded that he was afraid to unbuckle his seatbelt because his hands, at the time displayed outside the driver’s side window, would no longer be visible to the officers. In some previous cases of the murders of unarmed African American men, officers stated that they fired their weapons because they feared the detained citizen may have been reaching for a weapon. Hearing Lt. Nazario’s response, Guiterrez angrily shouted, “Yeah, yeah, you should be! Get out, get out now!” (CNN, 2021, 2:14). After several verbal exchanges during which Ofc. Guiterrez’s discomposure was the antithesis of Lt. Nazario’s calm demeanor, Ofc. Crocker attempted to open the lieutenant’s door. It was locked. Additional words were exchanged and without warning, Ofc. Guiterrez discharged pepper spray in Lt. Nazario’s face, pulled him from his vehicle, forced him to the ground, and handcuffed him. Eventually, Lt. Nazario was allowed to leave the scene; but not before being warned that his service record and career as an Army officer could be adversely affected if he chose to file a complaint regarding the traffic stop.

This example of police officers' excessive use of force, like so many similar incidents involving unarmed African Americans, could have ended tragically. Lt. Nazario is just one of the latest victims in a long record of unarmed African Americans harmed or killed by police. Video recordings of these violent interactions between police and African Americans reveal what appears to be the excessive reactivity, fear, rage, and bias (i.e., both implicit and explicit) of those sworn to protect and serve and could be interpreted as examples of anti-Black racism and White supremacist mindsets within the criminal justice system. Evidence of anti-Black racism and White supremacist mindsets is also present within other institutions. Though anti-Black racism and White supremacist mindsets undoubtedly influence the behavior of some individuals in authority (e.g., some police officers, teachers, healthcare workers), I contend that these two interwoven factors (i.e., anti-Black racism and White supremacist mindsets) do not sufficiently explain how and why racial discipline disparities exist.

Racism has been defined as "a system of structuring opportunity and assigning value based on phenotype ([i.e.,] "race") that: unfairly disadvantages some individuals and communities [;] unfairly advantages other individuals and communities [;] [and] undermines realization of the full potential of the whole society through the waste of human resources" (Jones, 2002, p. 10). For centuries, within the United States (U. S.), anti-Black racism (i.e., defined as a "system of beliefs and practices that attack, erode, and limit the humanity of Black people"; Carruthers, 2018, p. 26) and White supremacist ideologies have been leveraged to maintain the power and privilege of the economically advantaged and to marginalize and oppress individuals of African descent (see, e.g., Allen, 1997, Buck, 2007, Smedley, 2007). Central to this process of oppression and marginalization is the false narrative and belief that "Whiteness"

is an attribute that may be possessed and that "Whiteness" both elevates one to elite status and affords one collective cultural capital with other "White" individuals (Harris, 1992).

In the United States, White supremacy and anti-Black racism are operationalized on a macrosystem level (Bronfenbrenner, 1979) and manifest within the criminal justice and education systems of municipalities and communities (i.e., an individual's exosystem which is comprised of factors that indirectly affect an individual through their influence on an individual's microsystem components; Bronfenbrenner, 1979) as differential surveillance, differential selection, and differential processing.

We define differential surveillance as the process of watching or observing one individual or a group of individuals more than another individual or group of individuals. An example of differential surveillance is the greater concentration of police officers assigned to patrol urban areas and neighborhoods with larger numbers of economically disadvantaged residents. Quoting the president of the International Association of Chiefs of Police and chief of the LaGrange, Georgia police department, Louis Dekmar, The Sentencing Project (2018) reported "One reason minorities are stopped disproportionately is because police see violations where they are . . . Crime is often significantly higher in minority neighborhoods than elsewhere. And that is where we allocate our resources" (para. 10). The authors go on to say that "U. S. criminal justice policies have cast a dragnet targeting African Americans" (para. 10).

The differential surveillance of African Americans might be explained by Foucault's Discipline and Punish Theory (1975) which posits that within society, those empowered to establish cultural and social norms decide how violators of those norms will be disciplined and punished. An element of this theory is "the gaze" which involves the surveillance or perception of surveillance of certain individuals or groups of individuals. For example, prisoners are

sometimes watched from the vantage point of a panopticon or tower positioned to provide a panoramic view of an area. Another example is the use of surveillance devices such as cameras that are used to monitor students in schools. These methods of surveillance are especially powerful because individuals do not know whether they are being watched. However, they very often self-regulate due to the possibility of being watched.

Within education, the presence of sworn resource officers [SROs], security measures, and surveillance technology in schools serving economically disadvantaged communities more than schools serving more economically advantaged communities are examples of differential surveillance. The idea that African Americans require differential surveillance is not reserved for students in elementary, middle, and high schools. Even African American preschool-aged children are watched more closely. According to a Yale study (Gilliam et al., 2016) using eye-tracking technology and during which teachers were told that one of four students they would be observing was known to exhibit behavior below expectations, teachers spent significantly more time focused on the Black male student than on the other three students (i.e., one Black female, one White female, and one White male). Differential surveillance puts individuals at greater risk of disciplinary consequences and arrests through greater exposure to law enforcement and others in authority (Carbado & Rock, 2016).

Differential selection may be defined as the process of selecting individuals differently. Evidence of differential selection are the disproportionate rates of "investigatory" or discretionary traffic stops police performed on African Americans to determine if *suspicious looking individuals* are *up to no good* (The Sentencing Project, 2018, p. 5) and the disproportionate rates of office discipline referrals teachers submit for African American students. Skiba et al. (2011) found that African American elementary and middle school students

were 2.19 and 3.78 times as likely, respectively, to be issued an office discipline referral than their White counterparts. Differential selection puts individuals at risk for entry into a pipeline that, very often, leads to some type of evaluation and judgment of behavior and subsequent processing (e.g., incarceration or out-of-school suspension).

Differential processing is a term used to describe the method of handling individuals' behaviors differently. Disproportionate rates of arrests, incarceration, and exclusionary discipline consequences for African Americans are evidence that the behaviors of this group of individuals are differentially processed. For example, the findings of Skiba and colleagues (2011) that, once selected and referred to administration, African American and Latinx students are more likely than White students to be expelled or assigned an out-of-school suspension "for the same or similar problem behavior" (p. 85) indicates that behaviors are differentially processed based on race.

Overall, African Americans experience differential treatment due to differential surveillance, selection, and processing. This differential treatment is thought to be based on the cultural mismatch between those in authority and those being "policed" (i.e., in schools and neighborhoods), implicit racial bias, systemic racism, negative expectations, stereotyping, and misinterpretation of and overreaction to African Americans' behavior (Gregory et al., 2010; Ferguson, 2000).

Though race is thought to be the primary cause of differential surveillance, selection, and processing (Skiba et al., 2002), research suggests that differential selection and differential processing may occur for different reasons. For example, Gregory and co-researchers (2010) assert that, within schools, differential selection may result from "cultural mismatch, implicit bias, or negative [teacher] expectations" (p. 63), while differential processing seems to occur due

to stereotypes and misinterpretations of and overreaction to African American males' behavior **(**Ferguson, 2000).

Framing these phenomena within Bronfenbrenner's Ecological System's Theory (1979), one might conclude that individuals who are raised and reach maturity within the U. S. develop within a macrosystem (e.g., federal laws and policies, socio-cultural beliefs and biases, institutions, systems, etc.) and exosystem (e.g., various healthcare and government agencies, the media, extended family and neighbors, school district and its ruling board, etc.) of anti-Black racism and White supremacist beliefs that influence their perceptions of African Americans and those of African descent. Even more troubling is that the transmittance of anti-Black and White supremacist views originated as an intentional insidious strategy utilized by wealthy landowners in the late seventeenth century to destroy the collaborative relationship between Black and White laborers and to facilitate the enslavement of human beings (see, e.g., Allen, 1997; Anderson, 2012; Battalora, 2015; Smedley, 2007).

Within schools, the negative outcomes that often result from differential surveillance, selection, and processing arising from anti-Black racism and White supremacist beliefs make identifying intervention strategies that may be utilized to mitigate and/or eliminate these processes an urgent task. This paper employs a theory-driven approach to build upon extant theoretical and conceptual frameworks for the purpose of identifying malleable intervention targets which may be used to eliminate racial discipline disparities.

Through the development and dissemination of a theory aimed at explaining why discipline disparities occur, we aim to touch the hearts and minds of individuals. Our primary targets are educators and those positioned to transform institutions and systems. We hope to make this theory accessible to those who interact directly with students and those empowered to

mitigate the effects of institutional and structural racism, especially within education. Therefore, in this paper, we provide background on the construction of race in the U. S. and theorize how anti-Black racism and White supremacist ideology lead to the differential surveillance, selection, and processing of African Americans. We present Little and Welsh's theory (2019) that seeks to explain why discipline disparities occur and explain how additional theories utilized by other researchers to explain racial disparities in healthcare (Alio et al. 2010; Noursi et al., 2020) and academic mentor-student relationships (Vargas et al., 2020) and teacher-student interactions might help us understand similar disparities in school discipline. We then present a conceptual framework integrating Little and Welsh's Theory and our enhancements. We conclude this paper by sharing possible future directions for this research.

Background and Review of the Literature

Anti-Blackness Theory

Anti-Blackness is an element of "Afro-pessimism" which "theorizes that Black people exist in a structurally antagonistic relationship with humanity" (Dumas, 2015, p. 13). In other words, people of African descent are "not simply an *Other* but [are] other than human" (p. 13). This ideology presents itself as a problem that cannot be solved through protests nor by addressing those in power. Anti-Blackness theory does not seek to solve issues of inequality and promote equity but seeks to illuminate the conditions under which African Americans exist within an anti-Black culture and society that holds "utter contempt for" and is complicit in acts of violence against African Americans and positions such individuals "as slave, dispossessed of human agency, desire, and freedom" (p. 13).

Though individuals of African descent have endured anti-Black racism for centuries, it was not until 1681, in a Colonial Assembly of Maryland amendment, that the term, "White," was

used in a legal document to distinguish a group of individuals (Battalora, 2015). Prior to that time, those who thereafter were referred to as "White" were considered "British and other Christians" and later "British and other freeborns."

During the Colonial period, Maryland and Virginia were among states that required low-cost or free human capital to raise crops such as tobacco. These crops were an economic staple. Until the mid-1600s, the demand for affordable labor was fulfilled by England (Wells, 1975) with approximately 92,000 immigrants arriving in Virginia and Maryland between 1607 and 1682, 69,900 of whom "were chattel bond laborers" (Battalora, 2015, p. 3). Immigrants were primarily from Britain; however, there were also individuals from Africa, the Netherlands, France, Ireland, Spain, Turkey, and Portugal. In addition to varying countries of origin, these laborers possessed various levels of freedom including only promised freedom. There was also differential treatment of these individuals, many of whom were chattel to be sold and purchased. Since the concept of race did not exist at this time, treatment was not differentiated along racial distinctions or classifications. In other words, Europeans were not considered to be "White," and Africans were not considered to be "Black" (Allen, 1997; Smedley, 2007). Anyone classified as free enjoyed the rights and privileges granted to free individuals under the law regardless of race or color including the right to vote and hold bond laborers (Jordan, 1968).

In addition to the need for inexpensive or free labor, females were also in demand, with males outnumbering females seven to one (Guttentag & Secord, 1983). The high ratio of males to females likely led to the eventual development of antimiscegenation laws which penalized "British and other [W]hite" females who married anyone other than those classified as "White" and motivated women to marry "White" men (Battalora, 2015). However, during this time of the colonization of the U. S., marriages between men and women of European descent and African

descent “were not uncommon” and were accepted by the community (Allen, 1997; Morgan, 1975, Smedley, 2007).

Court records at the time suggest that equity existed in treatment by court systems for those of African and European descent (Morgan, 1975) and that the laboring class did not embrace racism. Class appears to have been the primary determinant of how one was treated and the individuals with whom one associated (Morgan, 1975). Racism was not embraced by White members of the economically disadvantaged laboring class until wealthy landowners passed laws that led to the disintegration of collaborative relationships between White laborers and those of African descent culminating in Bacon’s Rebellion in 1676. For example, in 1662, a law passed by the House of Burgesses outlawed miscegenation between [B]lacks and “Christians” (Parent, 2003, p. 116). Tax codes such as the one passed in 1643 exempted White domestic servants but taxed Black and White female field laborers. At the time, all women of African descent worked in the fields, thus fostering the persistent notion that White women require protection and that Black women do not. Taxation of field labor was also an attempt to prevent White planters from engaging in relationships with Black women (Parent, 2003).

This divide and conquer strategy aimed at reducing antagonism between elite landowners and economically disadvantaged White laborers was successful in dissolving the collaborative relationship between Black and White laborers acting in solidarity against the White ruling class and affluent landowners. Over time, these laws, the need for laborers, and additional economic factors developing in Europe accelerated the existing practice of kidnapping and enslaving people. Of importance is that the concept of anti-Blackness (i.e., dehumanizing those of African descent) was used to manipulate economically disadvantaged White laborers into believing that they could possess “Whiteness” as a form of property that would raise their status, relative to

those of African American descent. Further, they were duped into believing that they shared that "Whiteness" with the economically elite and could, therefore, enjoy a type of collective social and cultural capital, and the possibility of obtaining higher status. Through the lens of Bronfenbrenner's Ecological System's Theory, one might conclude that it was during this period that anti-Black racism and White supremacy were ushered into the U. S. macro- and exosystems on a grand scale.

If enacting laws discriminating against people of African descent severed the collaborative relationship between Black and White laborers and catalyzed the enslavement of people of African descent, the dehumanization of Black and indigenous people allowed slavery to flourish. Individuals of African descent were viewed by many wealthy White landowners and Europeans as "mentally inferior, physically and culturally unevolved, and apelike in appearance (Ariel, 1867; Haeckel, 1876; Hunt, 1863; Lawrence, 1819; Parker, 1878; Vogt, 1864; White, 1799). Bruce (1907) states that:

> The belief was held by many, even in England, that the [N]egro was not a man but a wild beast, marked by an intelligence hardly superior to that of a monkey, and with instincts and habits far more debased. He was considered to be stupid in mind, savage in manners, and brutal in his impulses. (p. 64)

Disturbingly, even reference texts upheld this belief with dehumanizing language to describe the anthropometric attributes of those of African descent. The text that accompanies the term, "Negro," in the ninth edition of the Encyclopaedia Britannica (1884) reads, "the lowest position of the evolutionary scale, thus affording the best material for the comparative study of the highest anthropoids and the human species" (p.316) Also included in the text were the following physical descriptions for the term, "Negro"—

> . . . the abnormal length of the arm, which in the erect position sometimes reaches the knee-pan;" "weight of brain, as indicating cranial capacity, 35 ounces (highest gorilla 20, average European 45);" "short flat snub nose, deeply depressed at the base or frontal suture, broad at extremity, with dilated nostrils and concave ridge;" "thick protruding lips, plainly showing the inner red surface;" "exceedingly thick cranium, enabling the Negro to butt with the head and resist blows which would inevitably break any ordinary European's skull;" "short, black hair, eccentrically elliptical or almost flat in section, and distinctly woolly, not merely frizzly;" and "thick epidermis, cool, soft, and velvety to the touch, mostly hairless, and emitting a peculiar rancid odour, compared by Pruner Bey to that of the buck goat." (Encyclopaedia Britannica, 1884, pp. 316 - 317)

In addition to this description of physical characteristics of the "Negro," the text continues,

> . . . the cranial sutures, which close much earlier in the Negro than in other races. To this premature ossification of the skull, preventing all further development of the brain, many pathologists have attributed the inherent mental inferiority of the [B]lacks, an inferiority which is even more marked than their physical differences. Nearly all observers admit that the Negro child is on the whole quite as intelligent as those of other human varieties, but that on arriving at puberty all further progress seems to be arrested. Negro children were sharp, intelligent, and full of vivacity, but on approaching the adult period a gradual change set in. The intellect seemed to become clouded, animation giving place to a sort of lethargy, briskness yielding to indolence. We must necessarily suppose that the development of the Negro and White proceed on different lines. While with the latter the volume of the brain grows with the expansion of the brain-pan, in the former the

> growth of the brain is on the contrary arrested by the premature closing of the cranial sutures and lateral pressure of the frontal bone. (Encyclopaedia Britannica, 1884, p. 317)

Plous and Williams (1995) in their study examining the persistence of historical negative African American stereotypes in a sample of African American and White Connecticut residents found that of the 685 randomly selected participants surveyed by phone, most retained at least one negative stereotype regarding innate ability (e.g., "[W]hites have greater abstract thinking ability than [B]lacks;" p. 1). The researchers discovered that approximately 50% of respondents perceived physical differences between African Americans and Whites that are not visually obvious (e.g., "[B]lacks have thicker skulls than [W]hites;" p. 1). Even after the first African American was elected president, these attitudes and biases persist. Indeed, Yadon & Piston (2019) found that Obama's presidency did not reduce prejudice against African Americans and that it actually resulted in an activation of prejudice, especially as it relates to policies intended to support African Americans.

Consistent with the work of Plous and Williams (1995) other research findings support the existence and persistence of White supremacist views and biases against African Americans. For example, African American males are often viewed from a hegemonic perspective as powerful, dangerous (Potts, 1997) and able to withstand greater pain (Hoffman et al., 2016) than their White counterparts. African American boys are perceived to be, on average, four years older than their chronological age (Goff et al., 2014). In fact, several incidents of killings of unarmed African American children have been the result of differential selection and differential processing by police officers (Todd et al., 2016). In other words, due to differential surveillance, selection, and processing, officers have misinterpreted situations and the intent of African Americans and have overreacted using lethal force with devastating results. Indeed, African

American males make up only 12 percent of the male population; however, they represent 27 percent of those shot and 36 percent of those who are unarmed and killed by police (Iati 2020). Indeed, Ross (2015) found "that the probability of being {black, unarmed, and shot by police} is about 3.49 times the probability of being {white, unarmed, and shot by police} on average" (Ross, 2015, p. 1). Similar to Ross, Schwartz and Jahn (2020) found that African Americans are 3.23 times more likely to be killed by police than White individuals.

Stereotypes regarding African American females and their impact on women of African descent are no better. Citing Collins (1990) and Crenshaw (1991), Morris and Perry (2017) eloquently state that, "Intersectionality suggests that complex inequalities emanate from distinct stereotypes and modes of oppression that result from overlapping systems of inequality" (p. 128). Though not always distinctly assigned (i.e., these stereotypes are sometimes combined when portraying African American women), "Mammy," "Sapphire," and "Jezebel" are three common and historical stereotypes utilized to depict African American women (West, 1995). The "Mammy" stereotype portrays the African American woman "as highly maternal, family oriented, and self-sacrificing" (p. 464). The "Sapphire" stereotype portrays the African American woman "as threatening and argumentative"—a loud, emasculating, angry, neck bobbing figure with her arms akimbo (p. 464). The "Jezebel" stereotype portrays African American women "as seductive, sexually irresponsible, [and] promiscuous" (p. 464). Regarding discipline disparities, perhaps the most relevant, and dangerous, stereotype of African American women is that of the Sapphire. When females of African descent are perceived as threatening, both in communities by police and in schools by teachers, events can quickly escalate and result in violent outcomes.

Since 2015, 48 African American women have been fatally shot by police (Iati et al., 2020). The Washington Post (2020) reports that African American women, "who are 13 percent

of the female population, account for 20 percent of the women shot and killed and 28 percent of the unarmed deaths" (para. 9). Morris and Perry (2017) found that the office discipline referral gap between African American and White female students is larger than the gap between African American and White male students. African American female students are three times more likely to receive an office discipline referral than White female students. Consistent with the findings of other researchers (e.g., Skiba et al., 2002), African American female students are disproportionately issued office discipline referrals for behavior deemed to be offensive through subjective assessment and for which discretion may be employed (i.e., "disruptive behavior, dress code violations, disobedience, and aggressive behavior" [p. 127]). In an earlier study, Morris (2007) found that African American female students are often interpreted as and punished for being "loud," "assertive," and "unladylike." They are encouraged to behave according to the dominant culture's perception of feminine behavior. These research findings suggest that stereotypes, are not only prevalent and impact African American females in community settings but that they are also prevalent and impactful within schools.

Citing the American Psychological Association (1985) and Jackson (1983), West (1995) states that "research demonstrates that stereotypes based on race and gender have implications for diagnosis, treatment, and therapeutic outcomes for both Blacks and women" (pp. 458 – 459). We contend that racial and gender stereotypes also have implications within education—contributing to the differential surveillance, selection, and processing of African American students.

Statement of the Problem

African American youths are more likely to be arrested than White youths for the same criminal behavior (Huizinga et al., 2007). In addition, based on a systematic review of body

worn camera footage, Voigt and colleagues (2017) found that even after accounting for the race of the officer, severity of infraction, and location and outcome of the stop, African American community members were treated significantly less respectfully than White community members during “everyday traffic stops” (p. 6521). A recent study (Thomas et al., 2020) examining data reported voluntarily to the FBI by police departments across the U. S. found that, controlling for the demographics of localities police departments serve, in 800 jurisdictions, African Americans were five times more likely to be arrested. In 250 jurisdictions, African Americans were ten times more likely to be arrested. These disproportionate rates of arrest indicate that African Americans are subjected to differential surveillance and selection. Anti-Black racism and White supremacist mindsets are thought to contribute to these higher rates of arrest for African Americans (The Sentencing Project, 2018).

Within the U. S., the criminal justice and education systems share a number of similar characteristics. Similar to the exclusion from society that results from serving a prison sentence, out-of-school suspensions and expulsions exclude students from educational opportunities and result in lasting negative effects. In addition, negative interactions with police and negative encounters with teachers can both result in negative consequences. Further, the differential surveillance, differential selection, and differential processing of brown and black bodies by educators and police lead to disproportionate rates of office discipline referrals (ODRs; Skiba et al., 2008) and police arrests (Epp et al., 2014). Moreover, African Americans are disproportionately assigned exclusionary discipline consequences (Skiba et al., 2008) and experience disparate rates of incarceration (The Sentencing Project, 2018).

One might wonder if differential rates of violations of the law between African American and White individuals might be the underlying cause of disparities in arrests. Epp and co-

researchers (2014) found that African American and Latinx drivers are more likely to be stopped by police for discretionary reasons or "investigatory stops" used proactively to determine if "suspicious-looking" individuals are up to wrongdoing as opposed to "traffic-safety stops" which occur after officers observe a violation of the law, an example of differential selection. Following stops, African American and Latinx drivers were three times more likely to be searched and two times more likely to be arrested (Langton & Durose, 2013), an example of differential processing. This holds true despite the data showing that, in general, the "contraband hit rate" (i.e., the number of times contraband is found divided by the total number of searches) is lower for African American drivers as opposed to White motorists (The Sentencing Project, 2018).

A similar narrative is found within education. Though African American students are differentially surveilled, selected, and processed, they do not "misbehave" at different rates than White students. Bradshaw et al. (2010) found that, even after controlling for teachers' self-reported ratings of student behaviors, the probability of being issued an office discipline referral was higher for African American students indicating that discipline disparities are not due to differential behavior by African American students. Smolkowski and colleagues' (2016) found that African American students were at greater risk of receiving office discipline referrals for subjectively defined behaviors (e.g., disrespect). Overall, African American male and female students were 1.25 and 1.73 times more likely to receive major office discipline referrals, respectively, than their White peers.

Skiba et al. (2002) also found that White students are assigned discipline consequences for more objective offenses such as drug possession, while African American students are assigned discipline consequences for more subjective behaviors such as disrespect. Similar to discretionary police stops, teachers and administrators may practice discretion when determining

who will be selected and how those individuals will be processed for rule infractions. The subjectivity and discretion practiced by those empowered to refer students to administrators for discipline consequence consideration and those empowered to assign students to discipline consequences is concerning when one considers (1) that implicit bias is ubiquitous in the U. S. (Sue et al., 2007), (2) the negative outcomes associated with discipline practices (Gregory & Weinstein, 2008; Hirschfield, 2008; Skiba & Peterson, 1999), and (3) schools have become a pipeline to prisons (Nicholson-Crotty et al., 2009; Rocque & Paternoster, 2011). Most concerning are the disproportionate rates of exclusionary discipline for African American students.

The U. S. Department of Education Office for Civil Rights (OCR; 2018) reported that during the 2015-16 school year, approximately 2.7 million students were administered one or more out-of-school suspensions (out-of-school suspensions). While African American students make up only 15% of enrollment, they represent 35% of students suspended one time, 44% of students suspended multiple times, and 36% of expelled students. Even in preschool, African American students are disproportionately suspended or expelled (OCR, 2016). During the 2013-14 school year, African American students made up less than one-fifth of students enrolled in preschool; however, they represented almost half of students suspended. In addition, African American students are disproportionately subjected to referrals to law enforcement and school-related arrests. Although African American students made up only 15% of 2015-16 student enrollment, they represented 31% of students referred to law enforcement and subjected to school-related arrests.

Even more disturbing is the increased rate in exclusionary discipline for African American students between 2011 and 2016 despite an overall reduction in the number of students

administered out-of-school suspensions. Though enrollment for non-White students is increasing and predicted to reach 56% by 2024 (OCR, 2016), African American student enrollment is trending downward (i.e., 18% in school year 2009-10 [OCR, 2012], 16% in school year 2012-13 [OCR, 2014], and 15% in school year 2015-16 [OCR, 2018]), and rates for out-of-school suspension are trending upward. For survey years 2011-12 and 2015-16, African American students made up 32% (OCR, 2014) and 39% (OCR, 2018), respectively, of students assigned one or more out-of-school suspensions. This represents a 22% increase in the proportion of African American students receiving one or more out-of-school suspensions.

Exclusion from learning environments exacerbate the achievement gap by increasing the opportunity gap and leads to negative outcomes both proximally (e.g., failure, retention, and attrition; Skiba and Peterson, 2000) and distally (e.g., reduced occupational opportunities and increased risk of incarceration; Gregory & Weinstein, 2008; Hirschfield, 2008). Students that are expelled or suspended are "more than two times more likely to be arrested within the same month" of their expulsion or suspension when compared with students not expelled or suspended (Okonofua, 2016, p. 382, citing Monahan et al., 2014).

The impact of exclusionary discipline policies and practices within schools is not limited to excluded students. Perry and Morris (2014) found that schools with higher rates of exclusionary discipline experience "collateral damage" (p. 1) that negatively impacts the academic achievement of students who are not suspended. This effect is most pronounced when levels of exclusionary discipline are high, and levels of violence are low. However, these adverse effects are observed "in even the most disorganized and hostile school environments" (p. 1). Mitchell and Bradshaw (2013) in their examination of "the association between classroom management strategies and student perceptions of school climate" (p. 601) found that "greater

use of exclusionary discipline strategies was associated with lower order and discipline scores, whereas greater use of classroom-based positive behavior supports was associated with higher scores on order and discipline, fairness, and student–teacher relationship" (p. 599).

Significance

Overall, strategies for reducing or eliminating exclusionary discipline practices within schools warrant examination due to the negative impact exclusionary discipline has on excluded and non-excluded students. Developing a theory that models why disparities occur is a sound methodological approach for identifying malleable intervention targets at every level of the school system. Researchers have used a number of theories to explain why racial discipline disparities occur (see Anyon et al., 2018; Faching-Varner et al., 2014; Hines-Datiri & Carter Andrews, 2017; Little & Welsh 2019; Morris, 2005; Okonofua et al., 2016; Scott et al., 2017; Simson, 2013; Wun, 2016). Little and Welsh (2019) have developed, perhaps, the most comprehensive theory based upon work in the field of sociology. Theories and constructs from the field of psychology may enhance and refine this theory by explicitly situating the processes that contribute to discipline disparities within an anti-Black and White supremacist socio-cultural-political framework (e.g., Bronfenbrenner). Further, individual level factors such as psychological distress and stereotype threat may lead to discipline disparities. Moreover, cyclic negative interactions between individuals in close proximity with each other day after day may reinforce stereotypical thinking and lead to discipline disparities. Therefore, through the enhancement of Little and Welsh's theory, we aim to further explain how and why discipline disparities occur. Through this process, we hope to elucidate constructs that may be targeted to eliminate discipline disparities and educational opportunity gaps for marginalized students. To our knowledge and at the time of the submission of this manuscript, no other researchers have

proposed integrating the Little and Welsh Theory, Bronfenbrenner's Ecological Systems Theory, and social-psychological theory to model racial discipline disparities within U. S. public schools.

Theorizing Discipline Disparities

Little and Welsh (2019), utilizing an "integrative theoretical framework" (p. 4) employ Bourdieu's Theory of Cultural and Social Reproduction, Broken Windows Theory, Critical Race Theory, and Foucault's Discipline and Punish Theory "to examine the: (a) underlying intent and philosophy of discipline policies and (b) contested controversial role of racial bias and discrimination as a contributor to discipline disparities" (p. 2). In this section, first, we describe the four theories used by Little and Welsh (2019). Second, we explain how theories drawn from the field of psychology may add value to these four theories, to explain how and why African American students experience disproportionate rates of discipline consequences and to illuminate possible targets for intervention. We introduce these additional theoretical frameworks (i.e., Bronfenbrenner's Ecological Systems Theory and social-psychological theory) and additional constructs (i.e., teacher psychological distress, implicit bias, stereotype threat) that, we argue, should also be considered when theorizing why discipline disparities occur. Third, we explain how these added frameworks and constructs may broaden and refine Little and Welsh's theory and further explain why discipline disparities occur. We aim to accomplish this task by framing teachers and students within their own independent microsystems that impact their intra-relationships (i.e., the student's relationship with themself and the teacher's relationship with themself) and their inter-relationship with each other determined by the quality of teacher-student interactions and their attitudes and beliefs regarding the other (i.e., which may be thought of as an overlapping mesosystem). Both students' and teachers' micro- and mesosystems are situated within the broader context of anti-Black/White supremacist socio-cultural-political exo-

and macrosystems. Implicit bias is included in the student's and teacher's microsystems because it is very likely that both possess implicit biases (Jones et al., 2012). Stereotype threat is also included in the microsystems since each may fear they will be judged based on prevalent stereotypes (Okonofua et al., 2016). Lightning bolts representing teacher stress surround the teacher's microsystem because of the prevalence of daily stress for teachers (i.e., reputedly 46 percent; Gallup, 2014).

Little and Welsh's Theory

Bourdieu's Theory of Cultural and Social Reproduction

Pierre Bourdieu's Theory of Cultural and Social Reproduction (1986) helps to explain why discipline disparities occur in schools. Cultural capital can be classified as embodied, objectified, and institutional. Embodied cultural capital refers to one's social skills, tastes, and deportment (e.g., the manner with which one speaks, one's posture, and the way one walks). These elements of embodied cultural capital convey different meanings and levels of power and influence. Valued ways of speaking, carrying oneself, and tastes are dictated by those who are in power, financially advantaged, and possess influence.

One of the primary responsibilities of the education system is to acculturate students to certain social and cultural norms (DiMaggio, 1982; Nash, 1990). The system also is designed to maintain the "dominance of upper classes" (Little & Welsh, 2019, p. 8, citing Nash, 1990) by stratifying students into different tracks. Due to their privilege and power, "upper" and "middle" class socio-economic groups have the cultural capital to "legitimize their culture and attach meanings to it, they are able to distinguish their culture as the basis for knowledge in the education system" (Little & Welsh, 2019, p. 8, citing Nash). Similar to the lens through which nineteenth century scholars viewed "Negroes" (Encyclopaedia Britannica, 1884), economically

disadvantaged students and their families and communities are often viewed through a deficit lens by teachers and administrators. Cultural capital [i.e., advantages experienced due to what one knows] and social capital [i.e., advantages experienced due to who one knows] are integral constructs in the reproduction framework according to Bourdieu's Cultural and Social Reproduction Theory (Bourdieu, 1973, Nash, 1990).

Foucault's Discipline and Punish Theory

Foucault's Discipline and Punish Theory (1975) posits that, within an anti-Black/White supremacist socio-cultural-political environment, the cultural and societal norms of the economically advantaged and politically powerful are valued and determine the punishment and consequences for violation of those norms. One of the elements of Foucault's Discipline and Punish Theory is the maintenance and control of an individual's behavior through the belief that one is being observed. Foucault referred to this as "the gaze" (1975). Within prisons, the panopticon was used as a system of surveillance and control in which a tower overlooked prisoners (Semple, 1993). Prisoners never knew whether the tower was manned nor whether they were being watched. Within schools, cameras are placed near ceilings in areas occupied and frequented by students, yet students never know whether they are being watched. "The gaze" is an instrument of power used to coercively control behavior through self-regulation because individuals never know if they are being surveilled; therefore, they behave as if they ***are*** being watched. This type of surveillance transmits feelings of mistrust, violates the privacy of individuals, and promotes stereotype threat (Farmer, 2010). It might also be viewed as a strategic method of dehumanizing those who lack sufficient social and cultural capital.

Critical Race Theory

> From the perspective of critical educational theorists, the curriculum represents much more than a program of study, a classroom text, or a course syllabus. Rather, it represents the *introduction to a particular form of life; it serves in part to prepare students for dominant or subordinate positions in the existing society*. (McLaren, 2003, p. 86, citing White, 1983).
>
> The curriculum favors certain forms of knowledge over others and affirms the dreams, desires, and values of select groups of students over other groups, often discriminatorily on the basis of race, class, and gender. (McLaren, 2003, p. 86)

Extant research well documents race as a primary cause of discipline disparities (see, e.g., Little & Welsh, 2019; Skiba et al, 2002; Skiba et al., 2011; Skiba et al, 2016; Welsh & Little, 2018). Indeed, Dumas (2016) contends that "any incisive analyses of racial(ized) discourse and policy processes in education must grapple with cultural disregard for and disgust with [B]lackness" (p.12), in other words, anti-Blackness must be considered. Critical Race Theory (CRT) asserts that race or "Whiteness" determines social and cultural norms and that institutions and systems such as education, through that dominant cultural lens view students of color, their communities, and families as socially and culturally deficient. Schools stratify students into tracks that determine their educational and occupational opportunities. In addition, school personnel make conscious and unconscious decisions that ultimately determine whether students will be pushed out of the education system and even worse, whether they will enter the school-to-prison pipeline.

Little and Welsh (2019) assert that "CRT provides a theoretical lens to examine how racial perceptions, misconceptions, and stereotypes create differences and contribute to the racial discipline gap" (p. 12). Considering Little and Welsh's assertion, the extended and enhanced theoretical framework presented here situates the student, teacher, and all constructs that directly influence them in an anti-Black/White supremacist exosystem and macrosystem. In addition, two CRT tenets are utilized to help explain disproportionate rates of exclusionary discipline for African American students. The first is that racism is not extraordinary, within an anti-Black/White supremacist macrosystem, racism is commonplace and "business as usual." The second CRT tenant employed is interest convergence. Just as wealthy elite landowners used Whiteness as property to align themselves with White laborers and dehumanize laborers of African descent, within schools, the promise of collective cultural capital brings together White teachers from different backgrounds in cultural solidarity. Students of color, their families, and their communities are often viewed through a deficit lens when norms of the dominant culture are violated. This results in an "othering" of individuals from outgroups. Similarly, students may "other" White teachers and conclude that they are racist based on their own treatment or the treatment of their peers and/or family members. This process of "othering" can inhibit the development of positive teacher-student relationships, which we now know are critical to student success (Hamre & Pianta, 2001). These phenomena and conditions are exacerbated by the cultural mismatch that exists between school personnel and students, especially within some schools in urban areas.

Broken Windows Theory

The Broken Windows Theory (Wilson & Kelling, 1982) proposes that ill-maintained environments which convey the message that no one cares lead to further destruction. In

applying the Broken Windows Theory to student behavior, one might believe that in order to prevent higher-level offenses, lesser offenses must be punished. Therefore, in schools that have discipline policies that align with this theory, students that commit minor offenses are punished to avoid more serious offenses from occurring. The risk of applying this theory to student behavior is the differential surveillance, selection, and processing of students based on race (Gregory et al., 2010) and the criminalization of students and their behaviors for minor infractions.

What Theoretical Frameworks Add Value?

As we have reviewed, Little and Welsh's Theory (2019) applies theories from sociology to explain how discipline disparities occur through the dominance and transference of social and cultural "norms" (i.e., Bourdieu's Social and Cultural Capital Theory), by punishing and criminalizing students for minor infractions in order to avoid more serious offenses (i.e., Broken Windows Theory), by monitoring student behavior through surveillance and coercive self-regulation (i.e., Foucault's Discipline and Punishment Theory), and by oppressing, demoralizing, and marginalizing students and devaluing their cultures. We contend that the Little and Welsh theory can be enhanced and refined by applying Bronfenbrenner's Ecological Systems Theory (1979) in which the macro- and exosystems are a milieu of anti-Black racism and White supremacist ideology and social-psychology theory (Zanna, 2002) to model interactions between students and teachers that may lead to discipline disparities based upon race.

Bronfenbrenner's Ecological Systems Theory

Researchers have utilized Bronfenbrenner's Ecological Systems Theory (1979) to model racial disparities in healthcare and education. Noursi et al. (2020) employed Bronfenbrenner's Ecological Systems Theory to examine racial disparities in maternal morbidity and mortality,

and Alio et al. (2010) utilized Ecological Systems Theory to explain disproportionate rates of infant mortality for African Americans. Another group of researchers (Vargas et al., 2020) utilized a "Bronfenbrenner-type" ecological systems theory to model relationships between academic mentors and students and "to depict the nested and recursive relationships between phenomenological experience, discourse, academic research institutions, structural racism, and sociohistory" (p. 1045). Therefore, in the proposed enhanced model (i.e., displayed in Figure 1), we use Bronfenbrenner's Ecological Systems Theory to explain how individuals are influenced directly and indirectly by systems and interactions between those systems and that all systems exist within an anti-Black/White supremacist social-cultural-political system.

The Microsystem and Mesosystem:

Teacher Stress, Emotional Dysregulation, Reactivity, and Teacher-Student Relationships

Interactions are impacted by inter- and intra-relationships with the identity, beliefs, and perceptions of both the student and teacher (i.e., independently and in tandem) and their perceptions and beliefs about each other and the systems in which they are situated impacting their relationship (i.e., see Figure 1). Teacher stress and burnout affects teachers' ability to self-regulate and can lead to automatic responses impacted by existing biases and stereotypical beliefs. Both students and teachers likely have implicit biases since these have been found in children as young as six years of age (Baron & Banaji, 2006). Both also likely experience stereotype threat—the fear that one will be judged according to prevalent stereotypes. Stereotype threat affects cognitive ability and may diminish engagement as individuals experiencing this phenomenon try to avoid situations that trigger feelings of threat (Steele et al., 2002).

Teachers and students possess attributes, identities, and temperaments and each is influenced by their own immediate microsystem (Bronfenbrenner, 1979) and relationships with individuals and groups in their microsystem (Bronfenbrenner, 1979). For example, both teachers and students are influenced by their family, religious affiliation, neighborhood, socio-economic status, school, peers, and educational attainment and occupation(s) of their parent(s)/guardian(s). In addition, each may experience social identity threat (Okonofua et al., 2016).

In the model displayed in Figure 1, the teacher is depicted as slightly larger than the student due to the collective social and cultural capital she shares with the other teacher, staff, and administration in her school as well as that of the district leadership and government.

The Exosystem and Macrosystem: Anti-Blackness and White Supremacy

Within a macrosystem (i.e., socio-cultural-political system) that promotes and propagates anti-Black racism and White Supremacy (i.e., see Figure 1), systematic and structural racism exists and is maintained through laws and policies at the federal, state, and local/district levels. Those laws and policies may directly or indirectly impact students and teachers resulting in the differential surveillance, selection, and processing of African Americans that lead to disproportionate rates of exclusionary discipline both in communities and schools.

Social Psychology and Social Identity Threat

Students initially come to school excited and motivated to learn (Crocker et al., 1991; Mickelson, 1990; Steele, 1998). Teachers enter the profession with the desire to positively impact the lives of their students (Okonofua et al., 2016, citing Johnson et al., 2012). Interactions between teachers and students can reinforce the initial attitudes held by students and teachers, or they may alter them. Over time, students may begin to view teachers as their adversaries either through their direct encounters with teachers or by observing the treatment of others (e.g., from

witnessing a contentious encounter between a sibling, parent, or peer and a teacher). Similarly, the idealistic teacher just entering the profession may, through negative interactions with students, conclude that students do not want to learn and that parents do not socialize children to behave well in school. This may result in resentment toward the very group of individuals that teachers initially sought to serve. Unpleasant experiences can lead to feelings of hostility and animosity shared by both students and teachers and can negatively impact teacher-student relationships.

Okonofua et al. (2016) combine social-psychology and social identity threat theory into a teacher-student interaction theory that explains how cyclic negative teacher-student interactions can exacerbate implicit biases, stereotypical beliefs, and stereotype threat possessed by both students and teachers and can negatively impact teacher-student relationships. They theorize that "bias and apprehension about bias can build on one another in school settings in a vicious cycle that undermines teacher-student relationships over time and exacerbates inequality" (p. 381). Bronfenbrenner's (1979) microsystem level represents one's immediate environment and factors that directly influence one such as family, religious affiliations, school, neighborhood, etc. Both the teacher and student are influenced and develop within their own microsystems; however, to represent the cyclic nature of the teacher-student relationship, in the proposed conceptual model, an infinity symbol is drawn around the teacher and student (i.e., see Figure 1). In addition, both hold biases and may experience stereotype threat or what Okonofua et al. refer to as "apprehension about bias" (p. 381).

Other Constructs That Can Add Value

In this section, we describe the constructs included in the new proposed theoretical and conceptual frameworks and explain how they relate to one another and fit within the included theories.

Teacher Psychological Distress

Similar to serving the public as a police officer, serving the public as a teacher can be stressful. During the school year, rates of daily stress for teachers were found to exceed those of all other occupations surveyed, including physicians, and tied those of nurses at 46% (Gallup, 2014). Teachers' stress levels are significantly higher than those reported in a previous survey conducted in 1985 (Metropolitan Life Insurance Company, 2013). Researchers identify four primary factors that lead to teacher stress: dysfunctional school organizations (i.e., weak administrators, unhealthy school climates, and lack of support [Kyriacou, 2001]); increased job demands (i.e., high-stakes testing, difficult student behaviors, and challenging parents [Rentner et al., 2016]); resource structures that limit autonomy (Verhoeven et al., 2003); and insufficient teacher social and emotional competence (SEC) that reduces teachers' ability to "manage" stress and provide a positive classroom climate for their students (Montgomery & Rupp, 2005). In addition, stress was found to negatively impact teachers' effectiveness and students' academic outcomes (Hoglund, et al., 2015) and increases the financial burden on school districts nationwide (i.e., $7.3 billion per year) due to greater teacher turnover rates (Barnes et al., 2007). Disproportionate rates of teacher turnover in schools serving low-income families increases the incidence of educational inequity and causes instability within schools (Beteille et al., 2011). Furthermore, elevated levels of teacher stress impact the health, well-being, and quality of life of teachers (Souza et al., 2012).

Psychological distress and negative emotions can literally reduce peripheral vision and focus, limiting one's ability to perceive the "whole" picture and view events objectively (West & Fredrickson, 2020. Therefore, teacher's psychological stress is included and represented by lightning bolts since it may impact the ways in which teachers interpret and respond to student behavior. Stress can also elicit stereotyping (Baron et al., 1992; Friedland et al., 1999) and implicit prejudicial behavior (Frantz et al., 2004; Terbeck et al., 2012). Bertrand and colleagues (2005) identify three conditions often present within stressful environments that may elicit implicit prejudicial behavior and stereotyping: "inattentiveness to task, time pressure or other cognitive load, and ambiguity" (p. 95), all common factors associated with teacher stress (Jennings & Greenberg, 2009).

Implicit Racial Bias

Implicit bias can be defined as the unconscious "attitudes or stereotypes" that influence an individual's behavior, decisions, and understanding (Staats et al., 2015, p. 62). Implicit racial bias can exist without one's knowledge, resulting in devastating consequences within institutions. Implicit racial biases are ubiquitous among American citizens; few individuals raised in the U.S. avoid inheriting societal racial biases (Sue et al., 2007). Researchers examining the relationship between self-reported explicit racial bias and implicit racial bias report a weak correlation between the two constructs (Green et al., 2007; Greenwald et al., 2009). In other words, while explicit biases are more easily self-identifiable, the unconscious nature of implicit biases leaves individuals unaware of their existence. Beginning at a very early age and continuing throughout an individual's life, implicit racial biases develop as a result of environmental messages (Castelli et al., 2009). Maternal influences are especially salient in the development of implicit biases (Castelli et al., 2009). Socio-cultural conditioning leads to pro-

White/anti-African American bias and implicit in-group preference within children as young as six years of age (Baron & Banaji, 2006).

A mechanism believed to be responsible for implicit racial bias is automaticity of response described as the ways that individuals automatically respond to situations and people based on their past associations and memories (Lueke & Gibson, 2015). Rudman and Lee (2002) assert that implicit bias is based on fear and perceived vulnerability. Socio-cultural conditioning fosters fear and bias toward African American males (Heitzeg, 2009). Media overrepresentation of African American males as criminals and underrepresentation of African American males as victims of crime and in positive roles contributes to feelings of fear and vulnerability toward this group of individuals (Dorfman & Schiraldi, 2001). Dasgupta (2013) states that "hearsay" (p. 237), media exposure, and environmental messages, with regard to who matters and who does not, contribute to the development of implicit racial bias, thus increasing the likelihood that individuals will react automatically based on their biases.

Though bias is mentioned by Little and Welsh (2019) when theorizing how and why discipline disparities occur, in this extended theory, implicit bias is explicitly presented as a construct within the framework and is positioned within the microsystem of students and teachers (i.e., see Figure 1). Sue et al. (2007) posits that most individuals raised in the U. S. possess societal racial biases. Therefore, it is likely that both students and teachers possess implicit racial biases. For example, an African American student may possess anti-White biases and a White teacher may possess anti-Black biases.

Stereotype Threat

Steele et al. (2002) defines stereotype threat in this way:

> "When a negative stereotype about a group that one is part of becomes personally relevant, usually as an interpretation of one's behavior or an experience one is having, stereotype threat is the resulting sense that one can then be judged or treated in terms of the stereotype or that one might do something that would inadvertently confirm it." p. 389)

Stereotype threat is included in the microsystems of both teachers and students as they may both experience this phenomenon (i.e., see Figure 1). Stereotype threat can impact both students and teachers individually by limiting their engagement and cognitive ability and collectively by impacting students' and teachers' relationships. For example, a student experiencing stereotype threat may avoid feelings of threat by disengaging. The teacher may interpret the student's disengagement as a lack of motivation. The teacher, who may be experiencing psychological stress due to pressure from her administration to produce high scores on standardized tests may become frustrated with the student and reprimand them. This may initiate a cycle of negative interactions which may result in an office discipline referral (Okonofua et al., 2016).

Discussion

Anti-Black racism and White supremacist beliefs persist in U. S. institutions leading to the differential treatment of and opportunity gaps for African Americans. In particular, differential surveillance, selection, and processing result in disproportionate rates of exclusionary discipline consequences for African American students. This paper extends an extant theory (i.e., Little & Welsh, 2019) to further explain how and why discipline disparities occur within schools. Little and Welsh's (2019) theory explains how a "heightened focus on risk management," cultural and race/ethnicity mismatch between students and school personnel, and the attempt to

transmit values of the dominant culture through policies and procedures regarding discipline facilitate discipline disparities by integrating Bourdieu's Social and Cultural Reproduction Theory, Broken Windows Theory, CRT, and Foucault's Discipline and Punish Theory. Key constructs such as teacher stress, implicit bias, and stereotype threat may add value to this theory by explaining how they impact teacher-student relationships and lead to disproportion rates of exclusionary discipline for African American students. Further, we posit that Little and Welsh's framework may be enhanced by applying Bronfenbrenner's Ecological Systems Theory and Okonofua et al's. Teacher-Student Interaction Theory (2016) which combines social psychology and social identity threat theory. Teacher-Student Interaction Theory explains how cyclic negative teacher-student interactions can exacerbate implicit biases, stereotypical beliefs, and stereotype threat possessed by both students and teachers.

The purpose of this theoretical and conceptual framework was to identify malleable intervention targets to eliminate discipline disparities for African American students. Intervention targets included in the extended and enhanced Little and Welsh (2019) framework are teacher stress, implicit bias, stereotype threat, and anti-Black/White supremacist mindsets.

Evidenced-Based Stress Reduction Interventions

Identifying strategies to reduce teacher stress, burnout, and attrition and to increase teacher health and well-being is imperative and urgent. Three types of interventions have demonstrated promise in reducing teacher stress: (a) "organizational interventions" that modify the organizational structure and alter institutional culture to prevent stress (Cox et al., 2012); (b) "organization-individual interface interventions" that cultivate support and collegial relationships (i.e., teacher induction and mentoring programs, workplace wellness programs, and student social and emotional learning [SEL] programs [Tyson et al., 2009]); and (c) "individual

interventions" that equip individuals with strategies to "manage" stress (Bishop et al., 2004; Kabat-Zinn, 2003; Roeser, 2014; Jennings et al., 2017; Jennings et al., 2013; Roeser et al., 2013; Elder et al., 2014).

Jennings et al. (2017) found that a mindfulness-based professional development program, the Cultivating Awareness and Resilience for Educators (CARE), reduced psychological distress and was associated with teachers' emotional support for students. The CARE professional development program, grounded in the prosocial classroom model, is based on the theory that classroom teachers' social and emotional competency and general well-being are salient factors in facilitating the relationships between teachers and students, managing classroom behavior, and effective student social and emotional learning (SEL; Jennings & Greenberg, 2009). When combined with effective classroom management and high teacher quality, these factors result in improved classroom climate and positive social, emotional, and academic outcomes for students.

The CARE program consists of three primary instructional components. Within two of the components, mindfulness and stress reduction practices and listening and compassion exercises (Jennings, 2016), mindfulness meditation and a caring practice, respectively, are practiced. Both types of mindfulness practice have been found to reduce implicit racial bias (Fabbro et al., 2017; Kang et al., 2014; Stell & Farsides, 2015), although the impact of CARE on teachers' implicit biases has not yet been studied.

The third component, emotion skills instruction, facilitates teachers' self-examination of "habitual emotional patterns" (Jennings, 2016, p. 139) which may become activated during stressful situations and induce automatic responses (Jennings, 2016). Jennings et al. (2017) report that the CARE intervention increased self-reported mindfulness, emotion regulation, and

observed emotional supportiveness of students as well as decreased psychological distress and time urgency.

In addition to the aforementioned reputed causes of teacher stress, using an ecological systems approach one might conclude that within anti-Black and White supremacist macro- and exosystems, teachers and police officers may feel pressured to differentially surveille, select, and process students and community members, respectively. Within this framework, individuals in these authoritative service positions may feel the need to police minor offenses (i.e., Broken Windows Theory; Wilson & Kelling, 1982). In addition, they may convey within community members and students the dominant culture's social and cultural norms (i.e., Bourdieu's Social and Cultural Reproduction Theory; Bourdieu, 1973, Nash, 1990). Furthermore, they may use technology, additional security, and employ discretionary detainment to determine if those of the criminalized group (i.e., African Americans) are "up to no good" (i.e., Foucault's Discipline and Punish Theory; Foucault, 1975). Incongruent attitudes may exacerbate perceived stress on an unconscious level (i.e., systemic anti-Black racist and White supremacist views may result in individually held implicit racial bias that conflicts with the desire to maintain and demonstrate explicit non-racist attitudes [i.e., CRT; Bell, 1992]).

Components of the CARE intervention demonstrate promise in reducing teacher psychological distress (Jennings et al., 2017) and possibly implicit bias (Lueke & Gibson, 2015) as well as for increasing teachers' emotional support of students (Jennings et al., 2017). Additional malleable intervention targets are stereotype threat and lack of knowledge about the history of race and the negative effects of developing and existing within an anti-Black/White supremacist social-cultural-political exo- and macro-system and well as the negative impact of the indirect and direct influences of anti-Black/White supremacist meso- and microsystems.

Therefore, didactic components designed for educators and students on these topics are proposed additions. For instance, the curriculum would include instruction on social justice concepts.

Based on promising interventions, Okonofua et al. (2016) suggest utilizing "empathetic discipline" (p. 389). Empathetic discipline targets teachers to attenuate stereotypical views of African American children so that teachers can "understand student behavior in nonpejorative ways—to provide teachers insight into and empathy for racially stigmatized students' psychological experience in school" (p. 389). These strategies encourage teachers to use discipline events as opportunities to build relationships with students as opposed to punishing them. Jennings (2015) suggests this same approach through the use of logical consequences for students instead of punishment. In addition, Okonofua, citing Cohen et al. (1999) suggests that to avoid negative relationships and student perceptions that they do not belong, teachers should be encouraged to explicitly share their positive intentions with students during disciplinary interactions.

Other suggested interventions aim to address both students and teachers. An example is the use of critical feedback in which teachers employ "wise feedback" (Yeager et al., 2014, p. 810) to frame critical feedback to students in a way that conveys teachers' "high standards and confidence in the student's ability to reach that standard" (Okonofua, 2016, p. 389).

"Social-belonging intervention" is yet another approach to mitigating negative interactions between students and teachers. In this intervention, sixth grade students read and reflected on narratives from seventh grade students during two class sessions. Narratives convey the message that most students are concerned about whether they belong in middle school and whether they will experience positive relationships with their teachers; however, over time, those concerns fade, and students will begin to feel more comfortable and realize that teachers are

supportive. This intervention normalized concerns and emotions experienced by sixth grade students transitioning into middle school. Astonishingly, the social-belonging intervention was associated with a 65% reduction in disciplinary incidents for African American male students over the next seven years (Goyer et al., 2019).

Mischenko et al. (in review) found teachers feel more supported when interventions involve all education stakeholders within a district. Therefore, an effective intervention would need to include all district and school personnel, students, families, and perhaps, even communities.

Conclusion and Future Directions

Based on a previous theory developed by Little and Welsh (2019), this conceptual review presents comprehensive theoretical and conceptual frameworks that model why discipline disparities occur in U. S. public schools. However, Fasching-Varner et al. (2014) in their article proposing a theory of educational and penal realism contend that the criminal justice and education systems are working as designed to provide free and reduced-cost human capital to support the free market system. Within an anti-Black and White supremacist macrosystem (Bronfenbrenner, 1979), African Americans and other people of color are the chosen workforce. The school-to-prison pipeline presents the perfect system for this purpose. It is a system that uses schools to differentially surveille and select students to determine whether they are suitable candidates for incarceration. Unfortunately, Okonofua et al. (2016) contends that over time, negative encounters between students and teachers can become “a vicious cycle” producing more qualified candidates for incarceration (p. 381). Furthermore, “school reform and the prison industry are currently multi-billion-dollar industries” (Fasching-Varner et al., p. 411, citing Gaes et al., 2004). “Without school failure there is no opportunity for an educational reform-industrial

complex, and without people to punish, similarly, there is no need for the prison-industrial complex" (p. 411). If Fasching-Varner et al's. educational and penal realism theory correctly models these systems, interventions will only have a lasting effect if they target the macrosystem level. Therefore, any intervention aimed at eliminating disparities in discipline will have to also target the anti-Black/White supremacist macrosystem.

Author's Positionality

As a former middle school and alternative middle school teacher, I have observed, first-hand the trauma experienced by African American students that were pushed out of traditional schools. I have also personally experienced implicit racial bias. In addition, my nephew is a police officer in a major metropolitan area. Therefore, I am privy to the perspectives of both a young African American male and a police officer who patrols urban neighborhoods. As a police officer, my nephew must believe that "blue lives matter." As an African American male, he must concede that, sometimes, police officers use excessive force against individuals that resemble him.

As an African American parent of three amazing daughters, I feel great compassion for those who experience the violence that results from anti-Black racism and White supremacist ideology. I hope that I can make a difference in the lives of those that, historically, have not mattered. I hope that my research conveys the message that Black lives matter.

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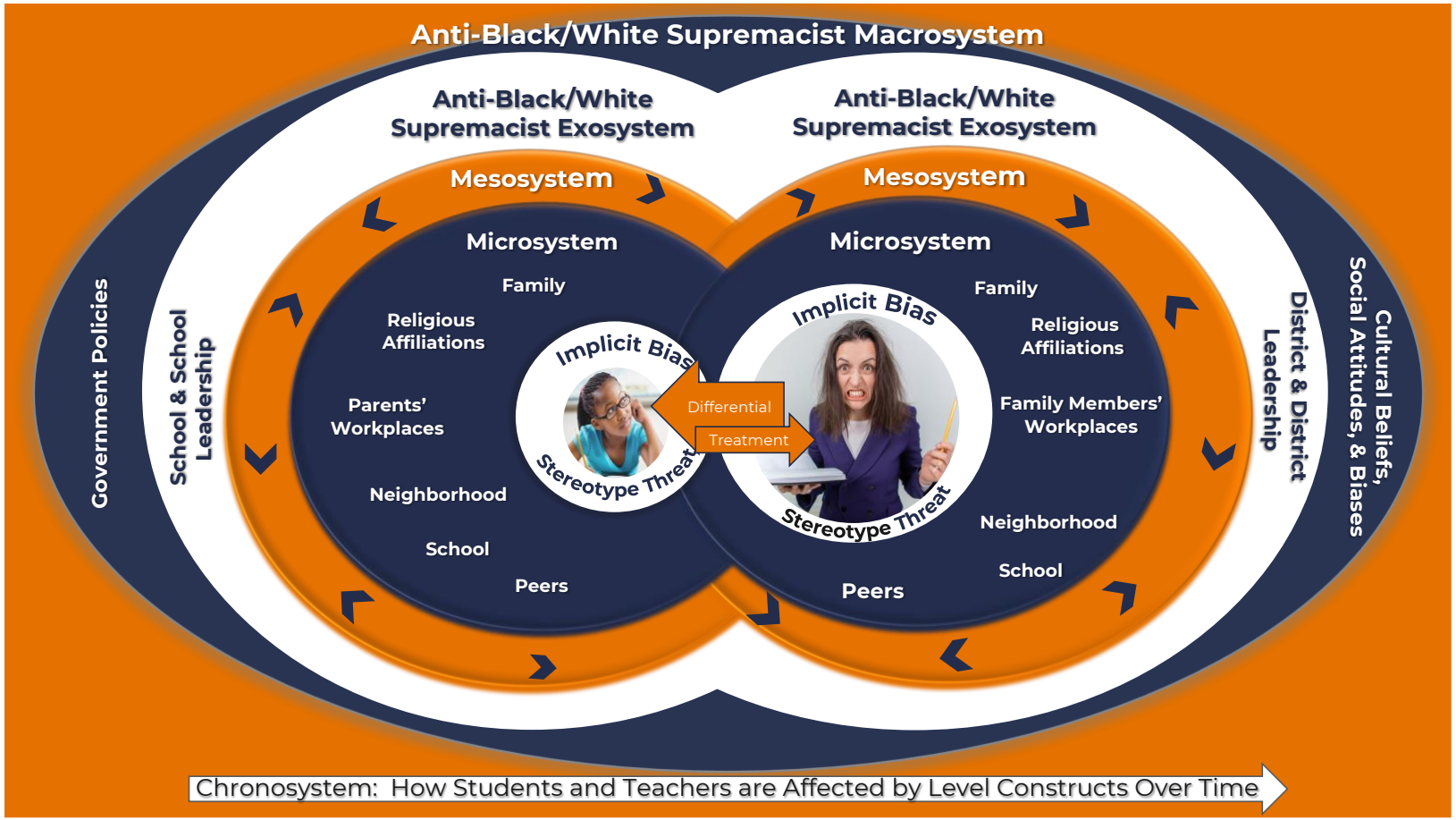
Figures

Figure 1

Conceptual Framework of Discipline Disparities within U. S. Public Schools



Note. Conceptual framework explicating how and why discipline disparities occur in U. S. public schools. The student and teacher have implicit biases and experience stereotype threat. The teacher experiences stress. They both exist in anti-Black/White supremacist social-cultural-politic exo- and macrosystems.

Students Put-At-Risk:

School-Level Predictors of Discipline Disparities In U. S. Public Schools

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Abstract

Within U. S. public schools there exists an opportunity gap that is exacerbated by a discipline gap. Disproportionate rates of exclusionary discipline reduce educational access for African American male students and lead to negative outcomes. The current study utilizes 2015-2016 NCES CCD and U. S. Department of Education's CRDC data to examine school-level factors associated with higher incident rates for the number of students assigned out-of-school suspensions. Applying zero-inflated negative binomial regression analysis, schools' percentages of African American male students, students eligible for free or reduced-price lunch, and students served under IDEA, as well as school locations' population densities and school levels were examined to determine their association with school-level counts of out-of-school suspensions. Schools with higher percentages of African American male students and students with economic disadvantage, schools located within urban communities, and middle, high, and "other" schools were found to have higher incident rates for numbers of students assigned out-of-school suspensions.

keywords: African American male students, discipline disparities, discipline gap, exclusionary discipline, out-of-school suspensions

Students Put-At-Risk:

School-Level Predictors of Discipline Disparities In U. S. Public Schools

> Power is the ability not just to tell the story of another person, but to make it the definitive story of that person. The Palestinian poet Mourid Barghouti writes that if you want to dispossess a people, the simplest way to do it is to tell their story and to start with, "secondly." Start the story with the arrows of the Native Americans, and not with the arrival of the British, and you have an entirely different story. Start the story with the failure of the African state, and not with the colonial creation of the African state, and you have an entirely different story (Adichie, 2009).

Within extant literature, evidence supporting the underachievement of African American students is often presented (Hanushek et al., 2019). In addition, researchers argue in favor of the existence of a theoretical academic achievement gap between African American and other student populations in which, very often, White students are the reference group or the "norm." The current study examines United States (U. S.) school-level data and attempts to provide a counternarrative of African American student underachievement that begins with "Part I," a narrative that supports the theory that the achievement gap for marginalized students exists due to a lack of educational opportunities created through the disproportionate assignment of exclusionary discipline.

Discipline disparities push students of color out of the educational system and exist because of power imbalances that allow the stories of one population of students, in particular (i.e., African American males), to be reduced to a single definitive story through a lens that defines them as "less than." The current study aims to identify school-level characteristics that

predict increased numbers of out-of-school suspensions for the proximal purpose of closing the opportunity gap and the distal purpose of closing the achievement gap for African American male students.

Background

The American Psychological Association (2020) defines exclusionary discipline as "any type of school disciplinary action that removes or excludes a student from his or her usual educational setting" (para. 1). The most commonly delivered forms of exclusionary discipline are suspensions and expulsions. Certain populations of students are disproportionately assigned exclusionary discipline. For example, the U. S. Department of Education's Office for Civil Rights (2015) reported that during the 2011-2012 school year, 3.45 million students were administered out-of-school suspensions. African American and White students have similar rates of suspension and expulsion, 32% to 42% and 31% to 40%, respectively; however, while White students make up 51% of the population of enrolled school children, African American students represent only 16%. African American male students are administered exclusionary discipline (i.e., suspensions and expulsions) three times more often than White male students. Zero tolerance policies, initially implemented to make schools safer, have resulted in exclusionary discipline for many African American male students for relatively minor infractions (Skiba, 2000).

Exclusionary discipline is ineffective in increasing school safety (Skiba & Peterson, 2000). Moreover, research suggests that exclusionary discipline results in academic underachievement (Arcia, 2006) and reduced school engagement (Balfanz et al., 2014; Skiba et al., 2014), and increases the likelihood of students dropping out of school (Skiba et al., 2014). Students that drop out of school are more likely to experience future incarceration (Skiba et al.,

2014) and less likely to attend and graduate from institutions of higher learning, thereby reducing future income earning potential (Belfield et al., 2012).

A number of factors have been identified as contributors to discipline disproportionality (Welsh & Little, 2018). Factors associated with discipline disparities may be observed by examining characteristics at a variety of levels (i.e., infraction, student, teacher/classroom, school, and district). Though we suspect that infraction-, student-, and teacher-/classroom-level data may predict disparate rates of out-of-school suspensions for African American male students, data at these levels is not easily accessible. In addition, Skiba et al. (2014) found that "school-level variables are the strongest predictors of disciplinary outcomes" (p. 758).

Extant research (Welsh & Little, 2018) indicates that schools with greater percentages of African American students (Anderson & Ritter, 2017; Anyon et al., 2014; Gregory et al., 2011; Losen et al., 2015; Rocha & Hawes, 2009; Skiba et al., 2014; Welch & Payne, 2010) and students in poverty (Losen et al., 2015; Mendez et al., 2002; Noltemeyer & Mcloughlin, 2010) report higher levels of discipline disparities that negatively impact African American male students. In addition, secondary schools report greater disproportionality between African American and White students and higher rates of suspension for African American students (Losen et al., 2015; Skiba et al., 2011; Wallace et al., 2008). Level of urbanicity (i.e., urban versus suburban versus rural) is also associated with discipline disparities. Controlling for poverty, Noltemeyer and Mcloughlin (2010) found that high-poverty urban schools reported higher rates of out-of-school suspensions for African American students. Furthermore, being a student served under the Individuals with Disabilities Education Act (IDEA; 2004) is a predictor of assignment to exclusionary discipline (Achilles et al., 2007; Anderson & Ritter, 2017). Finally, school type (i.e., charter versus traditional) is associated with significantly higher

percentages of disparities in exclusionary discipline. During the 2011-12 school year, traditional and charter schools reported 6.7% and almost 10% exclusionary discipline disparities, respectively, between African American and White students (Losen et al., 2016).

The Present Study

The present study was informed by a study conducted by the Government Accountability Office (GAO; Nowicki, 2018) in which school-level 2013-14 National Center for Educational Statistics Common Core of Data (CCD) and Civil Rights Data Collection (CRDC) data were examined to determine which, if any, school-level characteristics predicted higher counts of six discipline outcomes (i.e., corporal punishment, in-school suspension, out-of-school suspension, expulsion, referral to law enforcement, and school-related arrest). School-level characteristics in the GAO study included schools' percentages of student gender, race/ethnicity, interactions between student race/ethnicity and gender, students served under IDEA, students eligible for free- or reduced-price lunch (free and reduced-price lunch), school type, school level, and school personnel characteristics such as the presence of a sworn police officer or school counselor and the percentage of teachers within a school that have two or fewer years of experience.

Consistent with the GAO (Nowicki, 2018) study, the current study utilized data from the CCD and CRDC; however, we examined data for school year 2015-16, the most current data available at the time. In addition, we limited our analyses to the most commonly assigned discipline outcome, out-of-school suspensions. Further, with the exception of school type, we limited covariates to those found to be significantly associated with discipline disparities for African American male students. As previously mentioned, school type (i.e., charter versus traditional; Losen et al., 2016) is associated with discipline disparities; however, in the current study only traditional/regular schools were included to minimize the amount of missing data and

to ensure homogeneity of the sample regarding type of school. In essence, we chose to examine the association between the number of students assigned out-of-school suspensions and the percent of students within schools that were African American and male, controlling for the percent of students served under IDEA, the percent of free and reduced-price lunch-eligible students, school level, and the population density of the community in which the school was located. Finally, we examined the relationship between the number of students assigned out-of-school suspensions and *each* of the other covariates (i.e., percent of free and reduced-price lunch-eligible students, percent of students served under IDEA, school level, and the population density of the school's community), to answer the following research questions:

Q1. What is the relationship between counts of students assigned out-of-school suspension and the percentage of African American male students, controlling for percent of free and reduced-price lunch-eligible students, percent of students served under IDEA, school level, and school community's population density?

Q2. What is the relationship between counts of students assigned out-of-school suspension and the percentage of students eligible for free and reduced-price lunch, controlling for percent of African American male students, percent of students served under IDEA, school level, and school community's population density?

Q3. What is the relationship between counts of students assigned out-of-school suspension and the percentage of students served under IDEA, controlling for percent of African American male students, percent of free and reduced-price lunch-eligible students, school level, and school community's population density?

Q4. What is the relationship between counts of students assigned out-of-school suspension and school level controlling for percent of African American male students,

percent of free and reduced-price lunch-eligible students, percent of students served under IDEA, and school community's population density?

Q5. What is the relationship between counts of students assigned out-of-school suspension and the school community's population density, controlling for percent of African American male students, percent of free and reduced-price lunch-eligible students, percent of students served under IDEA, and school level?

Based upon the results of the GAO study (Nowicki, 2018), we hypothesized that schools with higher percentages of African American male students would report higher counts of students assigned out-of-school suspension, controlling for percent of free and reduced-price lunch eligible students, percent of students served under IDEA, school level, and school community's population density. We also hypothesized that schools with higher percentages of economically disadvantaged students and students served under IDEA would report higher numbers of students assigned out-of-school suspensions. Additionally, we hypothesized that schools located within communities with greater population densities would report higher numbers of students assigned out-of-school suspensions. Finally, we hypothesized that middle and high schools would report higher numbers of out-of-school suspensions than primary schools.

Methodology

Data Sources

The current study conducted analyses utilizing school-level 2015-16 CRDC and CCD datasets. The U.S. Department of Education's Office for Civil Rights requires that all public local education agencies (LEAs) and schools submit information in response to the CRDC biennial survey. The CRDC (U.S. Department of Education Office for Civil Rights, 2017),

collects data on civil rights indicators related to educational opportunity barriers and access, to ensure that agencies receiving federal financial assistance do not discriminate on the basis of race, color, national origin, sex, and disability. Within the complete dataset are 96,360 observations representing schools and 17,337 LEAs. These schools and agencies serve approximately 50.6 million students.

The current study utilized school-level, nonfiscal data from the U. S. Department of Education's NCES Public Elementary/Secondary School Universe Survey for school year 2015-16. This database, generated from annual surveys completed by state education agencies, includes basic information and descriptive statistics for all public elementary and secondary schools in the 50 states and the District of Columbia, American Samoa, the Bureau of Indian Education (BEI), the Department of Defense Education Activity (DoDEA), Guam, the Commonwealth of the Northern Mariana Islands, Puerto Rico, and the U. S. Virgin Islands (Glander, 2017). In total, there were 100,570 observations representing schools within the aforementioned geographic locations and 17,210 school divisions/agencies that serve 50,614,563 students.

Inclusion criteria for the present study restricted school type to traditional/regular schools with an enrollment of at least ten students. After excluding nontraditional schools and schools with less than ten students, the final merged CRDC and CCD dataset contained 74,420 schools.

Descriptives for Variables

Based on the aforementioned research which suggests that certain school-level characteristics predict discipline outcomes (Welsh & Little, 2018), we identified five school-level characteristics implicated in schools with higher counts of students assigned out-of-school suspension: the percent of African American male students and students experiencing economic

disadvantage, students served under IDEA, the population density of the community in which a school is located (e.g., urban, suburban, rural), and school level (i.e., primary, middle, high).

The number of students assigned out-of-school suspension, the dependent or outcome variable, is a continuous variable that represents the number of students assigned out-of-school suspensions reported by schools within the sample. For school year 2015-16, schools reported a total of 2,228,797 counts of out-of-school suspension. Counts ranged from 0 to 1025 with 12,714 schools (i.e., 17.08%) reporting zero out-of-school suspensions (see Figure 1). The large difference between the mean and the variance of the number of students assigned out-of-school suspension indicates that the distribution for student counts of out-of-school suspension is overdispersed. In other words, the conditional variance for out-of-school suspension, 31.11, is 3011% (i.e., (31.11 – 1) * 100) greater than the conditional mean.

Within the current sample, on average, African American male students made up 6.45% of the population of students within schools. The variable representing each school's percentage of African American male students is a continuous variable with possible values from zero to 100. The actual range of the percentage of African American male students is zero to 98.06%. During the data cleaning process, we recoded variables representing each school's percentage of students with economic disadvantage (i.e., represented by free and reduced-price lunch eligibility) and students served under IDEA to be indicator variables represented by percent quartiles to allow comparisons of the first quartile to each of the three additional quartiles for differences in incident rates of the number of students assigned out-of-school suspension. In essence, we separated each of these variables into four quartiles: 0 to 25%, 25.01 to 49.99%, 50 to 74.99%, and 75 to 100% representing the first, second, third, and fourth quartiles; respectively.

In addition to the continuous variable for a school's percent African American male students, to examine possible differences in the means of quartile categories (Gordon, 2012), we subdivided and "dummy" coded the variable representing African American male student enrollment into quartiles identical to those described for a school's percent of students served under IDEA and those free and reduced-price lunch eligible. Within the sample, there were 68,785 (92.43%) schools that fell in the first quartile; 4,912 (6.60%) schools in the second quartile; 711 (0.96%) schools in the third quartile; and 12 (0.02%) schools in the fourth quartile of African American male student enrollment. The mean number of students assigned out-of-school suspension for schools in the first, second, third, and fourth quartiles were 26.12 (*SD* = 44.53), 77.73 (*SD* = 91.68), 70.16 (*SD* = 83.89), and 53.33 (*SD* = 59.70); respectively (see Table 1).

Eligibility for free and reduced-price lunch is based upon a child's household income. For school year 2015-16, children living in households with incomes less than 130% of the poverty level or that received assistance through the Supplemental Nutrition Assistance Program (SNAP) or Temporary Assistance for Needy Families (TANF) program were eligible to receive free milk and meals; children living in households with incomes between 130 and 185% of the poverty level were eligible for reduced-price milk and meals (Child Nutrition Programs-Income Eligibility Guidelines, 2015). Though the NCES (2015) cautions researchers about utilizing free and reduced-price lunch eligibility as a proxy for economic disadvantage (see the Discussion section), within the current study free and reduced-price lunch eligibility is used as an indicator that students were experiencing economic disadvantage during the 2015-16 school year.

Within the current study's sample, there were 12,933 (17.80%) schools that fell in the first quartile; 20,874 (28.73%) schools in the second quartile; 20,993 (28.89%) schools in the

third quartile; and 17,861 (24.58%) schools in the fourth quartile of enrollment for students who qualify for free and reduced-price lunch. The mean number of students assigned out-of-school suspension for schools that fell in the first, second, third, and fourth quartiles of enrollment for students eligible to receive free and reduced-price lunch were 14.16 (*SD* = 25.49), 24.50 (*SD* = 40.58), 34.25 (*SD* = 57.27), and 43.88 (*SD* = 64.43); respectively (see Table 1 and Figure 3).

Within the sample, there were 70,384 (97.74%) schools that fell in the first quartile; 1,564 (2.17%) schools in the second quartile; 31 (0.04%) schools in the third quartile; and 29 (0.04%) schools in the fourth quartile of enrollment for students who received services under IDEA. The mean number of out-of-school suspensions for schools in the first, second, third, and fourth quartiles of enrollment for students served under IDEA were 30.63 (*SD* = 51.58), 33.72 (*SD* = 60.34), 18.93 (*SD* = 43.30), and 8.96 (*SD* = 14.04); respectively (see Table 1 and Figure 4).

The variables representing the population density of the community in which a school was located and school level are multinomial, categorical variables. Population density categories include 11 for large cities (*n* = 7,405; 9.94%), 12 for mid-size cities (*n* = 3,916; 5.26%), 13 for small cities (*n* = 4,676; 6.28%), 21 for large suburban areas (*n* = 20,501; 27.53%), 22 for mid-size suburban areas (*n* = 2,567; 3.45%), 23 for small suburban areas (*n* = 1,492; 2.00%), 31 for fringe towns (*n* = 2,356; 3.16%), 32 for distant towns (*n* = 4,903; 6.58%), 33 for remote towns (*n* = 3,091; 4.15%), 41 for fringe rural areas (*n* = 8,742; 11.74%), 42 for distant rural areas (*n* = 9,252; 12.42%), and 44 for rural remote areas (*n* = 5,574; 7.48%) (see Table 1 and Figure 6).

Schools in large, mid-size, and small cities had out-of-school suspension means of 45.11 (*SD* = 67.58), 46.96, (*SD* = 68.79) and 43.13 (*SD* = 64.84); respectively. Schools in large, mid-

size, and small suburban areas had out-of-school suspension means of 31.86 (*SD* = 56.07), 33.31 (*SD* = 48.30), and 30.54 (*SD* = 45.10); respectively. Schools within fringe, distant, and remote towns had out-of-school suspension means of 26.53 (*SD* = 36.17), 30.05 (*SD* = 42.07), and 25.01 (*SD* = 41.79); respectively. Finally, schools in fringe, distant, and remote rural areas had out-of-school suspension means of 29.62 (*SD* = 45.42), 14.33 (*SD* = 23.69), and 8.58 (*SD* = 17.56); respectively (see Table 1 and Figure 5).

Within the CCD dataset, categories for school level ranged from one to four with one, two, three, and four representing, primary, middle, high, and other levels; respectively (Glander, 2017). There were 44,287 (59.49%) primary, 14,424 (19.38%) middle, 13,566 (18.22%) high, and 2,168 (2.91%) other level schools in the current sample. Means for out-of-school suspensions for primary schools were 14.06 (*SD* = 21.80) and are, by far, the lowest rates for all school levels. Middle, high, and other level schools had out-of-school suspension means of 47.19 (*SD* = 56.24), 63.15 (*SD* = 82.38), and 32.06 (*SD* = 59.87); respectively (see Table 1 and Figure 6).

Analysis

StataCorp (2019), version 16, statistical software was utilized to conduct all statistical analyses in the current study. Variables were inspected and, if found to include invalid values (e.g., -5, -9), recoded to ensure the existence of only valid values. A discussion of the process for addressing missing values is included in the next section.

Missing Values

We began our analysis by examining the dataset and found that there were 74,420 observations. We then sought to determine if any of those observations contained missing values and found that the variables included in our model were missing less than three percent of

values. Missing values were analyzed to determine possible patterns. From these analyses, we concluded that the missing values were missing at random (MAR; Rabe-Hesketh & Skrondal, 2008). In addition, Stata analysis indicated that, based on the very low percentage of missing values and large sample size, the number of missing values was inconsequential. In essence, each of the variables with missing values was missing less than three percent of values. We imputed values that were found to be missing utilizing the multiple imputations with chained equations (MICE) method which is appropriate for multinomial, categorical variables such as the ones included within our model (White et al., 2011).

In order to complete the MICE process, we ran a pairwise correlation analysis (see Table 2) to determine which, if any, variables within the dataset were at least moderately correlated with variables with missing values. We found that the White student percent quartile variable was moderately, positively correlated with the population density variable ($r = 0.49$) and negatively correlated with schools' percent of African American male students variable ($r = -0.53$). Out-of-school suspension was moderately, positively correlated with the school level variable ($r = 0.32$). Once missing values were imputed, we successfully ran an initial negative binomial (NB) regression analysis utilizing the imputed values. Subsequent analyses attempting to utilize the zero-inflated Poisson (ZIP) and zero-inflated negative binomial (ZINB) regression models including the imputed values were unsuccessful. Based on information obtained through StataCorp (2019), the "mi estimate" command does not support zero-inflated regression analyses. For reasons that will be provided in subsequent text, the model most appropriate for answering the research question for the current study and that best fits the data is the ZINB regression model. Therefore, it was necessary to decide between utilizing imputed data for a dataset that was deemed complete (i.e., through prior analysis) and risk sacrificing the use of the

model of best fit and utilizing the dataset without imputed values that would allow use of the model of choice. Based on the analysis of dataset completeness (i.e., 100%) and type of missingness (i.e., MAR) and in order to utilize the best-fitting, most appropriate model for answering our research question (i.e., ZINB regression), we decided not to impute missing values. Therefore, relying on Stata's default listwise deletion process, all regression analyses were conducted on the remaining 74,420 observations.

Model Choice

For the current study, six potential models, deemed appropriate for count outcomes, were considered: the Poisson, overdispersed Poisson, ZIP, NB, and ZINB regression models. To determine which model best fit the data, we first examined the distribution of the outcome variable, students assigned out-of-school suspension, and found 12,714 schools reported no students were assigned out-of-school suspension for the 2015-16 school year (see Figure 1). This heavily, positively skewed distribution was the first indication that the Poisson model would not be the best fit for the data. Additional evidence is highlighted in the text that follows.

The current sample contains two sub-populations of schools that reported no students were assigned out-of-school suspension: schools that employ the policy that they *do not* suspend students from school that produce "structured zeros" and schools that employ the policy that they *do* suspend students from school; however, during the observational period (i.e., school year 2015-16), no students were suspended. We determined that the ZINB regression model was the best approach for analyzing data within the current study because it is appropriate 1) for count outcomes with non-negative integers, 2) when distributions are highly skewed, 3) when outcomes are overdispersed, (i.e., for the present study, the conditional variance for out-of-school suspension was approximately 31.11indicating that it was 3011% greater than the

conditional mean which was 29.95), 4) when heteroscedastic error terms are present, and 5) when data contains structured zeroes (Coxe et al., 2009). The dataset utilized for the current study met all of the aforementioned criteria.

The ZINB regression model consists of two components. The first part of the model is a negative binomial regression model that, in this study, provides the incidence risk ratio or incident rate. The second part of the model is a logit model that provides the probability of a reported zero falling into the category of a certain zero as opposed to an inflated zero. Schools reporting that zero students were assigned out-of-school suspension fall into categories—those that never suspend students and those that suspend students; however, during the survey year, no students were suspended. ZINB analysis for this study revealed that all quartile covariates (i.e., enrollment of students eligible to receive free and reduced-price lunch, African American male student enrollment, and enrollment of students served under IDEA), school level, and population density were significant predictors of reported zeroes being certain zeroes (i.e., zeroes reported by schools that suspend students; however, during the survey year, no students were suspended).

We compared results for the six regression approaches utilized in the current study through goodness-of-fit tests and by comparing coefficient and standard error results. Standard error comparisons provided conflicting conclusions. For example, when comparing the two best fitting models, NB and ZINB regression, at times, the standard errors were greater for the ZINB model (see Table 3). However, Chi-square, Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC) tests, and margins plots of model comparisons indicated that the ZINB regression model was the preferred model (see Table 3 and Figures 7 and 8).

All models included the same outcome, counts of students assigned out-of-school suspension and predictor variables (see Table 3):

Number of Students Assigned out-of-school suspension = $\beta_0 + \beta_1$*% African American* $+ \beta_2$*% free and reduced-price lunch* $+ \beta_3$*% IDEA* $+ \beta_4$*PopulationDensity* $+ \beta_5$*SchoolLevel* $+ \varepsilon$

Results

The current section reports on incident rates generated by the final model, utilizing ZINB regression analysis. These results should be interpreted as ***controlling for all variables*** not being reported upon or ***holding all other model variables constant***. For example, with regard to schools' percentages of African American male student enrollment, one might interpret the results as, ***holding all other variables in the model constant,*** when compared to incident rates of out-of-school suspension for schools in the first quartile, incident rates of out-of-school suspension were 95% (*RSE* = .03, $p < 0.00$), 80% (*RSE* = .08, $p < 0.001$), and 17% (*RSE* = .29, $p = 0.532$) higher in schools in the second, third, and fourth quartiles, respectively, for African American male student enrollment (see Table 4).

When compared to incident rates of out-of-school suspension for schools in the first quartile, incident rates of out-of-school suspension were 70% (*RSE* = .03, $p < 0.00$), 166% (*RSE* = .04, $p < 0.001$), and 251% (*RSE* = 06, $p < 0.001$) higher in schools in the second, third, and fourth quartiles, respectively, for enrollment of students eligible to receive free and reduced-price lunch (see Table 4).

When compared to incident rates of out-of-school suspension for schools in the first quartile, incident rates of out-of-school suspension were 1% (*RSE* = .03, $p = 737$), 44% (*RSE* = .13, $p = 0.011$), and 77% (*RSE* = .05, $p < 0.001$) lower in schools in the second, third, and fourth quartiles, respectively, for enrollment of students served under IDEA (see Table 4).

When compared to incident rates of out-of-school suspension for schools in large cities, mid-size and small cities had incident rates that were 2% (*RSE* = .02, $p = 0.380$) and 3% (*RSE* = .02, $p = 0.146$) higher. Incident rate ratios for out-of-school suspension in schools serving large, mid-size, and small suburban communities were 5% (*RSE* = .01, $p < .001$) and 4% (*RSE* = .02, $p = 0.108$), and 14% (*RSE* = .02, $p < .001$), lower, respectively, than incident rates for schools serving large cities. Incident rate ratios for out-of-school suspension in schools serving fringe, distant, and remote towns were 28% (*RSE* = .02, $p < 0.001$), 34% (*RSE* = .01, $p < 0.001$), and 43% (*RSE* = .01, $p < 0.001$), lower, respectively, than incident rates for schools serving large cities. Incident rate ratios for out-of-school suspension in schools serving fringe, distant, and remote rural areas were 21% (*RSE* = .01, $p < 0.001$), 57% (*RSE* = .01, $p < 0.001$), and 72% (*RSE* = .01, $p < 0.001$) lower, respectively, than incident rates for schools serving large cities (see Table 4).

Incident rate ratios for out-of-school suspension in middle, high, and other levels were 233% (*RSE* = .03, $p < 0.001$), 446% (*RSE* = .05, $p < 0.001$), and 228% (*RSE* = .07, $p < 0.001$) higher, respectively, than incident rates for primary schools (see Table 4).

Figures 9, 10, and 11 depict the predicted number of students assigned out-of-school suspension across the distribution of schools' percentages of African American male student enrollment for the ZIP, NB, and ZINB models. Though the number of students assigned out-of-school suspension consistently increased as the percentage of African American male student enrollment increased, at the threshold of approximately 25% African American male student enrollment, schools began to experience a marked increase in counts of students assigned out-of-school suspension. Figure 2 displays this increase at higher percent quartiles; however, for the

fourth quartile group comprised of 12 schools, the mean for counts of students assigned out-of-school suspension was lower than for the two middle quartiles.

Discussion

Within U. S. public schools there exists an opportunity gap that is exacerbated by a discipline gap. Disproportionate rates of exclusionary discipline reduce educational access for African American male students and lead to negative short- and long-term outcomes. The current study examined school-level factors found to be associated with higher incident rates of out-of-school suspension. We analyzed data utilizing ZINB regression to examine relationships among counts of students assigned out-of-school suspension and schools' percentages of African American male students and students eligible to receive free and reduced-price lunch, as well as the school location's population density and school level. In addition, since being a student served under IDEA has been found to be a student-level predictor of increased rates of out-of-school suspension (Achilles et al., 2007; Anderson & Ritter, 2017), the percent of students served under IDEA was also included in regression models.

This study did not examine student-level data and, therefore, could not identify student populations within a school that might experience greater rates of out-of-school suspension. However, preliminary results indicate that schools with higher percentages of African American male students and students experiencing economic disadvantage; schools located in urban communities; and middle, high, and "other" level schools were found to have higher incident rates of out-of-school suspensions suggesting that students attending those schools were at higher risk for being assigned out-of-school suspension. In contrast, schools with higher percentages of students served under IDEA, schools located in less densely populated communities (e.g., smaller suburban communities, towns, and rural areas), and primary schools reported lower

counts of students assigned out-of-school suspension suggesting that students within those schools were at lower risk for being assigned out-of-school suspension.

Within U. S. public schools, race is implicated as the primary factor responsible for discipline disparities between African American and White male students (Skiba et al., 2002). In the current study, means for counts of students assigned out-of-school suspension were higher in the two middle quartiles of African American male student enrollment (i.e., 77.73 for quartile two and 70.16 for quartile three) than for the first and fourth quartiles (i.e., 26.12 for quartile one and 53.33 for quartile four) of African American male student enrollment. Within this sample, the average percentage of African American male student enrollment was 6.45% or 39.11 students. There were 12 schools with an African American male student enrollment in the fourth quartile. Perhaps the lower incident rate for the highest percent quartile of enrolled African American male students is an effect associated with schools classified as traditional but that are also primarily or solely single-gender. A school specializing in the education of African American male students may also have discipline policies that support this population of students, resulting in fewer out-of-school suspensions.

Considering this finding, we hypothesized that though existing in an anti-Black/White supremacist macro-, exo, meso-, and micro system, teachers and school administrative staff in schools with predominantly African American male student populations might possess greater familiarity and acceptance of African American behavioral norms resulting in lower counts of out-of-school suspension. Viewed through Bourdieu's Social and Cultural Capital Reproduction (Bourdieu, 1973, Nash, 1990) lens, within these schools, students possess their own type of collective cultural capital that may be valued by teachers and administrators. Employing Okonofua et al's. Teacher-Student Interaction theory (2016) which combines Social Psychology

Theory and Social Identity Threat Theory, perhaps in schools with higher proportions of African American students, students and teachers are able to bond through positive cyclic interactions. Teachers in schools with the highest proportions of African American students may utilize methods in their feedback with students such as "wise feedback" which emphasizes teachers' confidence in the ability of the student and conveys "high standards and confidence in the student's ability to reach that standard" (Okonofua, 2016, p. 389) or perhaps discipline policies are based on an empathetic approach in which, instead of viewing student behaviors as an attempt to disrupt learning, students' perspectives are considered (Jennings, 2015; Okonofua, 2016). In contrast, within schools with higher proportions of White students, faculty, and staff and lower proportions of African American students (i.e., schools that fall within the first quartile), African American students may feel the need to assimilate and behave in ways that reflect the dominant culture, thereby reducing their risk of experiencing disparities in out-of-school suspension.

There exists a positive association between economic disadvantage and race/ethnicity, with eight percent of White and 45% of African American and Latinx students attending high poverty schools (NCES, 2015). In the current study, we found that incident rates for students assigned out-of-school suspension increased as the percentage of students eligible to receive free and reduced-price lunch increased. The NCES cautions against utilizing free and reduced-price lunch eligibility as a proxy for economic disadvantage, since some "non-poor" students may be allowed to take advantage of free and reduced-price lunches if a school chooses to adopt the Community Eligibility option in which all of the students within a school receive free and reduced-price lunch (NCES, 2015). Researchers intending to replicate the current study may wish to confirm that free and reduced-price lunch is, indeed, an appropriate proxy for economic

disadvantage or use data that explicitly and accurately represents the economic status of participants within the sample.

Noltemeyer and Mcloughlin (2010) found that the population density of the community that schools serve and schools with higher percentages of students experiencing economic disadvantage predicted higher rates of students assigned out-of-school suspension. Similar to their findings, within the present study, schools' percentages of free and reduced-price lunch-eligible students and schools located in urban areas were found to have higher incident rates of out-of-school suspension. In contrast, schools located in less population-dense areas such as suburbs, towns, and rural areas were found to have significantly lower incident rates of out-of-school suspension than schools located in larger, urban communities.

Consistent with Losen and colleagues (2015), Skiba and co-researchers (2011) and Wallace et al. (2008), within the current study, incident rates of students assigned out-of-school suspension were significantly higher in secondary schools. Compared to primary schools, incident rates for students assigned out-of-school suspension were significantly higher for middle, high, and schools categorized as, "other." Employing Okonofua et al's. Teacher-Student Interaction theory (2016), students and teachers in elementary schools may form closer relationships and enjoy more positive cyclic interactions due to their increased exposure to one another.

Though special education status has been found to be a predictor of exclusionary discipline (Anderson & Ritter, 2017), within the current study we found the opposite to be true. As the percentage of students served under IDEA increased, incident rates for students assigned out-of-school suspension and means for quartiles decreased. Perhaps the impact of being a student served under IDEA is better examined at the student- or infraction-level since observing

out-of-school suspensions at the school level does not provide information on exactly who is assigned exclusionary discipline outcomes. In addition, for 2015-16, the CRDC did not disaggregate data for students served under IDEA. It is likely that some populations of differently abled students may be more likely to experience exclusionary discipline than others. Take for example the findings of Achilles, Mclaughlin, and Croninger (2007) which suggest that students diagnosed with attention deficit and emotional and behavioral disorders were more likely to be suspended or expelled.

Limitations

The present study utilized school-level data that was six years old. Utilization of more recent data at the infraction- and/or student- and teacher-/classroom-levels will allow us to explore current patterns of exclusionary discipline at a deeper level. Data accuracy is another concern for the current study. Though the CCD and CRDC have measures in place to ensure the highest data quality, ultimately, the accuracy of the data that is collected relies upon accurate reporting by the LEAs and state agencies providing the reports.

Ultimately, the current study only examined predictors at a high level—the school level. Additional research examining more current data, additional predictors, and lower levels of data will provide more information regarding incident rates and predictors of higher counts of students assigned out-of-school suspension.

Next Steps and Future Directions

The current study examined the relationships between out-of-school suspensions and school-level factors that may predict increased rates of students assigned out-of-school suspensions. To further inform this area of research, we would like to examine the effect of teacher-student race/ethnicity match on out-of-school suspensions utilizing student-level and

teacher/classroom-level data. In addition, we would like to replicate the current study utilizing more recent CCD and CRDC data. For the replication study, we plan to use additional predictors that represent school personnel (e.g., presence or absence of a school resource officer and/or percent of teachers with two or fewer years of experience), school type, percentages of other populations of students and their interactions with gender, and state-level predictors. For example, some states allow corporal punishment and others do not. We would like to explore the potential differences in incident rates based upon state laws and policies. Finally, we would like to compare CCD and CRDC data across multiple years to examine possible differences that may result from policy changes due to changes in government administration.

In addition to the above-stated study enhancements, we would also like to include a qualitative component to this study. Data from student, teacher, and administrator interviews would further our understand of the role race plays in disproportionate rates of out-of-school suspension.

Conclusion

In conclusion, the current study sought to determine the relationship between higher incident rates of students assigned out-of-school suspension and school characteristics such as percentages of student enrollment that was African American male, economically disadvantaged, or served under IDEA, as well as the population density of the community in which the school was located and school level. We hypothesized that schools with higher percentages of the aforementioned populations, those within communities with greater population densities, and middle and high schools would have higher incident rates for counts of students assigned out-of-school suspension.

Indeed, within the current sample, when compared to the first quartile of African American male student enrollment, incident rates for counts of students assigned out-of-school suspension for the second and third quartiles were significantly higher. When compared to the first quartile of free and reduced-price lunch eligible student enrollment, incident rates for counts of students assigned out-of-school suspension were significantly higher for the second, third, and fourth quartiles. Incident rates for counts of students assigned out-of-school suspension were also higher for middle, high, and "other" schools than for primary schools. Schools located within urban areas reported higher incident rates for counts of students assigned out-of-school suspension than schools in less population-dense communities. Though the third and fourth quartiles of enrollment for students served under IDEA were associated with a significantly lower incident rate of counts of students assigned out-of-school suspension, we were not able to determine a possible differential effect due to the type of student "disability."

By pursuing research that examines factors associated with "the achievement gap," between African American male and other student populations, we hope to provide a counternarrative for African American male student "underachievement." We theorized that "the achievement gap" is exacerbated by "the opportunity gap" caused by exclusionary discipline. We examined school-level factors associated with increased rates of out-of-school suspension for the purpose of adding to the growing body of literature rewriting the story of African American male students beginning with "Part I." We leave, you, the reader, with the following quote:

> I believe that education is the civil rights issue of our generation. And if you care about promoting opportunity and reducing inequality, the classroom is the place to start. Great teaching is about so much more than education; it is a daily fight for social justice.
>
> ~Secretary Arne Duncan (Mullenholz, 2011)

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Tables

Table 1

Descriptive Statistics: 2015-16

	n	Proportion	School Mean	School Std. Dev.	Min	Max	Mean of Out-of-School Suspension	Std. Dev. Out-of-School Suspension
Total Number: Students Assigned Out-of-School Suspension	2228797	-----	29.95	51.33	0	1025	-----	-----
Total Number: African American Male	2899299	-----	38.96	71.78	0	1309	-----	-----
Percent Quartiles: African American Male								
0-25%	68785	92.43	-----	-----	-----	-----	26.12	44.53
25.5-49.99%	4912	6.60	-----	-----	-----	-----	70.73	91.68
50-74.99%	711	0.96	-----	-----	-----	-----	70.16	83.89
75-100%	12	0.02	-----	-----	-----	-----	53.33	59.70
Total Number: Free-/Reduced-Price Lunch	21085919	-----	290.20	261.93	0	4374	-----	-----
Percent Quartiles: Free-/Reduced-Price Lunch								
0-25%	12933	17.80	-----	-----	-----	-----	14.16	25.49
25.5-49.99%	20874	28.73	-----	-----	-----	-----	24.50	40.58
50-74.99%	20993	28.89	-----	-----	-----	-----	34.25	57.27
75-100%	17861	24.58	-----	-----	-----	-----	43.88	64.43
Total Number: IDEA	4977500	-----	69.17	53.41	2	1311	-----	-----
Percent Quartiles: IDEA								
0-25%	70341	97.75	-----	-----	-----	-----	30.63	51.58
25.5-49.99%	1561	2.17	-----	-----	-----	-----	33.72	60.34
50-74.99%	30	0.04	-----	-----	-----	-----	18.93	43.30
75-100%	27	0.04	-----	-----	-----	-----	8.96	14.04
Total Enrollment:	42302651	-----	568.43	423.64	10	5170	-----	-----
Population Density								
Large City	7398	9.94	-----	-----	-----	-----	45.11	67.58
Mid-Size City	3911	5.26	-----	-----	-----	-----	46.96	68.79
Small City	4674	6.28	-----	-----	-----	-----	43.13	64.84
Large Suburban	20491	27.54	-----	-----	-----	-----	31.86	56.07
Mid-Size Suburban	2566	3.45	-----	-----	-----	-----	33.31	48.30
Small Suburban	1492	2.00	-----	-----	-----	-----	30.54	45.10
Fringe Town	2353	3.16	-----	-----	-----	-----	26.53	36.17
Distant Town	4900	6.58	-----	-----	-----	-----	30.05	42.07
Remote Town	3080	4.14	-----	-----	-----	-----	25.01	41.79
Fringe Rural	8739	11.74	-----	-----	-----	-----	29.62	45.42
Distant Rural	9244	12.42	-----	-----	-----	-----	14.33	23.69
Remote Rural	5568	7.48	-----	-----	-----	-----	8.58	17.56
School Level								
Primary	44279	59.50	-----	-----	-----	-----	14.06	21.80
Middle	14421	19.38	-----	-----	-----	-----	47.19	56.24
High	13556	18.22	-----	-----	-----	-----	63.15	82.38
Other	2164	2.91	-----	-----	-----	-----	32.06	59.87

Note. Overall school participant information descriptive statistics. Only schools with enrollment of 10 or greater were included in the sample.

Table 2

Correlation Table

	% African American Students	% African American Male Students	African American Male % Quartiles	Free-Reduced-Price Lunch % Quartiles	IDEA % Quartile	Population Density	School Level	Students Assigned out-of-school suspension	Total Enrollment	White % Quartiles	White Male % Quartiles
% African American Students	1.00										
% African American Male Students	0.99	1.00									
African American Male % Quartiles	0.84	0.86	1.00								
Free/Reduced Price Lunch % Quart.	0.38	0.38	0.29	1.00							
IDEA % Quartiles	0.05	0.06	0.07	0.07	1.00						
Population Density	-0.27	-0.27	-0.16	-0.08	0.01	1.00					
School Level	-0.03	-0.03	0.01	-0.11	0.01	0.18	1.00				
Students Assigned out-of-school suspension	0.36	0.36	0.24	0.20	0.00	-0.18	0.35	1.00			
Total Enrollment	0.05	0.05	-0.03	-0.09	-0.08	-0.33	0.28	0.52	1.00		
White % Quartiles	-0.51	-0.51	-0.38	-0.57	-0.01	0.47	0.12	-0.27	-0.19	1.00	
White Male % Quartiles	-0.45	-0.44	-0.32	-0.47	0.01	0.44	0.11	-0.24	-0.21	0.85	1.00

Note. Correlation table of the dependent and independent variables.

Table 3

Regression Results and Model Comparison: 2015-16

	(1) Poisson	(2) Robust Poisson	(3) Over-Dispersed Poisson	(4) Zero-Inflated Poisson	(5) Negative Binomial	(6) Zero-Inflated Negative Binomial
	Students Assigned out-of-school suspension	Students Assigned out-of-school suspension	Students Assigned out-of-school suspension	Students Assigned out-of-school suspension	Students Assigned out-of-school suspension	Students Assigned out-of-school suspension
African American Male Student Percentage Quartile						
0-25%	----------	----------	----------	----------	----------	----------
	----------	----------	----------	----------	----------	----------
25.01-49.99%	36.98***	0.60***	0.60***	0.57***	0.72***	0.67***
	(0.68)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)
50-74.99%	27.67***	0.45***	0.45***	0.42***	0.65***	0.59***
	(1.66)	(0.04)	(0.03)	(0.04)	(0.04)	(0.05)
75-100%	-7.16	-0.32	-0.32	-0.10	0.00	0.16
	(12.87)	(0.34)	(0.22)	(0.30)	(0.34)	(0.25)
Free/Reduced-Price Lunch Eligible Percentage Quartile						
0-25%	----------	----------	----------	----------	----------	----------
	----------	----------	----------	----------	----------	----------
25.01-49.99%	13.20***	0.63***	0.63***	0.56***	0.63***	0.53***
	(0.50)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)
50-74.99%	27.19***	1.07***	1.07***	0.97***	1.14***	0.99***
	(0.51)	(0.02)	(0.02)	(0.02)	(0.01)	(0.02)
75-100%	31.10***	1.26***	1.26***	1.16***	1.44***	1.25***
	(0.55)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Students Served Under IDEA Percentage Quartile						
0-25%	----------	----------	----------	----------	----------	----------
	----------	----------	----------	----------	----------	----------
25.01-49.99%	1.07	-0.18***	-0.18***	-0.15***	-0.06*	-0.01
	(1.13)	(0.038)	(0.03)	(0.04)	(0.03)	(0.03)
50-74.99%	-35.62***	-1.22**	-1.23***	-0.72*	-0.97***	-0.59*
	(8.07)	(0.25)	(0.24)	(0.35)	(0.22)	(0.23)
75-100%	-43.99***	-2.05***	-2.05***	-1.48***	-2.18***	-1.46***
	(9.55)	(0.30)	(0.47)	(0.17)	(0.27)	(0.20)
Population Density						
City: Large	----------	----------	----------	----------	----------	----------
	----------	----------	----------	----------	----------	----------
City: Mid-Size	3.97***	0.11***	0.11***	0.08***	0.04	0.02
	(0.86)	(0.02)	(0.025)	(0.02)	(0.02)	(0.02)
City: Small	3.11***	0.10***	0.10***	0.09***	0.03	0.03
	(0.82)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Suburb: Large	-1.23*	-0.00	-0.00	0.01	-0.08***	-0.06***
	(0.62)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)

Table 3 (continued)

Suburb: Mid-Size	-2.83**	-0.03	-0.03	-0.05	-0.01	-0.04
	(1.02)	(0.03)	(0.02)	(0.03)	(0.03)	(0.02)
Suburb: Small	-6.87***	-0.16***	-0.16***	-0.17***	-0.15***	-0.16***
	(1.24)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Town: Fringe	-14.64***	-0.42***	-0.42***	-0.42***	-0.31***	-0.33***
	(1.04)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Town: Distant	-18.67***	-0.52***	-0.52***	-0.50***	-0.44***	-0.42***
	(0.82)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Town: Remote	-23.30***	-0.69***	-0.69***	-0.65***	-0.62***	-0.56***
	(0.95)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)
Rural: Fringe	-10.88***	-0.32***	-0.32***	-0.31***	-0.24***	-0.24***
	(0.71)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Rural: Distant	-29.77***	-1.12***	-1.12***	-1.02***	-0.92***	-0.84***
	(0.71)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Rural: Remote	-40.26***	-1.70***	-1.70***	-1.47***	-1.53***	-1.28***
	(0.83)	(0.03)	(0.03)	(0.03)	(0.02)	(0.03)
School Level						
Primary	---	---	---	---	---	---
	---	---	---	---	---	---
Middle	37.30***	1.32***	1.32***	1.20***	1.32***	1.20***
	(0.42)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
High	61.05***	1.83***	1.83***	1.69***	1.85***	1.70***
	(0.45)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Other	33.37***	1.30***	1.30***	1.22***	1.28***	1.19***
	(1.02)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)
Constant	0.20	1.87***	1.87***	2.12***	1.75***	2.04***
	(0.67)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Inflate						
African American Male Students						
0-25%	---	---	---	---	---	---
	---	---	---		---	---
25.01-49.99%	---	---	---	-0.75***	---	-0.72***
	---	---	---	(0.07)	---	(0.09)
50-74.99%	---	---	---	-0.62***	---	-0.58**
	---	---	---	(0.17)	---	(0.20)
75-100%	---	---	---	1.50	---	1.62
	---	---	---	(0.88)	---	(0.87)
Free/Reduced-Price Lunch Eligible Percentage Quartile						
0-25%	---	---	---	---	---	---
	---	---	---	---	---	---
25.01-49.99%	---	---	---	-0.74***	---	-0.73***
	---	---	---	(0.03)	---	(0.04)
50-74.99%	---	---	---	-1.29***	---	-1.26***
	---	---	---	(0.03)	---	(0.04)
75-100%	---	---	---	-1.39***	---	-1.28***
	---	---	---	(0.04)	---	(0.05)
Students Served Under IDEA Percentage Quartile						
0-25%	---	---	---	---	---	---
	---	---	---	---	---	---
25.01-49.99%	---	---	---	0.30 ***	---	0.36***
	---	---	---	(0.07)	---	(0.09)
50-74.99%	---	---	---	2.14***	---	2.25***
	---	---	---	(0.52)	---	(0.53)
75-100%	---	---	---	3.03***	---	3.09***
	---	---	---	(0.49)	---	(0.51)

Table 3 (continued)

Population Density						
City: Large	----------	----------	----------	----------	----------	----------
	----------	----------	----------	----------	----------	----------
City: Mid-size	----------	----------	----------	-0.36***	----------	-0.47***
	----------	----------	----------	(0.07)	----------	(0.099)
City: Small	----------	----------	----------	-0.07	----------	-0.08
	----------	----------	----------	(0.06)	----------	(0.08)
Suburb: Large	----------	----------	----------	0.19***	----------	0.21***
	----------	----------	----------	(0.05)	----------	(0.06)
Suburb: Mid-size	----------	----------	----------	-0.20*	----------	-0.28**
	----------	----------	----------	(0.08)	----------	(0.11)
Suburb: Small	----------	----------	----------	-0.01	----------	-0.08
	----------	----------	----------	(0.09)	----------	(0.12)
Town: Fringe	----------	----------	----------	0.04	----------	-0.10
	----------	----------	----------	(0.08)	----------	(0.11)
Town: Distant	----------	----------	----------	0.35***	----------	0.29***
	----------	----------	----------	(0.06)	----------	(0.08)
Town: Remote	----------	----------	----------	0.72***	----------	0.71***
	----------	----------	----------	(0.07)	----------	(0.08)
Rural: Fringe	----------	----------	----------	0.17**	----------	0.12
	----------	----------	----------	(0.05)	----------	(0.07)
Rural: Distant	----------	----------	----------	0.97***	----------	0.92***
	----------	----------	----------	(0.05)	----------	(0.06)
Rural: Remote	----------	----------	----------	1.83***	----------	1.82***
	----------	----------	----------	(0.06)	----------	(0.07)
School Level						
Primary	----------	----------	----------	----------	----------	----------
	----------	----------	----------	----------	----------	----------
Middle	----------	----------	----------	-1.34***	----------	-1.26***
	----------	----------	----------	(0.04)	----------	(0.04)
High	----------	----------	----------	-1.77***	----------	-1.63***
	----------	----------	----------	(0.04)	----------	(0.05)
Other	----------	----------	----------	-0.98***	----------	-0.83***
	----------	----------	----------	(0.07)	----------	(0.08)
Inflate: Constant	----------	----------	----------	-0.77***	----------	-1.08***
	----------	----------	----------	(0.05)	----------	(0.06)
/lnalpha	----------	----------	----------	----------	0.22***	0.25***
	----------	----------	----------	----------	(0.01)	(0.01)
R-Squared	z.		.z	.z		.z
Akaike Information Criterion	7.27e+05	2.06e+06	2.06e+06	1.78e+06	5.61e+05	5.54e+05
Bayesian Information Criterion	7.27e+05	2.06e+06	2.06e+06	1.78e+06	5.62e+05	5.54e+05
F						
Observations	70265	70265	70265	70265	70265	70265

Note. Model Comparison Table with standard errors

Table 4

Regression Results for Selected Model 2015-16: Zero-Inflated Negative Binomial Regression

Out-Of-School Suspensions	IRR	Robust Std. Error	z	P>|z|	95% Confidence Interval
African American Male Students					
25.01-49.99%	1.95	.03	44.44	0.000	1.90 2.01
50-74.99%	1.80	.08	12.71	0.000	1.65 1.97
75-100%	1.17	.29	0.63	0.532	.72 1.91
Free-/Reduced-Price Lunch					
25.01-49.99%	1.70	.03	35.68	0.000	1.65 1.74
50-74.99%	2.66	.04	64.32	0.000	2.58 2.74
75-100%	3.51	.06	76.65	0.000	3.40 3.62
Students Served Under IDEA					
25.01-49.99%	.99	.03	-0.34	0.737	.92 1.06
50-74.99%	.56	.13	-2.54	0.011	.35 .87
75-100%	.23	.05	-7.44	0.000	.16 .34
Population Density					
City: Mid-Size	1.02	.02	0.88	0.0380	.98 1.06
City: Small	1.03	.02	1.45	0.146	.99 1.07
Suburb: Large	.95	.01	-3.69	0.000	.92 .97
Suburb: Mid-size	.96	.02	-1.61	0.108	.92 1.01
Suburb: Small	.86	.02	-5.49	0.000	.81 .90
Town: Fringe	.72	.02	-13.05	0.000	.68 .76
Town: Distant	.66	.01	-20.51	0.000	.63 .69
Town: Remote	.57	.01	-21.73	0.000	.54 .60
Rural: Fringe	.79	.01	-12.89	0.000	.76 .82
Rural: Distant	.43	.01	-41.39	0.000	.41 .45
Rural: Remote	.28	.01	-45.54	0.000	.26 .29
School Level					
Middle	3.33	.03	121.91	0.000	3.26 3.39
High	5.46	.06	151.70	0.000	5.34 5.58
Other	3.28	.10	40.85	0.000	3.10 3.47
Constant	7.66	.15	105.04	0.000	7.37 7.95
Inflate					
African American Male Students					
25.01-49.99%	-.72	.09	-8.33	0.000	-.89 -.55
50-74.99%	-.58	.20	-2.93	0.000	-.98 -.19
75-100%	1.62	.87	1.86	0.000	-.09 3.34
Free-/Reduced-Price Lunch					
25.01-49.99%	-.73	.04	-15.89	0.000	-.81 -.66
50-74.99%	-1.26	.04	-19.20	0.000	-1.34 -1.17
75-100%	-1.28	.05	-17.03	0.000	-1.37 -1.18
Students Served Under IDEA					
25.01-49.99%	.36	.09	3.93	0.000	.19 .53
50-74.99%	2.25	.53	2.13	0.000	1.21 3.28
75-100%	3.09	.51	3.60	0.000	2.09 4.10
Population Density					
City: Mid-Size	-.47	.10	-1.44	0.000	-.66 -.27
City: Small	-.08	.08	0.06	0.294	-.24 .07
Suburb: Large	.21	.06	1.66	0.000	.10 .33
Suburb: Mid-size	-.28	.11	-3.34	0.010	-.48 -.07
Suburb: Small	-.08	.12	-1.82	0.504	-.32 .16
Town: Fringe	-.10	.11	0.21	0.358	-.31 .11
Town: Distant	.29	.08	0.85	0.000	.13 .45
Town: Remote	.71	.08	4.60	0.000	.54 .87
Rural: Fringe	.12	.07	-2.10	0.068	-.01 .26
Rural: Distant	.92	.06	7.23	0.000	.79 1.04

Table 4 (continued).

Rural: Remote	1.82	.07	22.51	0.000	1.69	1.95
School Level						
Middle	-1.26	.04	-19.66	0.000	-1.34	-1.17
High	-1.63	.05	-21.76	0.000	-1.72	-1.53
Other	-.83	.08	-0.73	0.000	-.99	-.67
Constant	-1.08	.06	-18.35	0.000	-1.19	-.96
lnalpha	-.25	.01	-31.80	0.000	-.26	-.23
alpha	.78	.01			.77	.79

Mean Counts of Students Assigned out-of-school suspension	29.95	Std. Dev. Mean Counts of Students Assigned out-of-school suspension	51.33
Number of Observations	74,420	Wald $Chi^2(24)$	39242.73
Prob > Chi^2	0.0000	Akaike Information Criterion (AIC)	552917.73

Note. Regression results from the model of best-fit, the Zero-Inflated Negative Binomial regression model. The constant estimates baseline incidence rate.

Table 5

Goodness-Of-Fit Model Comparison: 2015-16

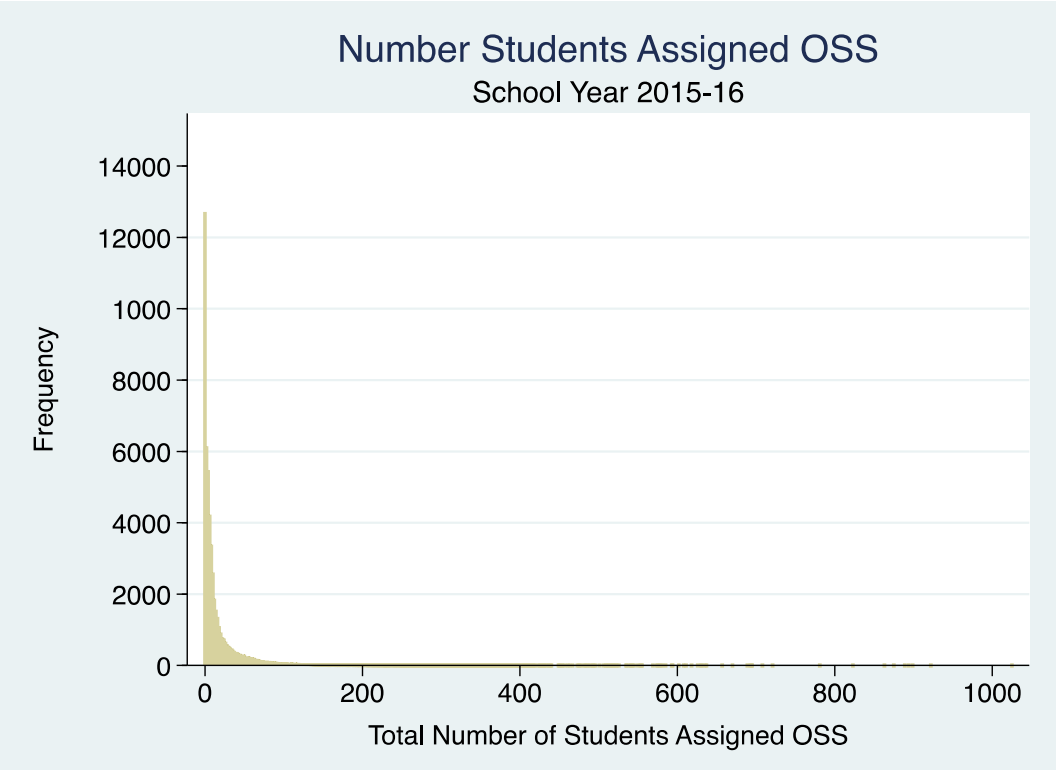
PRM		**BIC= 2.063e+06**	**AIC= 2.063e+06**	**Prefer**	**Over**	**Evidence**
	vs. NBRM	BIC = 561599.637	dif = 1.502e+06	NBRM	PRM	Very Strong
		AIC = 561370.637	dif = 1.502e+06	NBRM	PRM	
		LRX2 = 1.50e+06	prob = 0.000	NBRM	PRM	p = 0.000
	vs. ZIP	BIC = 1.777e+06	dif = 285959.078	ZIP	PRM	Very Strong
		AIC = 1.777e+06	dif = 286178.919	ZIP	PRM	
		Vuong = .	prob = .	ZIP	PRM	p = .
	vs. ZINB	BIC = 554460.869	dif = 1.509e+06	ZINB	PRM	Very Strong
		AIC = 554012.028	dif = 1.509e+06	ZINB	PRM	
NBRM		**BIC=561599.637**	**AIC=561370.637**	**Prefer**	**Over**	**Evidence**
	vs. ZIP	BIC = 1.777e+06	dif = -1.216e+06	NBRM	ZIP	Very Strong
		AIC = 1.777e+06	dif = -1.216e+06	NBRM	ZIP	
	vs ZINB	BIC = 554460.869	dif = 7138.768	ZINB	NBRM	Very Strong
		AIC = 549498.218	dif = 7358.609	ZINB	NBRM	
		Vuong = .	prob = .	ZINB	NBRM	p = .
ZIP		**BIC= 1.777e+06**	**AIC= 1.777e+06**	**Prefer**	**Over**	**Evidence**
	vs. ZINB	BIC = 554460.869	dif = 1.223e+06	ZINB	ZIP	Very Strong
		AIC = 554012.028	dif = 1.223e+06	ZINB	ZIP	
		LRX2 = 1.22e+06	prob = 0.000	ZINB	ZIP	p = 0.000

Note. Table of AIC, BIC, and Chi-Square Likelihood Ratio tests used to determine best-fitting model. The ZINB regression model emerged as the model of best fit. Results were not reported for the Vuong test. It is not appropriate for testing zero-inflated models.

Figures

Figure 1

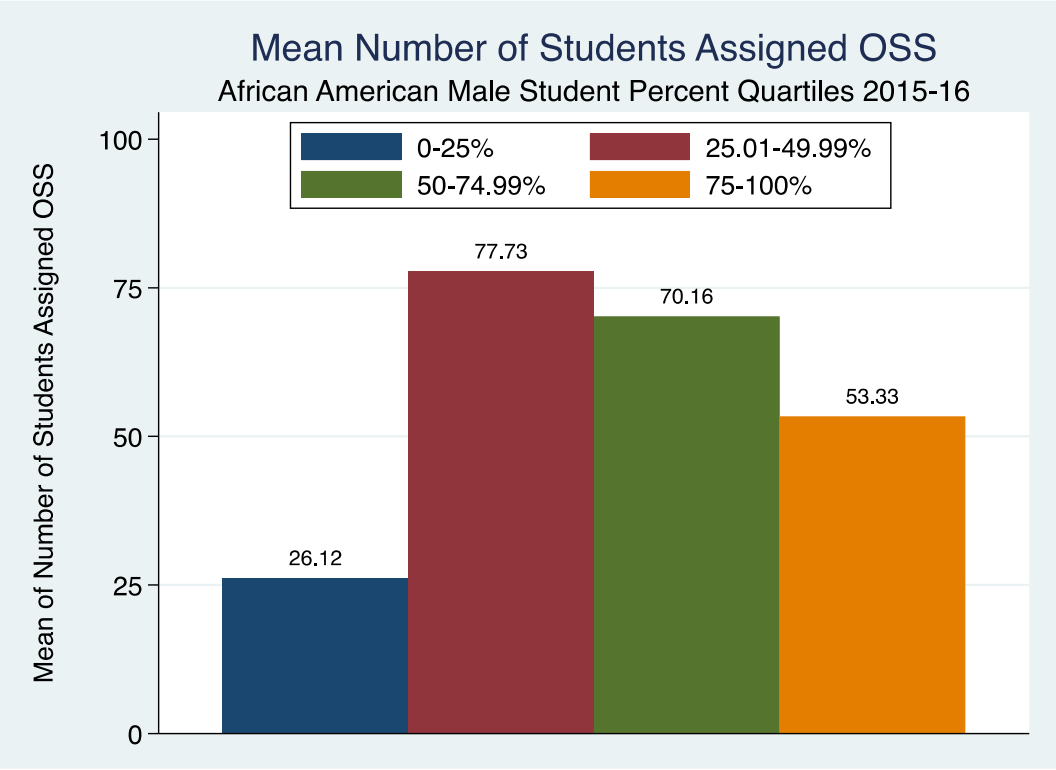
Frequency of Students Assigned Out-Of-School Suspension



Note. Graph depicting the outcome of interest, count of students assigned out-of-school suspensions.

Figure 2

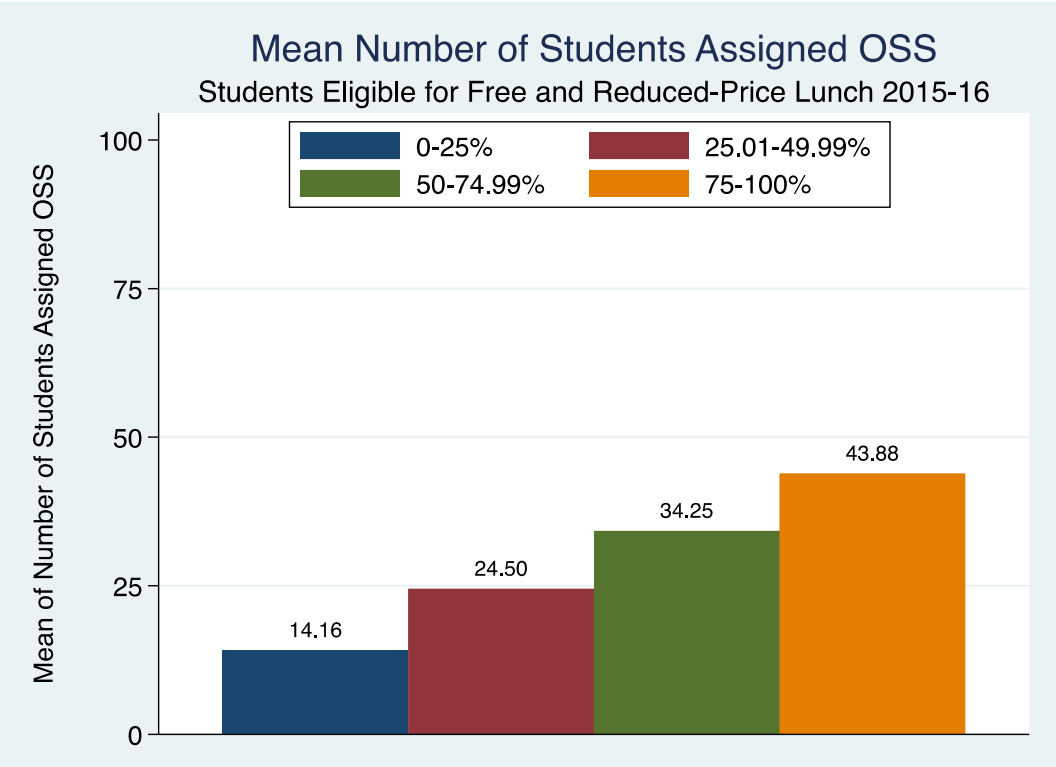
Mean Number of Students Assigned Out-Of-School Suspensions by Schools' African American Male Percent Quartiles 2015-16



Note. Graph depicting mean number of students assigned out-of-school suspensions by schools' African American male student percent quartiles for school year 2015-16.

Figure 3

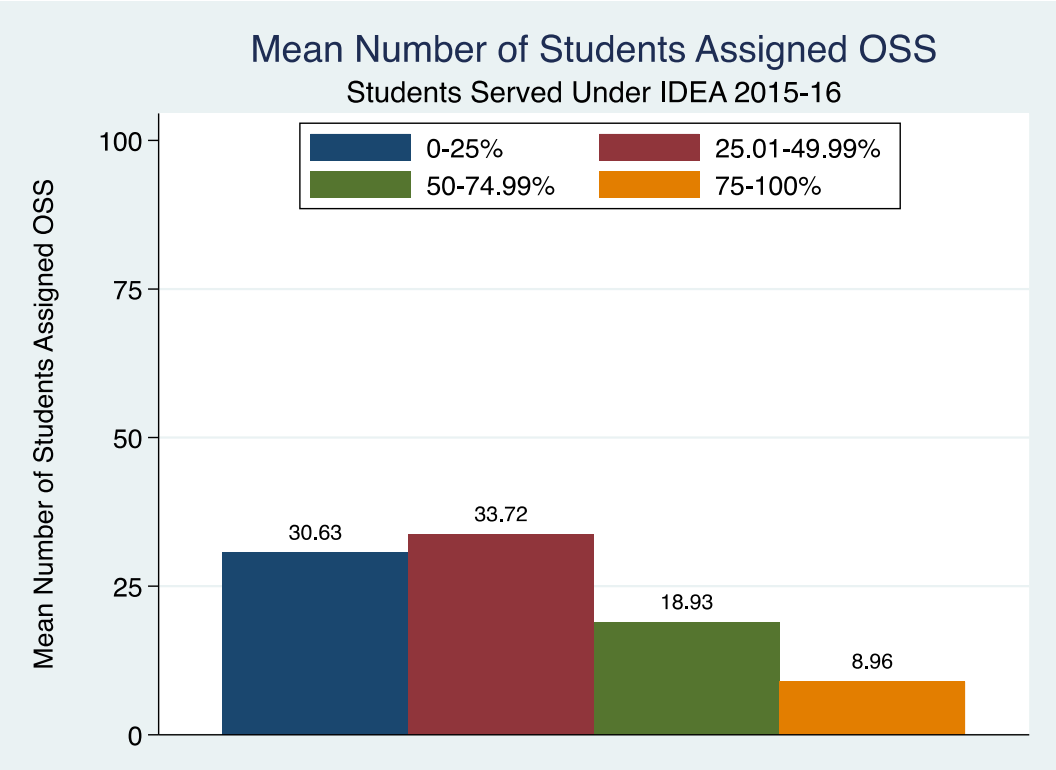
Mean Number of Students Assigned Out-Of-School Suspensions by Schools' Percent Quartiles of Students Eligible for Free-/Reduced-Price Lunch 2015-16



Note. Graph depicting mean number of students assigned out-of-school suspensions by schools' percent quartiles of students eligible for free and reduced-price lunch 2015-16.

Figure 4

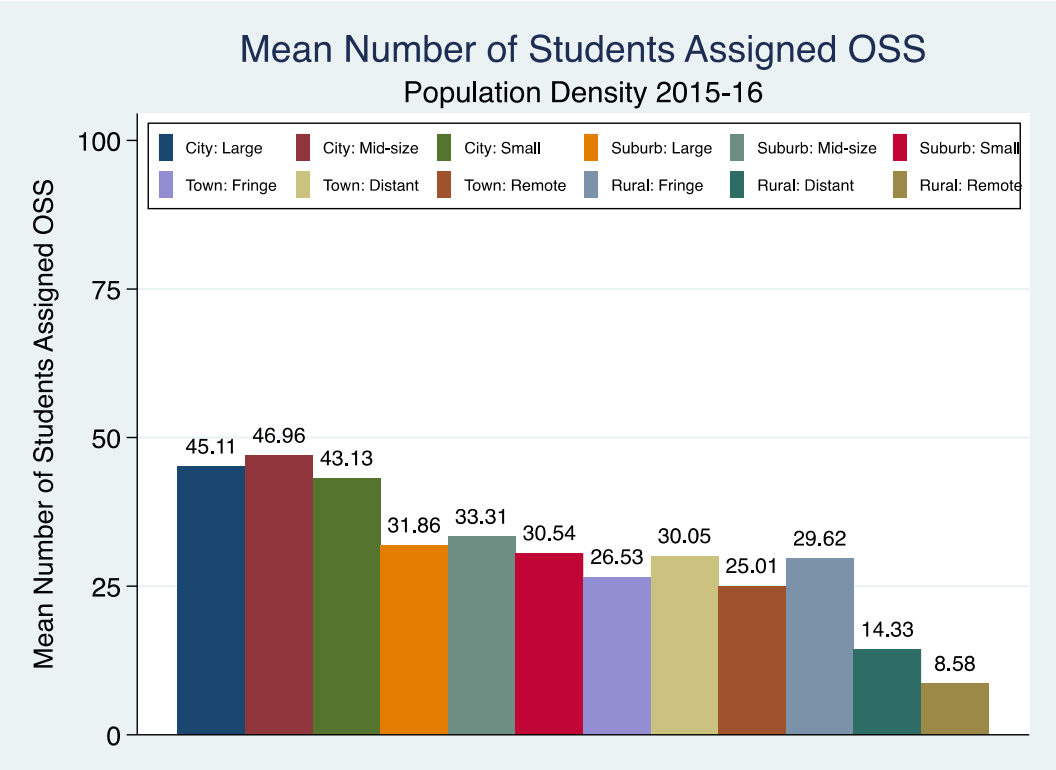
Mean Number of Students Assigned Out-Of-School Suspensions by Schools' Percent Quartiles of Students Served Under IDEA 2015-16



Note. Graph depicting mean number of students assigned out-of-school suspensions by schools' percent quartiles for students served under IDEA for school year 2015-16.

Figure 5

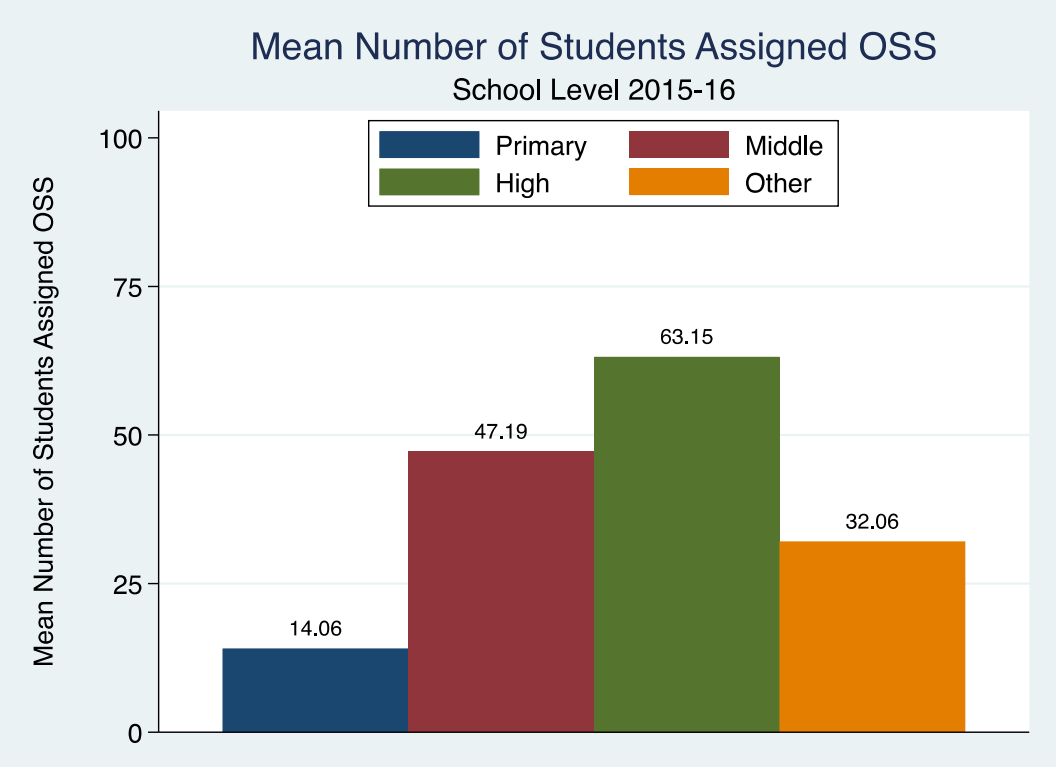
Mean Number of Students Assigned Out-Of-School Suspensions by Schools' Location Population Densities 2015-16



Note. Graph depicting mean number of students assigned out-of-school suspensions by the population density of the community in which the school is located for school year 2015-16.

Figure 6

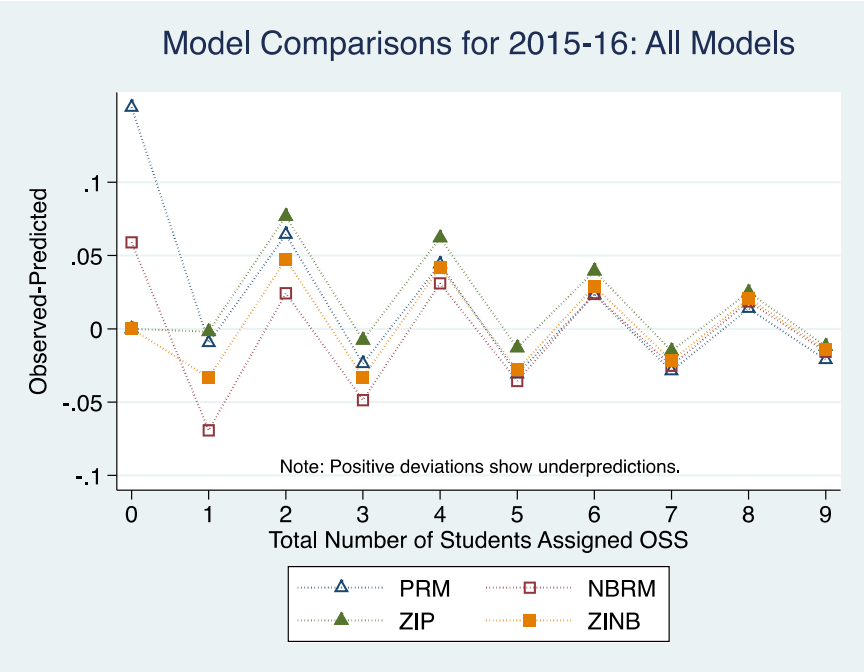
Mean Number of Students Assigned Out-Of-School Suspensions by School Levels 2015-16



Note. Graph depicting mean number of students assigned out-of-school suspensions by school level for school year 2015-16.

Figure 7

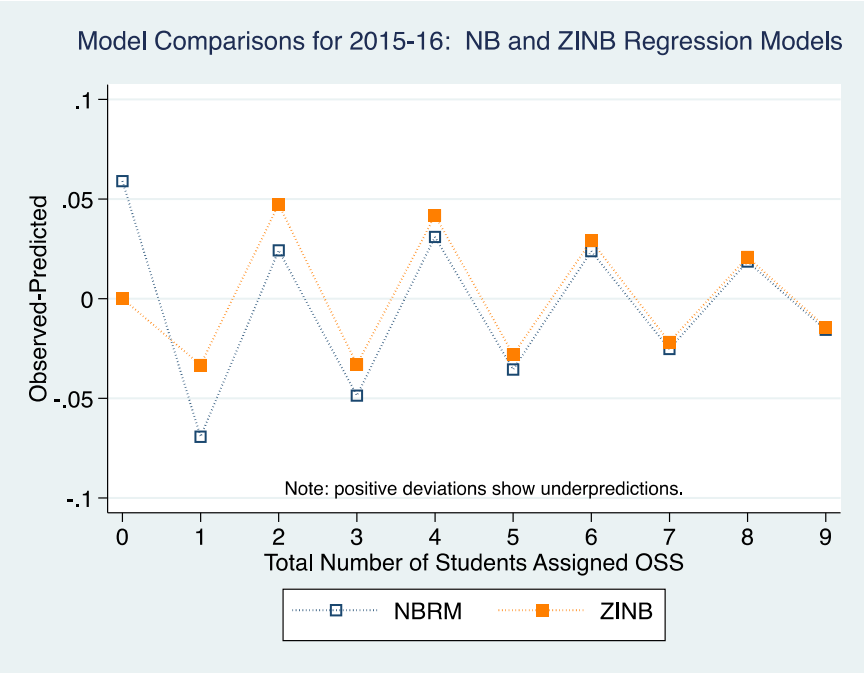
Comparison of the Poisson, Zero-Inflated Poisson, Negative Binomial, and Zero-Inflated Regression Models



Note. Visual depiction of model comparison among the Poisson, Zero-Inflated Poisson, Negative Binomial, and Zero-Inflated Negative Binomial regression models.

Figure 8

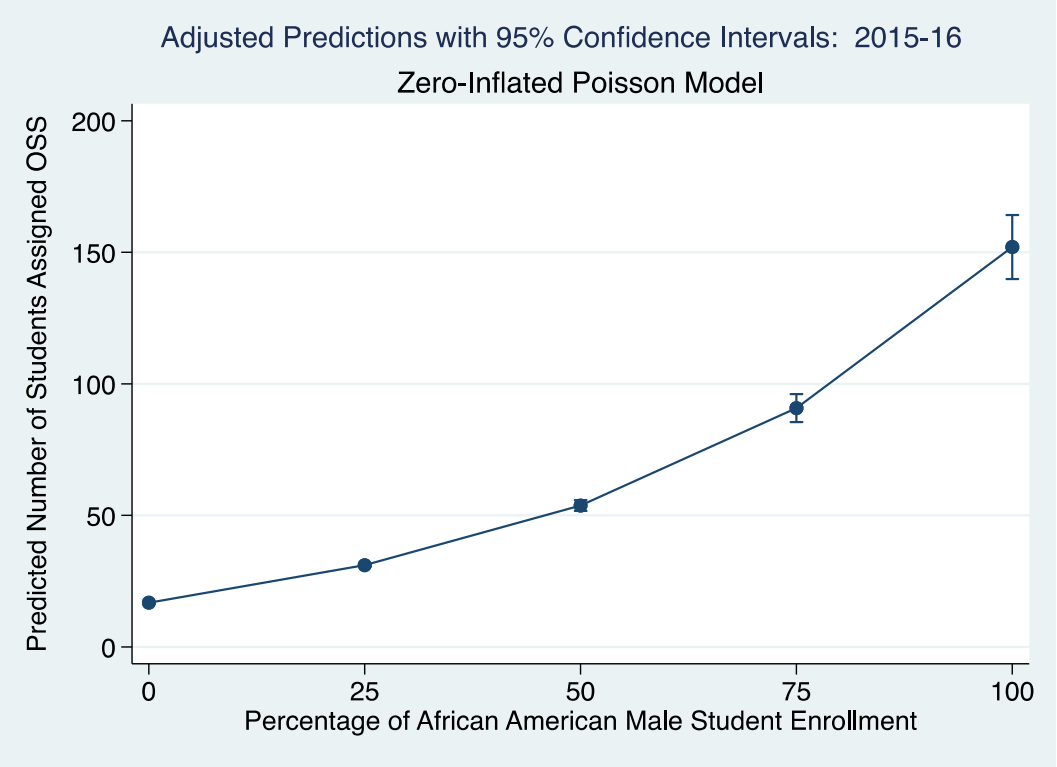
Comparison of the Negative Binomial and Zero-Inflated Negative Binomial Regression Models



Note. Visual depiction of model comparison between the Negative Binomial and Zero-Inflated Negative Binomial regression models.

Figure 9

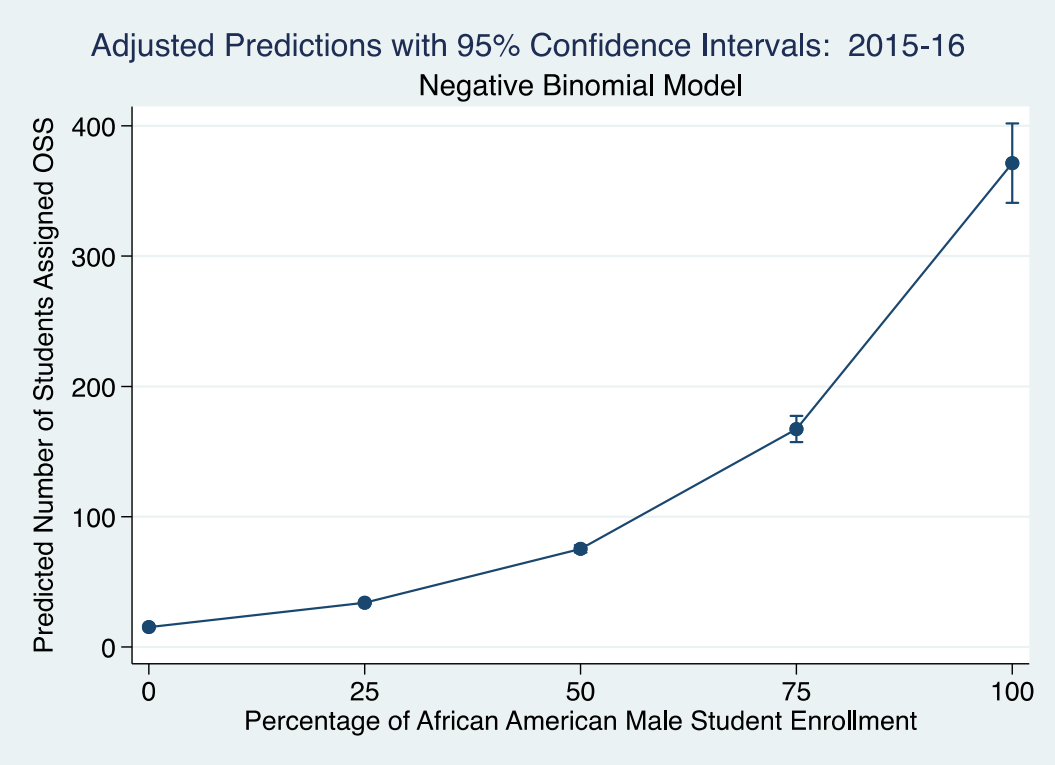
Adjusted Predictions by African American Male Student Enrollment with 95% Confidence Intervals for Number of Students Assigned Out-Of-School Suspensions Utilizing the Zero-Inflated Poisson Regression Model



Note. Predicted number of students assigned out-of-school suspensions based on schools' percent African American male students utilizing the Zero-Inflated Poisson Regression Model.

Figure 10

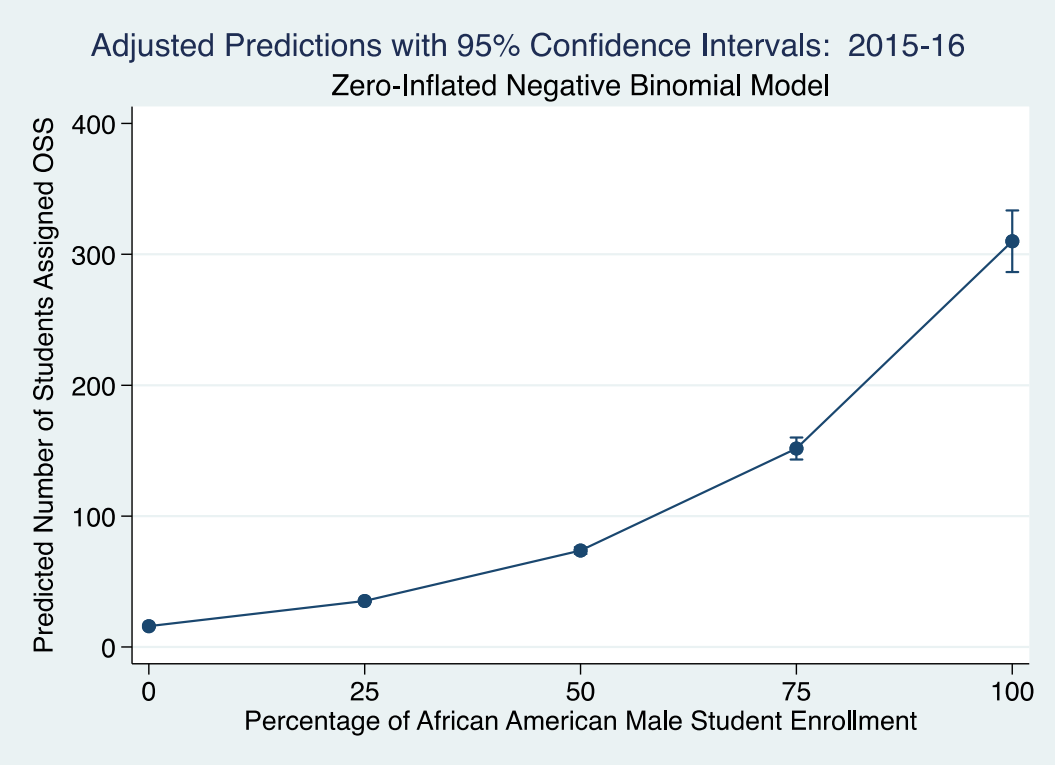
Adjusted Predictions by African American Male Student Enrollment with 95% Confidence Intervals for Number of Students Assigned Out-Of-School Suspensions Utilizing the Negative Binomial Regression Model



Note. Predicted number of students assigned out-of-school suspensions based on schools' percent African American male students utilizing the Negative Binomial Regression Model.

Figure 11

Adjusted Predictions by African American Male Student Enrollment with 95% Confidence Intervals for Number of Students Assigned Out-Of-School Suspensions Utilizing the Zero-Inflated Negative Binomial Model



Note. Predicted number of students assigned out-of-school suspensions based on schools' percent African American male students utilizing the Zero-Inflated Negative Binomial Regression Model.

The Relationship Between School Racial Composition and Out-Of-School Suspensions

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Abstract

"Black students are three times more likely to be suspended and expelled than their White peers" (Erase Racism, 2019, p. 16). Disproportionate rates of exclusionary discipline reduce educational access and undermine school engagement for African American students, contributing to negative educational and occupational outcomes. Disturbingly, while overall counts of both out-of-school suspension and African American student enrollment in U. S. public schools are trending downward (i.e., 18% in school year 2009-10 [OCR, 2012], 16% in school year 2012-13 [OCR, 2014], and 15% in school year 2015-16 [OCR, 2018]), out-of-school suspension rates for African American students are trending upward. For school years 2011-12 and 2015-16, African American students comprised 32% (OCR, 2014) and 39% (OCR, 2018), respectively, of students assigned one or more out-of-school suspensions.

Though numerous studies document disparities in exclusionary discipline, this is the first to utilize 2015-16 and 2017-18 U.S. Department of Education Civil Rights Data Collection data and National Center for Education Statistics Common Core of Data to compare incident rates across two different presidential administrations. Utilizing zero-inflated negative binomial regression analyses, this study examines whether the proportion of African American male students predicts the reporting and rates of out-of-school suspension across the 2015-16 and 2017-18 school years while controlling for a robust set of school characteristics. For both survey years, we found that schools in the middle quartiles of African American male student enrollment were at greatest risk for higher counts and incident rates of students assigned out-of-school suspension. Further, out-of-school suspension incident rates for schools in the middle quartiles of African American male student enrollment increased from 2015-16 to 2017-18.

Keywords: discipline disparities, exclusionary discipline, out-of-school suspensions

The Relationship Between School Racial Composition and Out-Of-School Suspensions

African American students disproportionately experience exclusionary discipline in U. S. public schools. The U. S. Department of Education Office for Civil Rights (OCR; 2018) reported that during the 2015-16 school year, approximately 2.7 million students were administered one or more out-of-school suspensions. While African American students made up only 15% of enrollment, they represented 35% of students suspended one time, 44% of students suspended multiple times, and 36% of expelled students. Even in preschool, African American students are disproportionately suspended or expelled (OCR, 2016). During the 2013-14 school year, African American students made up less than one-fifth of students enrolled in public preschools; however, they represented almost half of students suspended. In addition, African American students are disproportionately subjected to referrals to law enforcement and school-related arrests. Although African American students made up only 15% of 2015-16 student enrollment, they represented 31% of students referred to law enforcement and subjected to school-related arrests.

Even more disturbing is the increased rate of exclusionary discipline for African American students between 2011 and 2016, despite an overall reduction in the number of students administered out-of-school suspensions and 2014 guidance from the Obama administration on school discipline. Though enrollment for non-White students in K-12 public schools is increasing and predicted to reach 56% by 2024 (OCR, 2016), African American student enrollment is trending downward (i.e., 18% in school year 2009-10 [OCR, 2012], 16% in school year 2012-13 [OCR, 2014], and 15% in school year 2015-16 [OCR, 2018]), and rates of out-of-school suspension are trending upward. For survey years 2011-12 and 2015-16, African American students made up 32% (OCR, 2014) and 39% (OCR, 2018), respectively, of students

assigned one or more out-of-school suspensions. This represents a 22% increase in the proportion of African American students receiving one or more out-of-school suspensions. In 2014, the Obama administration responded to this trend by issuing guidance stating that schools must abide by the Civil Rights Act of 1964 and the Elementary and Secondary Education Act to ensure that when schools do not discriminate on the basis of race, color, or national origin when administering discipline. Indeed, by the end of Obama's second term, there was a growing emphasis on racial disparities in exclusionary discipline as a foundational issue underlying equity and excellence in the U. S. educational system.

Contrary to the emphasis on reducing racial disparities in exclusionary discipline during the Obama years, a 2018 report by the Federal Commission on School Safety (FCSS; DeVos et al., 2018) reversed course and posited that discipline disparities are the result of "societal factors other than race" (p. 14). Following the Marjory Stoneman Douglas High School shootings, the Trump administration began an initiative to rescind the 2014 Obama administration guidelines (Marcus & Dreiband, 2018). Under the authority of former Secretary of Education and Chair of the FCSS, Betsy DeVos, the FCSS (2018) released a report stating that school discipline guidelines issued by the Obama administration "advocated a federal solution" (p. 14) and jeopardized school safety by limiting the ability of schools to discipline students. The overarching conclusions presented by the FCSS under the Trump administration advocated for a reduction in federal oversight and promotion of "law and order" within schools. Policy changes under the Trump administration prioritized "the resolution of individual allegations of civil rights violations over systemic investigations" (Erase Racism, 2019, p. 21) that may illuminate systemic practices of discrimination. Fewer claims of civil rights violations, discrimination, and harassment were upheld as a result of these policy changes (Waldman, 2018).

The philosophical differences between the Obama and Trump administrations may have resulted in school culture shifts that contributed to greater rates of out-of-school suspension. Changes in federal oversight may have contributed to either increases or decreases in rates of out-of-school suspension. If schools perceived that federal oversight was loosened, efforts to reduce out-of-school suspension may have been abandoned and rates of out-of-school suspension may have risen. Alternatively, rates of out-of-school suspension may have changed due to differences in federal emphasis or oversight of out-of-school suspension and/or racial disparities in exclusionary discipline, highlighting the importance of examining both the rates of out-of-school suspension that schools report as well as the rates of reporting overall (i.e., differences in missing out-of-school suspension data).

Though initially implemented as part of zero-tolerance policies to increase school safety and cultivate a more positive school climate, exclusionary discipline is generally ineffective for the aforementioned purposes (Skiba & Peterson, 2000; Skiba et al., 2011). In fact, exclusionary discipline practices result in less safe environments, more negative school climates, and fewer opportunities for excluded students to learn, interact with others, and form a sense of belonging in school (Morrison et al., 2001, Rauch & Skiba, 2004). As a result, exclusionary discipline contributes to academic underachievement (Arcia, 2006), reduced school engagement (Balfanz et al., 2014; Skiba, Arredondo, et al., 2014), increased attrition and incarceration (Skiba, Arredondo, et al., 2014), decreased college attendance rates (Belfield et al., 2012), increased future unemployment (Rocque & Paternoster, 2011), and reduced future income earning potential (Belfield et al., 2012), thereby disadvantaging students receiving this form of punishment. Even non-excluded students are affected. Schools with higher rates of exclusionary

discipline experience “collateral damage” negatively impacting the academic achievement of non-suspended students (Perry & Morris, 2014, p. 1).

Though researchers have hypothesized that possible confounding variables such as neighborhood characteristics and students’ socioeconomic status, history of low achievement, and differential behavior are associated with discipline disparities, Gregory et al., (2010) and Skiba et al., (2002) found that the primary, causal factor of discipline disparities between African American and White male students is student race. In addition, a recent Government Accountability Office (GAO) study (Nowicki, 2018) found that, despite controlling for possible confounding variables, discipline disparities exist for African American students, boys, and students with disabilities. The availability of recent school-level data from the National Center for Education Statistics Common Core of Data (CCD) and the U. S. Department of Education Civil Rights Data Collection (CRDC) datasets enabled us to examine differences in counts, reporting, and incident rates of out-of-school suspension across the transition from the Obama administration to the Trump administration (i.e., from 2015-16 to 2017-18) and how they relate to student race in schools.

Significance

Current discipline disparities in general and, in particular, the upward trend in out-of-school suspension rates for African American students highlight the critical need to document the prevalence and trends of out-of-school suspension, examine how out-of-school suspension rates relate to student race, and determine the impact of federal policy on rates of out-of-school suspension. Specifically, this study advances the current state of knowledge in the field in four distinct ways. First, the study is the first to examine the reporting and rates of out-of-school suspension across the Obama and Trump administrations. Second, the study is the first to use the

2017-18 CRDC and CCD merged data to evaluate whether school racial composition (i.e., school proportion of African American male students) predicts increased rates of out-of-school suspension. Specifically, we compared the data from the 2015-16 CRDC and CCD merged datasets and the 2017-18 CRDC and CCD merged datasets to identify a potential time fixed effect associated with higher counts and incident rates of out-of-school suspension and differences in reporting (i.e., missing data). Though extant research provides results for previous years' school-year data, to our knowledge, none has examined data for school year 2017-18 and compared 2015-16 and 2017-18 CRDC and CCD merged data to determine if a differential effect exists associated with different presidential administrations and consequent changes in policy enactment and administration.

Third, this study provides additional empirical evidence supporting existing theoretical frameworks that implicate race as a primary factor associated with discipline disparities. Finally, we evaluated the implications of study findings for federal guidance and local reporting on exclusionary discipline with an eye to improving equity and excellence in the U. S. public education system. Taken together, this study lays the groundwork for documenting how differences in federal education positions, policies, and practices relating to the use of exclusionary discipline, in general, and emphasis on resolving disparities based on student race might impact school decisions with regard to discipline practices within schools. For example, based on the outcome of this research, schools may be more inclined to replace exclusionary discipline with evidence-based interventions for improving school safety and eliminating discipline disparities such as the Comprehensive School Threat Assessment Guidelines (CSTAG; Cornell, 2018). This is an especially salient topic given individual states' decisions to rescind advances in educational opportunity and equity.

Literature Review and Theoretical Framework

Exclusionary Discipline

The American Psychological Association (2020) defines exclusionary discipline as "any type of school disciplinary action that removes or excludes a student from his or her usual educational setting" (para. 1). The most common forms of exclusionary discipline are suspensions and expulsions, which tend to be disproportionately assigned to certain populations of students. The OCR (2018) reported that during the 2015-16 school year, 2.7 million students were administered out-of-school suspensions. African American students were 3.8 times more likely than White students to receive one or more out-of-school suspensions (OCR, 2016). Zero-tolerance policies, initially implemented to make schools safer, have resulted in exclusionary discipline consequences for African American students for relatively minor infractions (Skiba, 2000).

Researchers have identified a number of factors contributing to discipline disproportionality (Welsh & Little, 2018). Factors associated with discipline disparities may be observed by examining characteristics at a variety of levels (i.e., infraction, student, teacher/classroom, school, and district). However, national data at these levels are not easily accessible. In addition, some researchers suggest that school-level data may be the strongest predictors of out-of-school suspension. For example, in a multilevel analysis predicting the odds of being suspended or expelled compared to receiving an in-school suspension following an office referral, Skiba, Chung, et al. (2014) found that school-level variables, such as percentage of African American student enrollment and principals' attitudes toward exclusionary discipline practices, predicted higher odds of out-of-school suspension.

Additional extant research (Welsh & Little, 2018) indicates that schools with greater percentages of African American students (Anderson & Ritter, 2017; Anyon et al., 2014; Gregory et al., 2011; Losen et al., 2015; Payne & Welch, 2010; Rocha & Hawes, 2009) and students in poverty (Losen et al., 2015; Mendez et al., 2002; Noltemeyer & Mcloughlin, 2010) report higher levels of discipline disparities that negatively impact African American students. In addition, secondary schools report greater disproportionality between African American and White students and higher rates of suspension for African American students (Losen et al., 2015; Skiba et al., 2011; Wallace et al., 2008). Level of urbanicity (i.e., urban versus suburban versus rural) is also associated with discipline disparities. Controlling for poverty, Noltemeyer and Mcloughlin (2010) found that high-poverty urban schools reported higher rates of out-of-school suspensions for African American students. Furthermore, being a student served under the Individuals with Disabilities Education Act (IDEA; 2004) predicts assignment of exclusionary discipline (Achilles et al., 2007; Anderson & Ritter, 2017). Finally, school type is associated with significantly higher percentages of disparities in exclusionary discipline (i.e., charter schools report higher percentages of exclusionary discipline than traditional schools). For example, though both traditional and charter schools reported discipline disparities between African American and White students during school year 2011-12, discipline disparities between African American and White students were 6.7% for traditional schools and 10% for charter schools (Losen et al., 2016).

Although research has illuminated various school-level factors that predict disparities in exclusionary discipline, the literature lacks a theoretical framework to explain why these disparities exist. Little and Welsh (2019) posit that exclusionary discipline is based largely on race. Policies that focus on policing minor and subjective behaviors may contribute to

differential enforcement by race because the cultural mismatch between school personnel and students results in differences in defining disorder and misbehavior. The values of the dominant culture transmitted through a school's discipline policies create a racial discipline gap. Thus, they posit that the racial discipline gap results from the criminalization of cultural norms, traditions, and behaviors of the African American community.

In Manuscript One, A Formula for Discipline Disparities: Anti-Black Racism, White Supremacist Beliefs, Teacher Stress, and Negative Teacher-Student Interactions, we presented a theory to further explain discipline disparities that combines Little and Welsh's theory (2019), Bronfenbrenner's Ecological Systems theory (1979), and Okonofua et al.'s Teacher-Student Interaction theory (2016). Our theory highlights the importance of positive teacher-student interactions and relationships in mitigating disproportionate rates of exclusionary discipline within an anti-Black and White supremacist macro- and exosystem.

Purpose Statement

Informed by the theory presented by Little and Welsh (2019) and utilizing findings reported in Manuscript Two, Students Put-At-Risk: School-Level Predictors of Discipline Disparities in U. S. Public Schools, this study examined school-level characteristics associated with significantly higher rates of out-of-school suspension in 2015-16 and 2017-18, examined the relationship between the composition of African American male students and rates of students assigned out-of-school suspension in 2015-16 and 2017-18, examined how the composition of African American male students relates to the change in the rate of students assigned out-of-school suspension from 2015-16 to 2017-18, and explored other relevant school-level factors that may contribute to the composition of African American male students

predicting counts of students assigned out-of-school suspension, such as concentration of poverty, proportion of students served under IDEA, school level, and urbanicity.

Our preliminary research (i.e., presented in Manuscript Two) was informed by a study conducted by the GAO (Nowicki, 2018) in which school-level 2013-14 CCD and CRDC data were examined to determine which, if any, school-level characteristics predicted higher counts of six discipline outcomes (i.e., corporal punishment, in-school suspension, out-of-school suspension, expulsion, referral to law enforcement, and school-related arrest). School-level characteristics in the GAO study included schools' percentages of student gender, race/ethnicity, interactions between student race/ethnicity and gender, students served under IDEA, students eligible for free- or reduced-price lunch, school type, school level, and school personnel characteristics, such as the presence of a sworn police officer or school counselor, and the percentage of teachers within a school that had two or fewer years of experience.

Consistent with the GAO (Nowicki, 2018) study, we analyzed data from the CCD and CRDC; however, our study examined data for 2015-16 and 2017-18. In addition, we limited the analyses to the most consequential and commonly assigned discipline outcome, out-of-school suspension. Further, with the exception of school type, we limited covariates to those found to be significantly associated with discipline disparities for African American students. As mentioned above, school type (i.e., charter versus traditional; Losen et al., 2016) is associated with discipline disparities; however, in our dissertation research, only traditional/regular schools were included in an effort to minimize the amount of missing data and to ensure homogeneity of the sample with regard to type of school. In essence, this study examined the association between the number of students assigned out-of-school suspension and percentages of students within schools that were African American males, controlling for the percentage of students eligible to receive

free and reduced-price lunch, percentage of students served under IDEA, school level, and urbanicity.

Key Aims and Research Questions

Aim 1: Examine reports of out-of-school suspension in the 2015-16 and 2017-18 school years.

RQ1a. What is the rate of missing data for school reports of out-of-school suspension for each year?

RQ1b. What is the incident rate of out-of-school suspension reported for each year?

RQ1c. Is there a significant difference in the (i) missing data or (ii) incident rate of out-of-school suspension from one year to the next?

Aim 2: Examine the relationship between the composition of African American male students and incident rates of out-of-school suspension in the 2015-16 and 2017-18 school years.

RQ2. Does the proportion of African American male students predict higher incident rates of out-of-school suspension each year, when controlling for relevant school-level factors?

Aim 3: Examine how the composition of African American male students relates to the changes in reports of out-of-school suspension from the 2015-16 to 2017-18 school years.

RQ3. Does the composition of African American male students predict the (i) change in missingness or (ii) change in the incident rate of out-of-school suspension from 2015-16 to 2017-18, when controlling for relevant school-level factors?

Research Design and Methodology

Data Sources

This study conducted analyses utilizing school-level 2015-16 and 2017-18 CRDC and CCD datasets.

CRDC

The U. S. Department of Education Office for Civil Rights requires that all public local education agencies and schools submit information in response to the CRDC biennial survey. The CRDC survey collects data on civil rights indicators related to educational opportunity barriers and access to ensure that agencies receiving federal financial assistance do not discriminate on the basis of race, color, national origin, sex, and disability. The 2015-16 complete dataset included 96,360 observations representing schools and 17,337 LEAs. These schools and agencies served approximately 50.6 million students. Of the 96,360 schools, 608 were juvenile justice facilities, 2,886 were preschools, 3,036 were alternative schools, 3,631 were magnet schools, 6,710 were charter schools, and 1,710 were special education schools. Similar to the study presented in Manuscript Two, for this study we retained only traditional schools (see below). In all, 18,864 schools were excluded (i.e., 6,431 of the 6,710 charter schools, and only 1,521 of the 1,710 special education schools were excluded). After excluding those schools, 78,265 schools remained in the 2015-16 dataset.

The 2017-18 complete dataset included 97,632 observations representing schools and 17,637 LEAs. Of those 97,632 schools, 602 were juvenile justice facilities, 2,969 were preschools, 3,079 were alternative schools, 4,103 were magnet schools, 6,955 were charter schools, and 1,748 were special education schools. In all, 18,095 schools were excluded (i.e., only 4,088 of the 4,103 magnet schools, only 6,621 of the 6,955 charter schools, and only 1,505 of the 1,748 special education schools were excluded). After excluding those schools, 78,768 schools remained in the 2017-18 CRDC dataset.

CCD

In addition to the 2015-16 and 2017-18 CRDC datasets, this study utilized school-level, nonfiscal data from the U. S. Department of Education's National Center for Education Statistics (NCES) Public Elementary/Secondary School Universe Survey for school years 2015-16 and 2017-18. These datasets, generated from annual surveys completed by state education agencies, include basic information and descriptive statistics for all public elementary and secondary schools in the 50 states and the District of Columbia, American Samoa, the Bureau of Indian Education (BEI), the Department of Defense Education Activity (DoDEA), Guam, the Commonwealth of the Northern Mariana Islands, Puerto Rico, and the U. S. Virgin Islands (Glander, 2017). For 2015-16, there were 100,570 observations representing schools within the aforementioned geographic locations and 17,210 school divisions/agencies that served approximately 50.6 million students. For 2017-18, there were 99,348 observations representing schools in the aforementioned geographic locations and 17,744 school divisions/agencies that served approximately 50.7 million students.

This study restricted school type to traditional/regular schools to minimize the amount of missing data and to ensure homogeneity of the sample with regard to school type. Consistent with the GAO study (Nowicki, 2018), the sample included only schools with an enrollment of at least ten students.

Merged Datasets

After merging the 2015-16 CRDC and CCD datasets, there were 74,551 matched observations and 19,808 unmatched observations—3,245 from the master dataset and 16,563 from the using dataset. After merging the 2017-18 CRDC and CCD datasets, there were 74,217 matched observations and 19,106 unmatched observations—4,051 from the master dataset and 15,055 from the using dataset. The 2015-16 and 2017-18 CRDC-CCD datasets were appended to

complete final analyses of the data; therefore, there was no output on the number of matched observations. With the data structured in long form, there were 142,448 observations with most schools appearing once for 2015-16 and once for 2017-18.

Descriptives for Variables

Based on our preliminary results reported in Manuscript Two and the aforementioned research which suggests that certain school-level characteristics predict discipline outcomes (Welsh & Little, 2018), we identified five school-level characteristics implicated in schools with higher counts of students assigned out-of-school suspension: the percentage of African American male students, the percentage of students experiencing economic disadvantage, the percentage of students served under IDEA, the population density of the community in which a school was located (e.g., urban, suburban, rural), and school level (e.g., primary, middle, high).

Counts of Students Assigned Out-of-School Suspension

The number of students within a school assigned out-of-school suspension, the dependent or outcome variable, is a continuous variable that represents the number of students assigned out-of-school suspension reported by schools within the sample.

For 2015-16, schools reported that 2,230,433 students were assigned out-of-school suspension. Counts of students assigned out-of-school suspension ranged from 0 to 1,025 with 12,714 schools (i.e., 17.08%) reporting zero out-of-school suspensions (see Figure 1). The large difference between the mean of students assigned out-of-school suspension (M = 29.95, SD = 51.33) and the variance of the number of students assigned out-of-school suspension indicates that the distribution for student counts of out-of-school suspension is overdispersed. In other words, the conditional variance for student counts of out-of-school suspension, 31.11, is 3011% (i.e., (31.11 – 1) * 100) greater than the conditional mean.

For 2017-18, schools reported that 1,955,512 students were assigned out-of-school suspension. Counts of students assigned out-of-school suspension ranged from 0 to 883 with 10,452 schools (i.e., 15.36%) reporting zero out-of-school suspensions (see Figure 12). Similar to findings in 2015-16, the large difference between the mean of students assigned out-of-school suspension (M = 26.36, SD = 45.88) and the variance of the number of students assigned out-of-school suspension indicates that the distribution for student counts of out-of-school suspension is overdispersed. In other words, the conditional variance for out-of-school suspension, 30.12, is 2912% (i.e., (30.12 - 1.00 = 29.12) * 100) greater than the conditional mean. The large difference between the mean, 26.36 (SD = 45.88), and the variance, 30.12, of students assigned out-of-school suspension indicates that the distribution for out-of-school suspension is highly skewed.

Percent Quartile Variables

To examine possible differences in quartiles means (Gordon, 2012) and to determine relative incidence rate ratios (Lindquist, n.d.), during our analyses of 2015-16 and 2017-18 data, we subdivided and "dummy" coded variables representing a school's percentage of enrollment that was African American male, eligible to receive free and reduced-price lunch, and served under IDEA to be indicator variables. The indicator variables represented quartiles that allowed comparisons of the first quartile to each of the three subsequent quartiles for differences in rates of out-of-school suspension. In essence, we separated each of the aforementioned variables into four quartiles: 0 to 25%, 25.01 to 49.99%, 50 to 74.99%, and 75 to 100%, representing the first, second, third, and fourth quartiles; respectively.

African American Male Student Enrollment

Within the 2015-16 CRDC-CCD merged sample, there were 2,899,299 African American male students. School reports of African American male student enrollment ranged from zero to 1,309 (*M* = 38.96, *SD* = 71.78). On average, African American male students made up 6.45% (*SD* = 10.98) of total school enrollment (see Table 1).

Within the 2017-18 CRDC-CCD merged sample, there were 2,821,981 African American male students. School reports of African American male student enrollment ranged from zero to 1,299 (*M* = 41.48, *SD* = 71.66). On average, African American male students made up 6.94% (*SD* = 11.11) of total school enrollment (see Table 4).

For this study, two variables represented African American male student enrollment: (1) African American male percent—the variable which represented a school's percentage of African American male student enrollment and (2) African American male percent quartile—the variable which represented quartiles of African American male student enrollment (see above). Values for African American male percent ranged from zero to 98.06% in 2015-16 and from zero to 97.48% in 2017-18.

In 2015-16, 68,785 schools (92.43%) fell into the first quartile; 4,912 schools (6.60%) fell into the second quartile; 711 schools (0.96%) fell into the third quartile; and 12 schools (0.02%) fell into the fourth quartile of African American male student enrollment. Means of students assigned out-of-school suspension for schools in the first, second, third, and fourth quartiles for African American male student enrollment were 26.12 (*SD* = 44.53), 77.73 (*SD* = 91.68), 70.16 (*SD* = 83.89), and 53.33 (*SD* = 59.70); respectively (see Table 1).

In 2017-18, 62,555 schools (91.95%) fell into the first quartile; 4,817 schools (7.08%) fell into the second quartile; 646 schools (0.95%) fell into the third quartile; and 10 schools (0.01) fell into the fourth quartile of African American male student enrollment. Means of

students assigned out-of-school suspension for schools in the first, second, third, and fourth quartiles for African American male student enrollment were 24.82 (*SD* = 42.16), 66.12 (*SD* = 77.94), 60.07 (*SD* = 75.72), and 53.5 (*SD* = 39.85); respectively (see Table 5).

Figure 23 displays a comparison of quartile means for African American male student enrollment for 2015-16 and 2017-18. The two middle quartiles for African American male student enrollment have the highest mean values in both 2015-16 and 2017-18. While still higher than the means for the first and fourth quartile, the means for quartiles two and three for African American male student enrollment are lower in 2017-18 when compared to 2015-16.

Enrollment of Students Eligible for Free and Reduced-Price Lunch

Eligibility for free and reduced-price lunch is based upon a child's household income. For 2015-16 and 2017-18, children living in households with incomes less than 130% of the poverty level or who received assistance through the Supplemental Nutrition Assistance Program (SNAP) or Temporary Assistance for Needy Families (TANF) program were eligible to receive free milk and meals. Children living in households with incomes between 130 and 185% of the poverty level were eligible for reduced-price milk and meals (Child Nutrition Programs-Income Eligibility Guidelines, 2015). Though the NCES (2015) cautions researchers about utilizing free and reduced-price lunch eligibility as a proxy for economic disadvantage (see the footnote), for this study, free and reduced-price lunch eligibility is used as an indicator that students were experiencing economic disadvantage in 2015-16 and/or 2017-18. (see Tables 1 and 5 and Figures 3 and 14 for descriptive statistics and out-of-school suspension results, respectively).[2]

2 The NCES (2015) warns that free and reduced-price lunch eligibility may be used to estimate relative poverty; however, free and reduced-price lunch-eligibility is not representative of the percentage of students living in poverty. For example, in 2012, over 50% of public school students were free and reduced-price lunch-eligible while the poverty rate of public schools students was only 22%. One factor that explains this disparity is the Community Eligibility option in which, for the sake of administrative efficiency, schools provide all students free lunch.

In 2015-16, there were 21,083,472 students eligible to receive free and reduced-price lunch. School reports of free and reduced-price lunch student enrollment ranged from zero to 4,374 (*M* = 290.19, *SD* = 261.93). On average, students eligible to receive free and reduced-price lunch made up 53.10% (SD = 27.09) of total school enrollment. During this survey year, 12,933 schools (17.80%) fell into the first quartile; 20,874 schools (28.73%) fell into the second quartile; 20,993 schools (28.89%) fell into the third quartile; and 17,861 schools (24.58%) fell into the fourth quartile of enrollment for students who qualified for free and reduced-price lunch. The mean number of students assigned out-of-school suspension for schools that fell in the first, second, third, and fourth quartiles of enrollment for students eligible to receive free and reduced-price lunch were 14.16 (*SD* = 25.49), 24.50 (*SD* = 40.58), 34.25 (*SD* = 57.27), and 43.88 (*SD* = 64.43); respectively (see Table 1 and Figures 3).

In 2017-18, there were 19,220,915 students eligible to receive free and reduced-price lunch. School reports of free and reduced-price lunch student enrollment ranged from zero to 4,329 (*M* = 301.69, *SD* = 267.06). On average, students eligible to receive free and reduced-price lunch made up 54.07% (*SD* = 27.65) of total school enrollment. During this survey year, 11,845 schools (18.59%) fell into the first quartile; 18,538 schools (29.10) fell into the second quartile; 17,228 schools (27.04%) fell into the third quartile; and 16,100 schools (25.27%) fell into the fourth quartile of enrollment for students who qualified for free and reduced-price lunch. The mean number of students assigned out-of-school suspension for schools that fell in the first, second, third, and fourth quartiles of enrollment for students eligible to receive free and reduced-price lunch were 13.59 (*SD* = 24.85), 24.23 (*SD* = 39.52), 32.18 (*SD* = 51.71), and 38.01 (*SD* = 56.38); respectively (see Table 5 and Figure 14).

Enrollment of Students Served Under IDEA

The Individuals with Disabilities Education Improvement Act of 2004 (IDEA, 2004) ensures that students identified with a disability are provided "access to a free appropriate public education" (para. 4).

In 2015-16, 4,836,920 students were served under IDEA. School reports of enrollment of students served under IDEA ranged from two to 1,311 (*M* = 68.84, *SD* = 53.23). On average, students eligible to receive free and reduced-price lunch made up 12.29% (*SD* = 5.43) of school enrollment. During this survey year, 70,384 schools (97.74%) fell into the first quartile; 1,564 schools (2.17%) fell into the second quartile; 31 schools (0.04%) fell into the third quartile; and 29 schools (0.04%) fell into the fourth quartile of enrollment for students who qualified for services under IDEA. The mean number of students assigned out-of-school suspension for schools that fell in the first, second, third, and fourth quartiles of enrollment for students eligible to receive services under IDEA were 30.63 (*SD* = 51.58), 33.72 (*SD* = 60.34), 18.93 (*SD* = 43.30), and 8.96 (*SD* = 14.04); respectively (see Table 1 and Figure 4).

In 2017-18, 5,180,344 students were served under IDEA. School reports of enrollment of students served under IDEA ranged from zero to 1209 (*M* = 76.15, *SD* = 56.15). On average, students eligible to receive free and reduced-price lunch made up 13.43% (*SD* = 5.99) of school enrollment. During this survey year, 65,871 schools (96.83%) fell into the first quartile; 2,085 schools (3.06%) fell into the second quartile; 33 schools (0.05%) fell into the third quartile; and 39 schools (0.06%) fell into the fourth quartile of enrollment for students who qualified for services under IDEA. The mean number of students assigned out-of-school suspension for schools that fell in the first, second, third, and fourth quartiles of enrollment for students eligible to receive services under IDEA were 28.11 (*SD* = 47.23), 27.65 (*SD* = 51.30), 9.12 (*SD* = 14.77), and 11.36 (*SD* = 20.60); respectively (see Table 5 and Figure 15).

School Community's Population Density

Merriam Webster defines population density as **"**the number of people living in each unit of area (such as a square mile) (Merriam Webster, 2022). In this paper, we use the terms population density and urbanicity interchangeably. The variable representing the population density of the community in which a school was located is a multinomial, categorical variable. Urbanicity categories ranged from large cities to rural remote areas.

In 2015-16, 7,405 (9.94%), 3,916 (5.26%), and 4,676 (6.28%) schools were located in large, mid-size, and small cities, respectively; 20,501 (27.53%), 2,567 (3.45%), and 1,492 (2.00%) schools were located in large, mid-size, and small suburban areas, respectively; 2,356 (3.16%), 4,903 (6.58%), and 3,091(4.15%) schools were located in fringe, distant, and remote towns, respectively; and 8,742 (11.74%), 9,252 (12.42%), and 5,574 (7.48%) schools were located in fringe, distant, and remote rural areas, respectively (see Table 1).

Means of counts of students assigned out-of-school suspension for schools located in large cities, mid-size cities, and small cities were 45.1 (*SD* = 67.58), 46.96 (*SD* = 68.79), and 43.13 (*SD* = 64.84), respectively. Means of counts of students assigned out-of-school suspension for schools located in large suburban, mid-size suburban, and small suburban areas were 31.86 (*SD* = 56.07), 33.31 (*SD* = 48.30), and 30.54 (*SD* = 45.10), respectively. Means of counts of students assigned out-of-school suspensions for schools located in fringe towns, distant towns, and remote towns were 26.53 (*SD* = 36.17), 30.05 (*SD* = 42.07), and 25.01 (*SD* = 41.79), respectively. Means of counts of students assigned out-of-school suspension for schools located in fringe rural, distant rural, and remote rural areas were 29.62 (*SD* = 45.42), 14.33 (*SD* = 23.69), and 8.58 (*SD* = 17.56), respectively (see Table 1 and Figure 5).

In 2017-18, 7,345 (10.80%), 3,744 (5.50%), and 4,480 (6.59%) schools were located in large, mid-size, and small cities, respectively; 19,935 (29.30%), 2,463 (3.62%), and 1,403 (2.06%) schools were located in large, mid-size, and small suburban areas, respectively; 2,164 (3.18%), 4,444 (6.53%), and 2,755 (4.05%) schools were located in fringe, distant, and remote towns, respectively; and 8,397 (12.34%), 6,953 (10.22%), and 3,945 (5.80%) schools were located in fringe, distant, and remote rural areas, respectively (see Table 5 and Figure 16).

Means of counts of students assigned out-of-school suspension for schools located in large cities, mid-size cities, and small cities were 35.81 (*SD* = 58.04), 42.71 (*SD* = 62.34), and 40.01 (*SD* = 60.74), respectively. Means of counts of students assigned out-of-school suspensions for schools located in large suburban, mid-size suburban, and small suburban areas were 28.22 (*SD* = 49.11), 31.82 (*SD* = 47.34), and 28.92 (*SD* = 40.43), respectively. Means of counts of students assigned out-of-school suspension for schools located in fringe towns, distant towns, and remote towns were 25.30 (*SD* = 36.64), 28.39 (*SD* = 41.53), and 25.31 (*SD* = 40.78), respectively. Means of counts of students assigned out-of-school suspension for schools located in fringe rural, distant rural, and remote rural areas were 28.63 (*SD* = 43.18), 14.98 (*SD* = 24.21), and 8.01 (*SD* = 17.10), respectively (see Table 5 and Figure 16).

School Level

The variable representing school level is a multinomial, categorical variable with four levels categorizing schools as primary, middle, high, and other (Glander, 2017). In 2015-16, there were 42,024 (59.81%) primary schools, 13,689 (19.48%) middle schools, 12,639 (17.99%) high schools, and 1,907 (2.71%) schools categorized as other. Means of counts of students assigned out-of-school suspension for primary, middle, high, and other schools were 14.06 (*SD* =

21.80), 47.19 (*SD* = 56.24), 63.15 (*SD* = 82.38), and 32.061 (SD = 56.87), respectively (see Table 1 and Figure 6).

In 2017-18, there were 44,522 (60.02%) primary schools, 14,152 (19.08%) middle schools, 14,232 (19.19%) high schools, 205 (0.2%) secondary schools, and 1,062 (1.43%) schools categorized as other. Means of counts of students assigned out-of-school suspension for primary, middle, high, secondary, and other schools were 11.95 (*SD* = 19.74), 47.53 (*SD* = 53.09), 60.19 (*SD* = 73.00), 50.85 (*SD* = 73.23) and 17.24 (*SD* = 36.28) (see Table 5 and Figure 17).

Analyses

StataCorp (2021), version 17, statistical software was utilized to conduct all statistical analyses in this study. Variables were inspected and, if found to include invalid values (e.g., -2, -5, -9), recoded to ensure the existence of only valid values. Recoding invalid values resulted in variables having missing values. We decided not to impute missing values for three reasons: (1) previous analyses suggested that values were missing at random ((MAR; Rabe-Hesketh & Skrondal, 2008); (2) there did not appear to be any patterns to the missing values; (3) variables included in our model that were missing values were missing between 0.01% and 3.29% of their values; and (4) the "mi estimate" command does not support zero-inflated regression analyses (StataCorp, 2019). Therefore, we relied on Stata's listwise deletion process. All regression analyses were conducted on the remaining 71,224 observations.

Model Choice

For this study, we considered six potential models that are appropriate for count outcomes: the Poisson, overdispersed Poisson, ZIP, NB, and ZINB regression models. We first examined the distribution of the outcome variable—counts of students assigned out-of-school

suspension. We found that 12,790 schools reported that no students were suspended during 2015-16 and 12,275 schools reported that no students were suspended during 2017-18 (see Figures 1 and 12). We found that the distribution of the outcome variable was heavily, positively skewed—indicating that the Poisson model would not be the best fitting model for our data. We compared the results for the remaining models using goodness-of-fit tests and by comparing coefficients and standard errors. We determined that the ZINB model was the model of best fit (see Tables 4 and 8). We provide additional support for using the ZINB regression model below.

The data used in this study contain two sub-populations of schools that reported zero counts of students assigned out-of-school suspensions for 2015-16 and/or 2017-18. One sub-population consists of schools that suspend students; however, no students were assigned out-of-school suspension during one or both survey years. The other sub-population consists of schools that have policies prohibiting out-of-school suspension that never assign students out-of-school suspension. The zero values reported by schools in the latter sub-population are "structured zeroes."

The ZINB regression model was the best model for analyzing the data used in this study for the following reasons. The ZINB model is appropriate (1) for count outcomes with non-negative integers, (2) when distributions are highly skewed, (3) when outcomes are overdispersed, (4) when heteroscedastic error terms are present, and (5) when data contains structured zeroes (Coxe et al., 2009). Both the 2015-16 and 2017-18 datasets met all of the above criteria.

The ZINB regression model consists of two components. The first part of the model is a negative binomial regression model that, in this study, provided the relative incidence risk ratio or incident rate for each of the categorical variables included in the model. For example, for the

variable representing African American male student enrollment, the incident rates for the second, third, and fourth quartiles are compared to the incident rate for the first quartile to determine their relative incident rate for counts of students assigned out-of-school suspension.

The second part of the model is a logit model that provides the probability of a reported zero falling into the category of a certain zero as opposed to an inflated zero. Schools reporting that zero students were assigned out-of-school suspension fall into categories—those that never suspend students and those that suspend students; however, during the survey year, no students were suspended. ZINB analysis for this study revealed that all quartile variables (i.e., African American male student enrollment, enrollment of students eligible to receive free and reduced-price lunch, and enrollment of students served under IDEA), school level, and population density were significant predictors of reported zeroes being certain zeroes (i.e., zeroes reported by schools that suspend students; however, during the survey year, no students were suspended).

All models included the same outcome—counts of students assigned out-of-school suspension and predictor variables (see Table 3):

$$\textbf{Number of Students Assigned Out-of-School Suspension} = \beta_0 + \beta_1 \%\ African\ American\ male + \beta_2 \%\ free\ and\ reduced\text{-}price\ lunch + \beta_3 \%\ IDEA + \beta_4 PopulationDensity + \beta_5 SchoolLevel + \varepsilon$$

Results

This section reports on incident rates generated by the model of best fit for the 2015-16 and 2017-18 CRDC-CCD data—the ZINB regression model. These results should be interpreted as *controlling for all variables* not being reported upon or *holding all other model variables constant. . .* We have simplified the text by shortening the outcome variable from “number of students assigned out-of-school suspension” to “out-of-school suspension.”

African American Male Student Enrollment

2015-16

When compared to incident rates of out-of-school suspension for schools in the first quartile, incident rates were 95% (*RSE* = .03, $p < 0.001$), 80% (*RSE* = .08, $p < 0.001$, and 17% (*RSE* = .29, $p = 0.532$) higher for schools in the second, third, and fourth quartiles, respectively, for African American male student enrollment (see Table 3).

2017-18

When compared to incident rates of out-of-school suspension for schools in the first quartile, incident rates were 106% (*RSE* = .04, $p < 0.01$) and 95% (*RSE* = .11, $p < 0.001$) higher and 50% (*RSE* = .11, $p = 0.001$) lower for schools in the second, third, and fourth quartiles, respectively, for African American male student enrollment (see Table 7).

Comparison of 2015-16 and 2017-18

For African American male student enrollment, 2017-18 incident rates of out-of-school suspension were 11.58 % and 18.75% higher than incident rates for 2015-16 for quartiles two and three. However, for quartile four, 2017-18 incident rates were 394.10% lower. This suggests that students attending schools in the second and third quartile of African American male student enrollment, while already experiencing higher risk of being suspended in 2015-16, experienced even higher risk in 2017-18 (for a comparison of means see Figure 29).

Enrollment of Students Eligible to Receive Free and Reduced-Price Lunch

2015-16

When compared to incident rates of out-of-school suspension for schools in the first quartile, incident rates were 70% (*RSE* = .03, $p < 0.000$), 166% (*RSE* = .04, $p < 0.001$), and 251% (*RSE* = 06, $p < 0.001$) higher for schools in the second, third, and fourth quartiles,

respectively, for enrollment of students eligible to receive free and reduced-price lunch (see Table 3).

2017-18

When compared to incident rates of out-of-school suspension for schools in the first quartile, incident rates were 84% (*RSE* = .03, $p < 0.000$), 193% (*RSE* = .04, $p < 0.001$), and 287% (*RSE* = 06, $p < 0.001$) higher for schools in the second, third, and fourth quartiles, respectively, for enrollment of students eligible to receive free and reduced-price lunch (see Table 7).

Comparison of 2015-16 and 2017-18

For enrollment of students eligible to receive free and reduced-price lunch, 2017-18 incident rates of out-of-school suspension were 20.00%, 16.27%, 14.34% higher, respectively, than incident rates for 2015-16 for quartiles two, three, and four. This suggests that students attending schools with higher percentages of students experiencing economic disadvantage were at greater risk of being assigned out-of-school suspension in 2017-18 than they were in 2015-16 (for a comparison of means see Figure 30).

Enrollment of Students Served Under IDEA

2015-16

When compared to incident rates of out-of-school suspension for schools in the first quartile, incident rates were 1% (*RSE* = .03, $p = 737$), 44% (*RSE* = .13, $p = 0.011$), and 77% (*RSE* = .05, $p < 0.001$) lower for schools in the second, third, and fourth quartiles, respectively, for enrollment of students served under IDEA (see Table 3). However, the incident rate for the second quartile was not statistically significant.

2017-18

When compared to incident rates of out-of-school suspension for schools in the first quartile, incident rates were 1% (*RSE* = .03, *p* = 710), 51% (*RSE* = .24, *p* = 0.139), and 67% (*RSE* = .11, *p* < 0.001) lower for schools in the second, third, and fourth quartiles, respectively, for enrollment of students served under IDEA (see Table 7). However, incident rates for the second and third quartiles were not statistically significant.

Comparison of 2015-16 and 2017-18

For enrollment of students served under IDEA, 2017-18 incident rates of out-of-school suspension are equal, 15.90% lower, and 13.00% higher, respectively, than incident rates for 2015-16 for quartiles two, three, and four. This suggests that students attending schools in the fourth quartile of students served under IDEA were at greater risk of being assigned out-of-school suspension in 2017-18 than they were in 2015-16 (for a comparison of means see Figure 31).

School Location's Population Density

2015-16

When compared to incident rates of out-of-school suspension for schools serving large cities, mid-size and small cities had incident rates that were 2% (*RSE* = .02, *p* = 0.380) and 3% (*RSE* = .02, *p* = 0.146) higher. Incident rates of out-of-school suspension for schools serving large, mid-size, and small suburban communities were 5% (*RSE* = .01, *p* < .001), 4% (*RSE* = .02, *p* = 0.108), and 14% (*RSE* = .02, *p* < .001), lower, respectively, than incident rates for schools serving large cities. Incident rates of out-of-school suspension for schools serving fringe, distant, and remote towns were 28% (*RSE* = .02, *p* < 0.001), 34% (*RSE* = .01, *p* < 0.001), and 43% (*RSE* = .01, *p* < 0.001), lower, respectively, than incident rates for schools serving large cities. Incident rates of out-of-school suspension for schools serving fringe, distant, and remote rural areas were

21% (*RSE* = .01, $p < 0.001$), 57% (*RSE* = .01, $p < 0.001$), and 72% (*RSE* = .01, $p < 0.001$) lower, respectively, than incident rates if schools serving large cities (see Table 3).

2017-18

When compared to incident rates of out-of-school suspension for schools serving large cities, mid-size and small cities had incident rates that were 14% (*RSE* = .03, $p = 0.000$) and 24% (*RSE* = .03, $p = 0.000$) higher. Incident rates of out-of-school suspension for schools serving large, mid-size, and small suburban communities were 4% (*RSE* = .02, $p = .022$), 18% (*RSE* = .04, $p = 0.000$), and 4% (*RSE* = .04, $p = .292$), higher, respectively, than incident rates for schools serving large cities. Incident rates of out-of-school suspension for schools serving fringe, distant, and remote towns were 14% (*RSE* = .03, $p < 0.000$), 21% (*RSE* = .02, $p < 0.000$), and 29% (*RSE* = .02, $p < 0.000$), lower, respectively, than incident rates for schools serving large cities. Incident rates of out-of-school suspension for schools serving fringe, distant, and remote rural areas were 6% (*RSE* = .02, $p = 0.005$), 47% (*RSE* = .01, $p < 0.000$), and 69% (*RSE* = .01, $p < 0.000$) lower, respectively, than incident rates for schools serving large cities (see Table 7).

Comparison of 2015-16 and 2017-18

For students attending schools in midsize and small cities there were 600% and 700% increases, respectively, in the incident rate for being assigned out-of-school suspension from 2015-16 to 2017-18. For students attending schools in large suburban, mid-size, and small suburban areas, there were 180.0%, 550.0%, and 128.6% increases, respectively, in incident rate for being assigned out-of-school suspension from 2015-16 to 2017-18.

For students attending schools in towns and rural areas, incident rates for being assigned out-of-school suspension were higher in 2017-18 than in 2015-16. The incident rate for being assigned out-of-school suspension for students attending schools in fringe, distant, and remote

towns increased by 50.00%, 38.24%, and 32.56%, respectively, from 2015-16 to 2017-18. The incident rate for being assigned out-of-school suspension for students attending schools in fringe, distant, and remote rural areas increased by 71.43%, 17.54%, and 4.17%, respectively, from 2015-16 and 2017-18 (for a comparison of means see Figure 32).

School Level

2015-16

Incident rates of out-of-school suspension for middle, high, and other levels were 233% (*RSE* = .03, $p < 0.001$), 446% (*RSE* = .05, $p < 0.001$), and 228% (*RSE* = .07, $p < 0.001$) higher, respectively, than incident rates for primary schools (see Table 3).

2017-18

Incident rates of out-of-school suspension for middle, high, secondary, and other levels were 325% (*RSE* = .05, $p < 0.000$), 564% (*RSE* = .08, $p < 0.000$), 458% (*RSE* = .41, $p < 0.000$), and 185% (*RSE* = .16, $p < 0.001$) higher, respectively, than incident rates for primary schools (see Table 7).

Comparison of 2015-16 and 2017-18

For students attending middle and high schools, the incident rate for being assigned out-of-school suspension increased 39.48% and 26.46% from 2015-16 to 2017-18; however, the incident rate for being assigned out-of-school suspension for students attending schools categorized as other decreased 18.86%.

Figures 9, 10, 11, 20, 21, and 22 depict the predicted number of students assigned out-of-school suspension across the distribution of schools' percentages of African American male student enrollment for 2015-16 and 2017-18 using the ZIP, NB, and ZINB regression models. Though the number of students assigned out-of-school suspension consistently increased as the

percentage of African American male student enrollment increased, at the threshold of approximately 25% African American male student enrollment, schools began to experience a marked increase in counts of students assigned out-of-school suspension. Figures 2 and 13 display this increase for the second and third quartiles; however, for the fourth quartile, comprised of 12 schools for 2015-16 and 10 schools for 2017-18, the means for counts of students assigned out-of-school suspension were lower than for the two middle quartiles (for a comparison of means see Figure 33).

Discussion

African American students are at greater risk of being assigned exclusionary discipline than their White counterparts (Erase Racism, 2019, p. 16). Disproportionate rates of exclusionary discipline for African American students reduce access to educational and occupational opportunities. During the 2015-16 school year, approximately 2.7 million students were administered single or multiple out-of-school suspensions (OCR; 2018). African American students comprised only 15% of public school enrollment; however, they made up 35% of students suspended once, 44% of students suspended more than once, and 36% of expelled students. Over the last several school years, despite lower African American student enrollment and an overall reduction in the number of students assigned out-of-school suspension, rates of exclusionary discipline for African American students have trended upward (OCR, 2012; 2014; 2018). For 2011-12, African American students made up 32% of students assigned one or multiple out-of-school suspensions (OCR, 2014). For 2015-16, African American students made up 39% of students assigned one or multiple out-of-school suspensions (OCR, 2018). This 22% increase in the proportion of African American students assigned one or more out-of-school

suspensions occurred despite efforts by the Obama administration to reduce discipline disparities for marginalized students.

In April 2017, former President Donald Trump signed into law an executive order requiring former Education Secretary Betsy DeVos to examine "whether and how the federal government ha[d] overstepped its legal authority in K-12 schools" (Brown, 2017). Trump commented, "Previous administrations have wrongfully forced states and schools to comply with federal whims and dic[t]ate what our kids are taught" "But we know that local communities do it best and know it best" (para 2.) There is little doubt that Trump was referring to the joint civil rights guidance released by former President Obama's Departments of Justice and Education in a Dear Colleague letter "to assist public elementary and secondary schools in meeting their obligation under Federal law to administer student discipline without discriminating on the basis of race, color, or national origin" (U. S. Department of Justice & U. S. Department of Education, 2014, para. 1).

In response to former President Trump and under the authority of former Secretary of Education and Chair of the FCSS, Betsy DeVos, the FCSS generated and released a report (DeVos et al., 2018) which argued that discipline disparities could be attributed to "societal factors other than race" (p. 14). The report also stated that guidelines on school discipline issued by the Obama administration "advocated a federal solution" (p. 14) and limited schools' abilities to discipline students thereby jeopardizing the safety of students. Thereafter, the Trump administration began rescinding the 2014 Obama administration guidelines (Marcus & Dreiband, 2018). Further, Trump administration policy changes prioritized "the resolution of individual allegations of civil rights violations over systemic investigations" (Erase Racism, 2019, p. 21). Systemic investigations are more likely to uncover systemic discriminatory practices. This shift

in focus from systemic investigations to individual allegations has resulted in fewer claims of civil rights violations, discrimination, and harassment being upheld (Waldman, 2018).

Differences between the Obama and Trump administrations may have resulted in greater rates of out-of-school suspension, especially for African American students. We sought to document the prevalence and trends of out-of-school suspension across two school years and two presidential administrations to examine how schools' rates of out-of-school suspension relate to school racial composition and federal policy. We analyzed merged CRDC-CCD data for 2015-16 and 2017-18 to examine how the racial composition of schools relates to the assignment of out-of-school suspension. Findings from our previous research indicate that higher counts of out-of-school suspension occur in schools with higher proportions of African American school enrollment. We examined the reporting and incident rates of out-of-school suspension for both school years to determine if there were a significant change in the incident rate of out-of-school suspension from the Obama to Trump presidential administrations. We employed ZINB regression analyses to determine if the proportion of African American male students predicted the reporting and rates of out-of-school suspension across the 2015-16 and 2017-18 school years while controlling for other predictors of higher counts and rates of out-of-school suspension.

We set out to accomplish the following aims and answer the following research questions:

Aim 1: Examine reports of out-of-school suspension in the 2015-16 and 2017-18 school years.

RQ1a. What is the rate of missing data for school reports of out-of-school suspension for each year?

RQ1b. What is the incident rate of out-of-school suspension reported for each year?

RQ1c. Is there a significant difference in the (i) missing data or (ii) incident rate of out-of-school suspension from one year to the next?

Aim 2: Examine the relationship between the composition of African American male students and incident rates of out-of-school suspension in the 2015-16 and 2017-18 school years.

RQ2. Does the proportion of African American male students predict higher incident rates of out-of-school suspension each year, when controlling for relevant school-level factors?

Aim 3: Examine how the composition of African American male students relates to the changes in reports of out-of-school suspension from the 2015-16 to 2017-18 school years.

RQ3. Does the composition of African American male students predict the (i) change in missingness or (ii) change in the incident rate of out-of-school suspension from 2015-16 to 2017-18, when controlling for relevant school-level factors?

To accomplish Aim 1, we inspected the 2015-16 and 2017-18 merged CRDC-CCD datasets and ran descriptive statistics. We found that the rate of missing data for reports of students assigned out-of-school suspension was very low for both school years (i.e., 01%). Though missingness rates were low for out-of-school suspension, through the use of ZINB regression modeling, we observed an increase in incident rates from 2015-16 to 2017-18 in schools likely to have higher enrollments of African American male students.

To analyze incident rate using ZINB regression, we "dummy" coded (Gordon, 2012) continuous variables for African American male student enrollment, the enrollment of students eligible to receive free and reduced-price lunch, and the enrollment of students served under IDEA, generating categorical variables for each. Along with the variables representing urbanicity and school level, each of the generated variables allowed us to compare each category level above the first level to the first level. For example, we sub-divided the continuous variable for African American male student enrollment into four quartiles (i.e., categories or levels). We were then able to compare incident rates for the three higher quartiles to the incident rate for the first quartile to estimate relative incident risk ratios or incident risk rates.

African American Male Student Enrollment

For both 2015-16 and 2017-18, when compared to the first and fourth quartiles of African American male student enrollment, schools in the second and third quartiles were at greater risk for higher counts of students assigned out-of-school suspension. Disturbingly, for schools that fell into the middle quartiles of African American male student enrollment, the incident rate for assigning higher numbers of students out-of-school suspension increased by almost 12% and 19%, respectively, from 2015-16 to 2017-18. Similar to previous findings reported in Manuscript Two, the incident rate for counts of students assigned out-of-school suspension for schools in the first quartile of African American male student enrollment was lowest. The incident rate for counts of students assigned out-of-school suspension for schools in the fourth quartile of African American male student enrollment was higher than the first quartile and lower than the middle quartiles.

We theorize that students that attend schools in the lowest quartile of African American male student enrollment are forced to assimilate and behave in alignment with the dominant

culture's behavioral norms to avoid discipline consequences. Students within such schools may be pushed out of the traditional school environment if they do not conform thereby reducing schools' incident rates of out-of-school suspension.

We exercise caution when theorizing about incident rates for schools in the highest quartile of African American male student enrollment due to the low number of schools in this quartile. Essentially, there were only 12 schools that fell into the fourth quartile in 2015-16 and 10 schools in 2017-18. Exercising the aforementioned caution, we theorize that within the fourth quartile of African American male student enrollment, there may be a mixture of schools. Some schools within this quartile, though categorized as public and traditional, may have an almost all African American male student population and may specialize in the education of young African American males. Other schools may have very high percentages of African American students (i.e., both male and female).

Some schools with very high percentages of African American students may be more familiar with and value African American culture. They may view their students through an asset lens—facilitating positive relationships and positive cyclic interactions (Okonofua et al., 2016). Teachers in such schools may embrace and adopt culturally responsive pedagogy (Ladson-Billings, 2014) and cultivate student-centered learning environments in which students feel valued and enjoy a sense of social and cultural capital through prosocial leadership and social and emotional competency exhibited by their teachers (Jennings & Greenberg, 2009). These schools may report lower counts of suspension or may even prohibit the assignment of out-of-school suspension.

Conversely, other schools with high percentages of African American students may suspend greater numbers of students thus offsetting the lower number of students suspended in

more culturally-responsive schools within the fourth quartile. In addition to these theories, schools with higher percentages of African American students may employ more racially/ethnically diverse faculty who may advocate for African American students, families, and communities leading to fewer out-of-school suspensions.

In summary, incident rates of out-of-school suspension for schools in the highest quartile of African American male student enrollment decreased by 394.1% from 2015-16 to 2017-18. However, existing high incident rates for schools in the second quartile (i.e., 95% higher than the first quartile) and third quartile (i.e., 80% higher than the first quartile) increased by 11.6% for schools in the second quartile and 18.8% for schools in the third quartile of African American male student enrollment. This suggests that students attending schools in which 25 to 75% of student enrollment is African American male were at higher risk of being assigned out-of-school suspension in 2015-16 and were at even higher risk in 2017-18.

Free and Reduced-Price Lunch Eligible Enrollment

For both 2015-16 and 2017-18, when compared to the first quartile of enrollment for students eligible to receive free and reduced-price lunch, schools in the second, third, and fourth quartiles were at greater risk for higher counts of students assigned out-of-school suspension. In addition, incident rates were higher for the third quartile than the second, and incident rates for the fourth quartile were higher than the third for both school years.

Though already high, incident rates for the second quartile (i.e., 70% higher than the first quartile), third quartile (i.e., 166% higher than the first quartile), and fourth quartile (i.e., 251% higher than the first quartile) for students eligible to receive free and reduced-price lunch in 2015-16 were lower than those in 2017-18. Incident rates for free and reduced-price lunch enrollment in 2017-18 were 20% higher for the second quartile, 16.27% higher for the third

quartile, and 14.34% higher, respectively, for the fourth quartile than for the second, third, and fourth quartile incident rates in 2015-16. Extant research indicates that African American students are more likely to experience economic disadvantage (Creamer, 2020). They are also more likely to attend schools with higher enrollments of students eligible to receive free and reduced-price lunch (Boschma & Brownstein, n.d.). The observed increase in incident risk from 2015-16 to 2017-18 suggests that schools with higher proportions of students that qualify for free and reduced-price lunch may be at greater risk for higher counts of students assigned out-of-school suspension.

Students Served Under IDEA

Though not statistically significant, for both 2015-16 and 2017-18, the incident rates for schools in the second quartile of enrollment for students served under IDEA are 1% lower than incident rates for schools in the first quartile. For 2015-16, incident rates for schools in the third quartile are 44% lower and schools in the fourth quartile are 77% lower than schools in the first quartile for enrollment of students served under IDEA. For 2017-18, incident rates are similarly lower. Incident rates for schools in the third quartile are 51% lower and schools in the fourth quartile are 67% lower than schools in the first quartile of enrollment for students served under IDEA.

In 2015-16 and 2017-18, the CRDC did not provide disaggregated data to allow the examination of different categories of "disability." Subsequent analyses examining student-level data will likely add to the preponderance of evidence that differently-abled students are disproportionately assigned exclusionary discipline consequences. The Dear Colleague letter issued by the Obama administration states that,

> "While this document addresses race discrimination against all students, including students with disabilities, evidence of significant disparities in the use of discipline and aversive techniques for students with disabilities raises particular concern for the Departments. For example, although students served by IDEA represent 12% of students in the country, they make up 19% of students suspended in school, 20% of students receiving out-of-school suspension once, 25% of students receiving multiple out-of-school suspensions, 19% of students expelled, 23% of students referred to law enforcement, and 23% of students receiving a school-related arrest. Additionally, students with disabilities (under the IDEA and Section 504 statutes) represent 14% of students, but nearly 76% of the students who are physically restrained by adults in their schools" (U. S. Department of Justice, U. S. Department of Education, 2014).

School's Population Density

For 2015-16, incident rates of out-of-school suspension for schools located in mid-size cities did not significantly differ from incident rates for large cities. Similarly, incident rates of out-of-school suspension for schools located in small cities did not significantly differ from incident rates for large cities. However, in 2017-18 incident rates of out-of-school suspension for schools located in mid-size and small cities significantly differed from incident rates of out-of-school suspension for schools located in large cities. In 2017-18 when compared to large cities, the incident rates for mid-size and small cities were 14% and 24% higher, respectively.

In 2015-16, when compared to incident rates of out-of-school suspension in schools located in large cities, incident rates for schools located in large, mid-size, and small suburban areas were 5%, 4%, and 14% lower, respectively. However, the incident rate for out-of-school suspension for schools located in mid-size suburban areas did not significantly differ from those

located in large cities. In 2017-18, when compared to incident rates of out-of-school suspension in schools located in large cities, incident rates for schools located in large, mid-size, and small suburban areas were 4%, 18%, and 4% lower, respectively. However, incident rates for small suburban areas did not significantly differ from incident rates for large cities.

In 2015-16, when compared to incident rates of out-of-school suspension in schools located in large cities, incident rates for schools located in fringe, distant, and remote towns were 28%, 34%, and 43%, lower, respectively. In 2017-18, when compared to incident rates of out-of-school suspension in schools located in large cities, incident rates for schools located in fringe, distant, and remote towns were 14%, 21%, and 29, lower, respectively.

In 2015-16, when compared to incident rates of out-of-school suspension in schools located in large cities, incident rates for schools located in fringe, distant and remote towns were 21%, 57%, and 72%, lower, respectively. In 2015-16, when compared to incident rates of out-of-school suspension in schools located in large cities, incident rates for schools located in fringe, distant and remote towns were 6%, 47%, and 69%, lower, respectively.

For schools in cities and suburban communities, incident rates of out-of-school suspension were higher in 2017-18 than in 2015-16. The incident rates of out-of-school suspension for schools serving mid-size and small cities were 600% and 700% higher, respectively, in 2017-18 than in 2015-16. The incident rate of out-of-school suspension for schools serving large, mid-size, and small suburban areas were 20%, 350%, and 71.43% higher, respectively, in 2017-18 than in 2015-16.

For schools in towns and rural areas, incident rates of out-of-school suspension were higher in 2017-18 than in 2015-16. The incident rates of out-of-school suspension for schools serving fringe, distant, and remote towns were 50.00%, 38.24%, and 32.56% higher,

respectively, in 2017-18 than in 2015-16. The incident rates of out-of-school suspension for schools serving fringe, distant, and remote rural areas were 71.43%, 17.54%, and 4.17% higher, respectively, in 2017-18 than in 2015-16.

School Level

When compared to primary schools, incident rates of out-of-school suspension for both 2015-16 and 2017-18 were higher for middle (i.e., 233% higher and 325% higher, respectively), high (i.e., 446% higher and 564% higher, respectively), and schools categorized as other (i.e., 228% higher and 185% higher, respectively). The 2017-18 data had an additional category for school level—secondary. When compared to the incident rate of out-of-school suspension for primary schools, the incident rate for secondary schools was 458% higher.

From 2015-16 to 2017-18 the incident rate of out-of-school suspension increased 38.48% and 26.46%, respectively, for middle and high schools; however, the incident rate for schools categorized as other decreased 18.86%.

Implications for African American Students

Under the Obama administration, the U. S. Justice Department and the U. S. Department of Education sought to make schools more equitable and to reduce the opportunity gap caused by disparate rates of exclusionary discipline for marginalized students. Indeed, from 2015-16 to 2017-18 the maximum number of students assigned out-of-school suspension reported by schools decreased from 1,025 to 883. The total number of students assigned out-of-school suspension decreased from 2,228,797 to 1,919,365. School means of students assigned out-of-school suspension dropped from 29.95 to 28.08. However, while overall counts of out-of-school suspension have dropped, rates of out-of-school suspension for African American students continue to rise.

We found that schools in the middle two quartiles for African American male student enrollment, schools with higher enrollments of students eligible for free and reduced-price lunch, schools in urban areas, and secondary schools had the highest incident rates of out-school-suspension and the highest increases in incident risk from 2015-16 to 2017-18. With the exception of secondary schools, these are also schools more likely to have higher proportions of African American students. Thus African American students are exposed to greater risk of being suspended because the schools they are more likely to attend have higher counts of out-of-school suspension.

In addition, with regard to former Secretary of Education DeVos' claim that discipline disparities exist due to societal factors other than race, even after controlling for reputed predictors of higher rates of out-of-school suspension, in our study, race emerged as the best predictor of higher counts and incident rates of out-of-school suspension. Schools falling in the middle quartiles of African American male student enrollment had the highest counts and rates of out-of-school suspension for 2015-16 and 2017-18. Further, for those quartiles, 2017-18 incident rates were higher than 2015-16 rates. One might argue that means of out-of-school suspension were lower in 2017-18 than in 2015-16; however, when comparing quartiles two and three to quartile one for African American male student enrollment, incident rates increased dramatically from 2015-16 to 2017-18. We posit that the reduction in federal oversight caused by the recension of Obama-era initiatives may be, at least partially responsible for this outcome. Access to student-level data would allow us to examine which students within schools were suspended. This information would help us to further understand the associations among policy recensions, race, and out-of-school suspension.

Findings from this study suggest that the trend persists—though schools report lower overall counts of out-of-school suspension, counts and incident rates may not be declining for African American students. Our findings are important because they provide further evidence that school racial composition and student race predict disparities in school discipline, thus highlighting the need to revisit the recension of Obama-era initiatives enacted to reduce racial disparities in discipline. Further, there exists a critical need for the implementation of policies and interventions that target disproportionate counts and incident rates of out-of-school suspension and support students of color in all schools.

Limitations

This study utilized school-level data from two federally-funded, national datasets. While we were able to identify school-level predictors of higher incident rates for counts of students assigned out-of-school suspension, we were not able to identify which students in schools were at greater risk of being assigned out-of-school suspension. Analyzing student- and infraction-level data and incorporating qualitative methods would provide valuable insight into the relationship between race and out-of-school suspension. Utilizing student-level and teacher-/classroom-level data would allow us to explore current patterns of exclusionary discipline at a deeper level. Data accuracy is another concern for this study. Though the CCD and CRDC have measures in place to ensure the highest data quality, ultimately, the accuracy of the data that is collected is dependent upon accurate reporting by the LEAs and state agencies providing the reports.

Ultimately, the current study only examined some of the factors implicated in discipline disparities, and those factors were examined at a high level—the school level. Additional research needs to be conducted examining more predictors, with lower levels of data.

Next Steps and Future Directions

This study examined the relationships between counts of students assigned out-of-school suspension and school-level factors that reputedly predict increased rates of out-of-school suspension. To further inform this area of research, it would be important to examine student-level data to determine the association between student race/ethnicity, economic and ability status, and grade level. We would also like to examine the effect of teacher-student race/ethnicity match on out-of-school suspensions utilizing student-level and teacher/classroom-level data. In addition, we would like to replicate the current study utilizing more recent CCD and CRDC data. However, due to the global pandemic and resulting school closures, it is likely that we will never be able to determine the full impact of Trump administration policy recensions.

We would also like to replicate this study and include additional predictors that represent school personnel (e.g., presence or absence of a school resource officer and/or percent of teachers with two or fewer years of experience), school type, percentages of other populations of students and their interactions with gender, and state-level predictors. Including state-level predictors is especially salient at this time given the decisions by some states to rescind policies designed to increase equity and reduce the opportunity gap for marginalized students. For example, newly-elected Virginia Governor, Glen Youngkin, has stated his intentions to rescind policies enacted by former Virginia Governor Ralph Northam to reduce inequity in Virginia public schools. Examining incident rates of out-of-school suspension at the student level across the Northam and Youngkin years could be informative.

Conclusion

In conclusion, the current study sought to examine the rate of missing data for school reports of counts of students assigned out-of-school suspension for 2015-16 and 2017-18. We found that the rate of missingness for reports of out-of-school suspension was 0.01%.

We also examined incident rates for counts of students assigned out-of-school suspension. We found that for schools that fell into the two middle quartiles of African American male student enrollment, schools with higher percentages of students eligible to receive free and reduced-price lunch, schools in more densely populated/urban areas, and secondary schools had greater incident rates for higher counts of students assigned out-of-school suspension. In addition, we found that for schools in these categories incident rates increased from 2015-16 to 2017-18. It would be irresponsible to suggest that the observed increases in incident rates for schools more likely to be attended by African American students are due to the recension of Obama-era policies by the Trump administration. However, these increases in incident rates are alarming and warrant further investigation.

We also sought to determine if the proportion of African American male students predicts higher incident rates of out-of-school suspension for 2015-16 and 2017-18. We found that schools within the middle two quartiles of African American male student enrollment were predictors of greater incident rates of higher counts of students assigned out-of-school suspension; however, we did not find that the composition of African American male students predicted changes in missingness.

Controlling for a robust set of school-level predictors, school racial composition and student race emerged as the best predictors of higher counts and incident rates of out-of-school suspension. Our findings contribute to mounting evidence that disparities in out-of-school suspension are related to race.

Policy Implications

Though our findings indicate that schools in the middle quartiles of African American male student enrollment are at greater risk for higher counts of out-of-school suspension, it is well-documented that African American students are disproportionately assigned out-of-school suspension regardless of their representation in school populations. Therefore, our policy recommendations target all schools and should benefit all students. Our policy recommendations are grounded in frameworks and research that present promising strategies for eliminating discipline disparities. That research includes but is not limited to Gregory et al.'s (2017) Framework for Increasing Equity in School Discipline, Jennings and Greenberg's (2009) Prosocial Classroom, and recommendations posed by Losen (2011) in his paper entitled Discipline Policies, Successful Schools, and Racial Justice.

In addition, effective interventions that result in enduring positive change must involve key stakeholders at all levels—the macrosystem, exosystem, mesosystem, and microsystem. In Manuscript One, we sought to identify intervention targets in a theoretical conceptual framework. We believe that a multi-system, multi-level intervention is required if schools are to become more equitable and opportunity gaps are to be eliminated. Therefore, we have included multi-level policy recommendations.

Federal and State Level Policy Recommendations

We recommend that federal and state-level policy-makers (1) employ the disparate impact standard when determining whether a civil rights violation has occurred, (2) incentivize schools', districts', and states' systemic improvements in assigning discipline, and (3) include rates of out-of-school suspension in school evaluations.

District and School Administrator Policy Recommendations

We recommend that district and school policy-makers and administrators (1) collect disaggregated data, (2) analyze that data identifying and addressing differential treatment, (3) publicly report findings and plans for improvement, (4) utilize findings to drive systemic improvements, (5) differentiate improvement plans, (6) provide professional development on implicit bias, (7) develop and implement school-wide initiatives to support teachers, increase their social and emotional competencies, and address burnout, and (8) involve students and families.

Teacher Recommendations

We recommend that teachers (1) identify/reflect upon unconscious biases and be mindful of their influence in disciplinary decisions, (2) adopt culturally relevant and responsive pedagogy and practices, (3) cultivate positive teacher-student interactions and relationships, (4) leverage behavior as opportunities for social and emotional learning, (5) cultivate bias-aware classrooms where students feel respected and heard, (6) provide academic rigor for students, and (7) develop their own social and emotional competency.

In closing, we hope that our continued research will allow us to examine how schools can be transformed to better serve and be safe and equitable for all students. We leave you, the reader with these words,

> **Not everything that is faced can be changed, but nothing can be changed until it is faced. (Baldwin & Peck, 2017, p. 103)**

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Tables

Table 1 *Descriptive Statistics: 2015-16*

	n	Proportion	School Mean	School Std. Dev.	Min	Max	Mean of Out-of-School Suspension	Std. Dev. Out-of-School Suspension
Total Number: Students Assigned Out-of-School Suspension	2228797	-----	29.95	51.33	0	1025	-----	-----
Total Number: African American Male	2899299	-----	38.96	71.78	0	1309	-----	-----
Percent Quartiles: African American Male								
0-25%	68785	92.43	-----	-----	-----	-----	26.12	44.53
25.5-49.99%	4912	6.60	-----	-----	-----	-----	70.73	91.68
50-74.99%	711	0.96	-----	-----	-----	-----	70.16	83.89
75-100%	12	0.02	-----	-----	-----	-----	53.33	59.70
Total Number: Free-/Reduced-Price Lunch	21085919	-----	290.20	261.93	0	4374	-----	-----
Percent Quartiles: Free-/Reduced-Price Lunch								
0-25%	12933	17.80	-----	-----	-----	-----	14.16	25.49
25.5-49.99%	20874	28.73	-----	-----	-----	-----	24.50	40.58
50-74.99%	20993	28.89	-----	-----	-----	-----	34.25	57.27
75-100%	17861	24.58	-----	-----	-----	-----	43.88	64.43
Total Number: IDEA	4977500	-----	69.17	53.41	2	1311	-----	-----
Percent Quartiles: IDEA								
0-25%	70341	97.75	-----	-----	-----	-----	30.63	51.58
25.5-49.99%	1561	2.17	-----	-----	-----	-----	33.72	60.34
50-74.99%	30	0.04	-----	-----	-----	-----	18.93	43.30
75-100%	27	0.04	-----	-----	-----	-----	8.96	14.04
Total Enrollment:	42302651	-----	568.43	423.64	10	5170	-----	-----
Population Density								
Large City	7398	9.94	-----	-----	-----	-----	45.11	67.58
Mid-Size City	3911	5.26	-----	-----	-----	-----	46.96	68.79
Small City	4674	6.28	-----	-----	-----	-----	43.13	64.84
Large Suburban	20491	27.54	-----	-----	-----	-----	31.86	56.07
Mid-Size Suburban	2566	3.45	-----	-----	-----	-----	33.31	48.30
Small Suburban	1492	2.00	-----	-----	-----	-----	30.54	45.10
Fringe Town	2353	3.16	-----	-----	-----	-----	26.53	36.17
Distant Town	4900	6.58	-----	-----	-----	-----	30.05	42.07
Remote Town	3080	4.14	-----	-----	-----	-----	25.01	41.79
Fringe Rural	8739	11.74	-----	-----	-----	-----	29.62	45.42
Distant Rural	9244	12.42	-----	-----	-----	-----	14.33	23.69
Remote Rural	5568	7.48	-----	-----	-----	-----	8.58	17.56
School Level								
Primary	44279	59.50	-----	-----	-----	-----	14.06	21.80
Middle	14421	19.38	-----	-----	-----	-----	47.19	56.24
High	13556	18.22	-----	-----	-----	-----	63.15	82.38
Other	2164	2.91	-----	-----	-----	-----	32.06	59.87

Note: Overall school participant information descriptive statistics. Only schools with enrollment of 10 or greater were included in the sample.

Table 2

Model Comparison Table: 2015-16

	(1) Poisson	(2) Robust Poisson	(3) Over-Dispersed Poisson	(4) Zero-Inflated Poisson	(5) Negative Binomial	(6) Zero-Inflated Negative Binomial
	Students Assigned OSS	Students Assigned OSS	Students Assigned OSS	Students Assigned OSS	Students Assigned OSS	Students Assigned OSS
African American Male Student Percentage Quartile						
0-25%	---	---	---	---	---	---
25.01-49.99%	36.98***	0.60***	0.60***	0.57***	0.72***	0.67***
	(0.68)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)
50-74.99%	27.67***	0.45***	0.45***	0.42***	0.65***	0.59***
	(1.66)	(0.04)	(0.03)	(0.04)	(0.04)	(0.05)
75-100%	-7.16	-0.32	-0.32	-0.10	0.00	0.16
	(12.87)	(0.34)	(0.22)	(0.30)	(0.34)	(0.25)
Free/Reduced-Price Lunch Eligible Percentage Quartile						
0-25%	---	---	---	---	---	---
25.01-49.99%	13.20***	0.63***	0.63***	0.56***	0.63***	0.53***
	(0.50)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)
50-74.99%	27.19***	1.07***	1.07***	0.97***	1.14***	0.99***
	(0.51)	(0.02)	(0.02)	(0.02)	(0.01)	(0.02)
75-100%	31.10***	1.26***	1.26***	1.16***	1.44***	1.25***
	(0.55)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Students Served Under IDEA Percentage Quartile						
0-25%	---	---	---	---	---	---
25.01-49.99%	1.07	-0.18***	-0.18***	-0.15***	-0.06*	-0.01
	(1.13)	(0.038)	(0.03)	(0.04)	(0.03)	(0.03)
50-74.99%	-35.62***	-1.22**	-1.23***	-0.72*	-0.97***	-0.59*
	(8.07)	(0.25)	(0.24)	(0.35)	(0.22)	(0.23)
75-100%	-43.99***	-2.05***	-2.05***	-1.48***	-2.18***	-1.46***
	(9.55)	(0.30)	(0.47)	(0.17)	(0.27)	(0.20)

Table 2 (continued)

Population Density						
City: Large	----------	----------	----------	----------	----------	----------
	----------	----------	----------	----------	----------	----------
City: Mid-Size	3.97***	0.11***	0.11***	0.08***	0.04	0.02
	(0.86)	(0.02)	(0.025)	(0.02)	(0.02)	(0.02)
City: Small	3.11***	0.10***	0.10***	0.09***	0.03	0.03
	(0.82)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Suburb: Large	-1.23*	-0.00	-0.00	0.01	-0.08***	-0.06***
	(0.62)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)
Suburb: Mid-Size	-2.83**	-0.03	-0.03	-0.05	-0.01	-0.04
	(1.02)	(0.03)	(0.02)	(0.03)	(0.03)	(0.02)
Suburb: Small	-6.87***	-0.16***	-0.16***	-0.17***	-0.15***	-0.16***
	(1.24)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Town: Fringe	-14.64***	-0.42***	-0.42***	-0.42***	-0.31***	-0.33***
	(1.04)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Town: Distant	-18.67***	-0.52***	-0.52***	-0.50***	-0.44***	-0.42***
	(0.82)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Town: Remote	-23.30***	-0.69***	-0.69***	-0.65***	-0.62***	-0.56***
	(0.95)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)
Rural: Fringe	-10.88***	-0.32***	-0.32***	-0.31***	-0.24***	-0.24***
	(0.71)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Rural: Distant	-29.77***	-1.12***	-1.12***	-1.02***	-0.92***	-0.84***
	(0.71)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Rural: Remote	-40.26***	-1.70***	-1.70***	-1.47***	-1.53***	-1.28***
	(0.83)	(0.03)	(0.03)	(0.03)	(0.02)	(0.03)
School Level						
Primary	----------	----------	----------	----------	----------	----------
	----------	----------	----------	----------	----------	----------
Middle	37.30***	1.32***	1.32***	1.20***	1.32***	1.20***
	(0.42)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
High	61.05***	1.83***	1.83***	1.69***	1.85***	1.70***
	(0.45)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Other	33.37***	1.30***	1.30***	1.22***	1.28***	1.19***
	(1.02)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)
Constant	0.20	1.87***	1.87***	2.12***	1.75***	2.04***
	(0.67)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Inflate						
African American Male Students						
0-25%	----------	----------	----------	----------	----------	----------
	----------	----------	----------		----------	----------
25.01-49.99%	----------	----------	----------	-0.75***	----------	-0.72***
	----------	----------	----------	(0.07)	----------	(0.09)
50-74.99%	----------	----------	----------	-0.62***	----------	-0.58**
	----------	----------	----------	(0.17)	----------	(0.20)
75-100%	----------	----------	----------	1.50	----------	1.62
	----------	----------	----------	(0.88)	----------	(0.87)

Table 2 (continued)

Free/Reduced-Price Lunch Eligible Percentage Quartile						
0-25%	---	---	---	---	---	---
	---	---	---	---	---	---
25.01-49.99%	---	---	---	-0.74***	---	-0.73***
	---	---	---	(0.03)	---	(0.04)
50-74.99%	---	---	---	-1.29***	---	-1.26***
	---	---	---	(0.03)	---	(0.04)
75-100%	---	---	---	-1.39***	---	-1.28***
	---	---	---	(0.04)	---	(0.05)
Students Served Under IDEA Percentage Quartile						
0-25%	---	---	---	---	---	---
	---	---	---	---	---	---
25.01-49.99%	---	---	---	0.30 ***	---	0.36***
	---	---	---	(0.07)	---	(0.09)
50-74.99%	---	---	---	2.14***	---	2.25***
	---	---	---	(0.52)	---	(0.53)
75-100%	---	---	---	3.03***	---	3.09***
	---	---	---	(0.49)	---	(0.51)
Population Density						
City: Large	---	---	---	---	---	---
	---	---	---	---	---	---
City: Mid-size	---	---	---	-0.36***	---	-0.47***
	---	---	---	(0.07)	---	(0.099)
City: Small	---	---	---	-0.07	---	-0.08
	---	---	---	(0.06)	---	(0.08)
Suburb: Large	---	---	---	0.19***	---	0.21***
	---	---	---	(0.05)	---	(0.06)
Suburb: Mid-size	---	---	---	-0.20*	---	-0.28**
	---	---	---	(0.08)	---	(0.11)
Suburb: Small	---	---	---	-0.01	---	-0.08
	---	---	---	(0.09)	---	(0.12)
Town: Fringe	---	---	---	0.04	---	-0.10
	---	---	---	(0.08)	---	(0.11)
Town: Distant	---	---	---	0.35***	---	0.29***
	---	---	---	(0.06)	---	(0.08)
Town: Remote	---	---	---	0.72***	---	0.71***
	---	---	---	(0.07)	---	(0.08)
Rural: Fringe	---	---	---	0.17**	---	0.12
	---	---	---	(0.05)	---	(0.07)
Rural: Distant	---	---	---	0.97***	---	0.92***
	---	---	---	(0.05)	---	(0.06)
Rural: Remote	---	---	---	1.83***	---	1.82***
	---	---	---	(0.06)	---	(0.07)
School Level						
Primary	---	---	---	---	---	---
	---	---	---	---	---	---
Middle	---	---	---	-1.34***	---	-1.26***
	---	---	---	(0.04)	---	(0.04)
High	---	---	---	-1.77***	---	-1.63***
	---	---	---	(0.04)	---	(0.05)
Other	---	---	---	-0.98***	---	-0.83***
	---	---	---	(0.07)	---	(0.08)

Table 2 (continued)

Constant	----------	----------	----------	-0.77***	----------	-1.08***
	----------	----------	----------	(0.05)	----------	(0.06)
/lnalpha	----------	----------	----------	----------	0.22***	0.25***
	----------	----------	----------	----------	(0.01)	(0.01)
R-Squared	z.		.z	.z		.z
Akaike Information Criterion	7.27e+05	2.06e+06	2.06e+06	1.78e+06	5.61e+05	5.54e+05
Bayesian Information Criterion	7.27e+05	2.06e+06	2.06e+06	1.78e+06	5.62e+05	5.54e+05
F						
Observations	70265	70265	70265	70265	70265	70265

Standard errors in parentheses
* p<0.05, ** p<0.01, *** p<0.001

Table 3

Regression Results for Selected Model 2015-16: Zero-Inflated Negative Binomial Regression

Out-Of-School Suspensions	IRR	Robust Std. Error	z	P>|z|	95% Confidence Interval
African American Male Students					
25.01-49.99%	1.95	.03	44.44	0.000	1.90 2.01
50-74.99%	1.80	.08	12.71	0.000	1.65 1.97
75-100%	1.17	.29	0.63	0.532	.72 1.91
Free-/Reduced-Price Lunch					
25.01-49.99%	1.70	.03	35.68	0.000	1.65 1.74
50-74.99%	2.66	.04	64.32	0.000	2.58 2.74
75-100%	3.51	.06	76.65	0.000	3.40 3.62
Students Served Under IDEA					
25.01-49.99%	.99	.03	-0.34	0.737	.92 1.06
50-74.99%	.56	.13	-2.54	0.011	.35 .87
75-100%	.23	.05	-7.44	0.000	.16 .34
Population Density					
City: Mid-Size	1.02	.02	0.88	0.380	.98 1.06
City: Small	1.03	.02	1.45	0.146	.99 1.07
Suburb: Large	.95	.01	-3.69	0.000	.92 .97
Suburb: Mid-size	.96	.02	-1.61	0.108	.92 1.01
Suburb: Small	.86	.02	-5.49	0.000	.81 .90
Town: Fringe	.72	.02	-13.05	0.000	.68 .76
Town: Distant	.66	.01	-20.51	0.000	.63 .69
Town: Remote	.57	.01	-21.73	0.000	.54 .60
Rural: Fringe	.79	.01	-12.89	0.000	.76 .82
Rural: Distant	.43	.01	-41.39	0.000	.41 .45
Rural: Remote	.28	.01	-45.54	0.000	.26 .29
School Level					
Middle	3.33	.03	121.91	0.000	3.26 3.39
High	5.46	.06	151.70	0.000	5.34 5.58
Other	3.28	.10	40.85	0.000	3.10 3.47
Constant	7.66	.15	105.04	0.000	7.37 7.95
Inflate					
African American Male Students					
25.01-49.99%	-.72	.09	-8.33	0.000	-.89 -.55
50-74.99%	-.58	.20	-2.93	0.000	-.98 -.19
75-100%	1.62	.87	1.86	0.000	-.09 3.34
Free-/Reduced-Price Lunch					
25.01-49.99%	-.73	.04	-15.89	0.000	-.81 -.66
50-74.99%	-1.26	.04	-19.20	0.000	-1.34 -1.17
75-100%	-1.28	.05	-17.03	0.000	-1.37 -1.18
Students Served Under IDEA					
25.01-49.99%	.36	.09	3.93	0.000	.19 .53
50-74.99%	2.25	.53	2.13	0.000	1.21 3.28
75-100%	3.09	.51	3.60	0.000	2.09 4.10
Population Density					
City: Mid-Size	-.47	.10	-1.44	0.000	-.66 -.27
City: Small	-.08	.08	0.06	0.294	-.24 .07
Suburb: Large	.21	.06	1.66	0.000	.10 .33
Suburb: Mid-size	-.28	.11	-3.34	0.010	-.48 -.07
Suburb: Small	-.08	.12	-1.82	0.504	-.32 .16
Town: Fringe	-.10	.11	0.21	0.358	-.31 .11
Town: Distant	.29	.08	0.85	0.000	.13 .45
Town: Remote	.71	.08	4.60	0.000	.54 .87
Rural: Fringe	.12	.07	-2.10	0.068	-.01 .26
Rural: Distant	.92	.06	7.23	0.000	.79 1.04

Table 4

Goodness-Of-Fit Model Comparison: 2015-16

PRM		**BIC= 2.063e+06**	**AIC= 2.063e+06**	**Prefer**	**Over**	**Evidence**
	vs. NBRM	BIC = 561599.637	dif = 1.502e+06	NBRM	PRM	Very Strong
		AIC = 561370.637	dif = 1.502e+06	NBRM	PRM	
		LRX2 = 1.50e+06	prob = 0.000	NBRM	PRM	p = 0.000
	vs. ZIP	BIC = 1.777e+06	dif = 285959.078	ZIP	PRM	Very Strong
		AIC = 1.777e+06	dif = 286178.919	ZIP	PRM	
		Vuong = .	prob = .	ZIP	PRM	p = .
	vs. ZINB	BIC = 554460.869	dif = 1.509e+06	ZINB	PRM	Very Strong
		AIC = 554012.028	dif = 1.509e+06	ZINB	PRM	
NBRM		**BIC=561599.637**	**AIC=561370.637**	**Prefer**	**Over**	**Evidence**
	vs. ZIP	BIC = 1.777e+06	dif = -1.216e+06	NBRM	ZIP	Very Strong
		AIC = 1.777e+06	dif = -1.216e+06	NBRM	ZIP	
	vs ZINB	BIC = 554460.869	dif = 7138.768	ZINB	NBRM	Very Strong
		AIC = 549498.218	dif = 7358.609	ZINB	NBRM	
		Vuong = .	prob = .	ZINB	NBRM	p = .
ZIP		**BIC= 1.777e+06**	**AIC= 1.777e+06**	**Prefer**	**Over**	**Evidence**
	vs. ZINB	BIC = 554460.869	dif = 1.223e+06	ZINB	ZIP	Very Strong
		AIC = 554012.028	dif = 1.223e+06	ZINB	ZIP	
		LRX2 = 1.22e+06	prob = 0.000	ZINB	ZIP	p = 0.000

Note. Table of AIC, BIC, and Chi-Square Likelihood Ratio tests used to determine best-fitting model. The ZINB regression model emerged as the model of best fit. Results were not reported for the Vuong test. It is not appropriate for testing zero-inflated models.

Table 5 *Descriptive Statistics: 2017-18*

	n	Proportion	School Mean	School Std. Dev.	Min	Max	Mean of Out-of-School Suspension	Std. Dev. Out-of-School Suspension
Total Number: Students Assigned Out-of-School Suspension	1910365	-----	28.08	47.34	0	883	-----	-----
Total Number: African American Male	2821981	-----	41.48	71.66	0	1299	-----	-----
Percent Quartiles: African American Male								
0-25%	62555	91.95	-----	-----	-----	-----	26.12	44.53
25.5-49.99%	4817	7.08	-----	-----	-----	-----	70.73	91.68
50-74.99%	646	0.95	-----	-----	-----	-----	70.16	83.89
75-100%	10	0.01	-----	-----	-----	-----	53.33	59.70
Total Number: Free-/Reduced-Price Lunch	19220915	-----	301.69	267.06	0	4329	-----	-----
Percent Quartiles: Free-/Reduced-Price Lunch								
0-25%	11845	18.59	-----	-----	-----	-----	13.59	24.85
25.5-49.99%	18538	29.10	-----	-----	-----	-----	24.23	39.52
50-74.99%	17228	24.04	-----	-----	-----	-----	32.18	51.71
75-100%	16100	25.27	-----	-----	-----	-----	38.01	56.38
Total Number: IDEA	5180344	-----	76.15	56.15	0	1209	-----	-----
Percent Quartiles: IDEA								
0-25%	65871	96.83	-----	-----	-----	-----	28.12	47.23
25.5-49.99%	2085	3.06	-----	-----	-----	-----	27.65	51.30
50-74.99%	33	0.05	-----	-----	-----	-----	9.12	14.77
75-100%	39	0.06	-----	-----	-----	-----	11.36	20.60
Total Enrollment:	40334027	-----	568.43	423.64	10	5170	-----	-----
Population Density								
Large City	7345	10.80	-----	-----	-----	-----	35.81	58.04
Mid-Size City	3744	5.50	-----	-----	-----	-----	42.71	62.34
Small City	4480	6.59	-----	-----	-----	-----	40.01	60.74
Large Suburban	19935	29.30	-----	-----	-----	-----	28.22	49.11
Mid-Size Suburban	2463	3.62	-----	-----	-----	-----	31.82	47.34
Small Suburban	1403	2.06	-----	-----	-----	-----	28.92	40.43
Fringe Town	2164	3.18	-----	-----	-----	-----	25.30	36.64
Distant Town	4444	6.53	-----	-----	-----	-----	28.39	41.53
Remote Town	2755	4.05	-----	-----	-----	-----	25.31	40.78
Fringe Rural	8397	12.34	-----	-----	-----	-----	28.63	43.18
Distant Rural	6953	10.22	-----	-----	-----	-----	14.98	24.21
Remote Rural	3945	5.80	-----	-----	-----	-----	8.01	17.10
School Level								
Primary	40901	60.13	-----	-----	-----	-----	11.95	19.74
Middle	13179	19.37	-----	-----	-----	-----	47.53	53.09
High	12759	18.76	-----	-----	-----	-----	60.19	73.00
Other	982	1.44	-----	-----	-----	-----	17.24	36.28
Secondary	204	0.30					50.85	73.23

Note: Overall school participant information descriptive statistics. Only schools with enrollment of 10 or greater were included in the sample.

Table 6

Model Comparison Table: 2017-18

	(1) Poisson	(2) Robust Poisson	(3) Over-Dispersed Poisson	(4) Zero-Inflated Poisson	(5) Negative Binomial	(6) Zero-Inflated Negative Binomial
African American Male Student Percentage Quartile						
0-25%	----------	----------	----------	----------	----------	----------
	----------	----------	----------	----------	----------	----------
25.01-49.99%	0.59***	0.59***	0.59***	0.57***	0.76***	0.73***
	(0.00)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)
50-74.99%	0.49***	0.49***	0.49***	0.47***	0.72***	0.67***
	(0.01)	(0.05)	(0.03)	(0.05)	(0.05)	(0.05)
75-100%	-0.87***	-0.87***	-0.87**	-0.61***	-1.08**	-0.70***
	(0.07)	(0.34)	(0.37)	(0.21)	(0.48)	(0.22)
Free/Reduced-Price Lunch Eligible Percentage Quartile						
0-25%	----------	----------	----------	----------	----------	----------
	----------	----------	----------	----------	----------	----------
25.01-49.99%	0.61***	0.61***	0.61***	0.54***	0.71***	0.61***
	(0.00)	(0.02)	(0.02)	(0.02)	(0.01)	(0.02)
50-74.99%	1.01***	1.01***	1.01***	0.93***	1.20***	1.07***
	(0.00)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
75-100%	1.18***	1.18***	1.18***	1.09***	1.48***	1.35***
	(0.00)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Students Served Under IDEA Percentage Quartile						
0-25%						
25.01-49.99%	-0.12***	-0.12***	-0.12***	-0.09**	-0.05*	-0.01
	(0.00)	(0.04)	(0.03)	(0.04)	(0.03)	(0.03)
50-74.99%	-1.68***	-1.68***	-1.68***	-1.46***	-0.90***	-0.72
	(0.06)	(0.29)	(0.32)	(0.26)	(0.23)	(0.49)
75-100%	-1.76***	-1.76***	-1.76***	-1.58***	-1.41***	-1.09***
	(0.06)	(0.28)	(0.32)	(0.28)	(0.23)	(0.34)
Population Density						
City: Large						
City: Mid-size	0.20***	0.20***	0.20***	0.20***	0.14***	0.13***
	(0.00)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
City: Small	0.25***	0.25***	0.25***	0.24***	0.22***	0.22***
	(0.00)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Suburb: Large	0.07***	0.07***	0.07***	0.08***	0.03*	0.04**
	(0.00)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)
Suburb: Mid-size	0.12***	0.12***	0.12***	0.10***	0.20***	0.16***
	(0.00)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)

Table 6 (continued).

Suburb: Small	-0.03***	-0.03	-0.03	-0.05	0.07*	0.04
	(0.01)	(0.04)	(0.03)	(0.03)	(0.04)	(0.04)
Town: Fringe	-0.26***	-0.26***	-0.26***	-0.25***	-0.14***	-0.15***
	(0.00)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Town: Distant	-0.37***	-0.37***	-0.37***	-0.35***	-0.23***	-0.23***
	(0.00)	(0.03)	(0.02)	(0.03)	(0.02)	(0.02)
Town: Remote	-0.46***	-0.46***	-0.46***	-0.43***	-0.37***	-0.34***
	(0.00)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)
Rural: Fringe	-0.16***	-0.16***	-0.16***	-0.16***	-0.03*	-0.06***
	(0.00)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Rural: Distant	-0.92***	-0.92***	-0.92***	-0.86***	-0.67***	-0.64***
	(0.00)	(0.03)	(0.02)	(0.03)	(0.02)	(0.02)
Rural: Remote	-1.64***	-1.64***	-1.64***	-1.38***	-1.44***	-1.18***
	(0.01)	(0.04)	(0.03)	(0.04)	(0.03)	(0.04)
School Level						
Primary						
Middle	1.49***	1.49***	1.49***	1.36***	1.53***	1.45***
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
High	1.90***	1.90***	1.90***	1.77***	1.99***	1.89***
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Other	1.12***	1.12***	1.12***	1.18***	0.99***	1.05***
	(0.01)	(0.07)	(0.05)	(0.07)	(0.04)	(0.06)
Secondary	1.58***	1.58***	1.58***	1.48***	1.78***	1.72***
	(0.01)	(0.10)	(0.05)	(0.10)	(0.08)	(0.07)
Constant	1.61***	1.61***	1.61***	1.85***	1.33***	1.54***
	(0.00)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Inflate						
African American Male Students						
0-25%						
25.01-49.99%				-0.60***		-0.50***
				(0.07)		(0.11)
50-74.99%				-0.62***		-0.58**
				(0.18)		(0.28)
75-100%				2.62***		2.78***
				(0.81)		(0.84)
Free/Reduced-Price Lunch Eligible Percentage Quartile						
0-25%						
25.01-49.99%				-0.84***		-0.92***
				(0.03)		(0.06)
50-74.99%				-1.22***		-1.22***
				(0.04)		(0.06)
75-100%				-1.25***		-1.09***
				(0.04)		(0.06)

Table 6 (continued).

Students Served Under IDEA Percentage Quartile		
0-25%		
25.01-49.99%	0.26***	0.39***
	(0.07)	(0.10)
50-74.99%	0.92*	1.25**
	(0.55)	(0.59)
75-100%	1.74***	1.94***
	(0.48)	(0.54)
Population Density		
City: Large		
City: Mid-size	-0.17**	-0.18
	(0.07)	(0.13)
City: Small	-0.07	0.01
	(0.06)	(0.11)
Suburb: Large	0.08*	0.13*
	(0.05)	(0.08)
Suburb: Mid-size	-0.37***	-0.61***
	(0.08)	(0.18)
Suburb: Small	-0.17*	-0.39*
	(0.10)	(0.21)
Town: Fringe	0.13*	0.03
	(0.08)	(0.15)
Town: Distant	0.17***	0.10
	(0.07)	(0.12)
Town: Remote	0.51***	0.54***
	(0.07)	(0.12)
Rural: Fringe	-0.06	-0.21**
	(0.05)	(0.10)
Rural: Distant	0.69***	0.67***
	(0.05)	(0.09)
Rural: Remote	1.84***	2.03***
	(0.06)	(0.09)
School Level		
Primary		
Middle	-1.46***	-1.31***
	(0.04)	(0.07)
High	-1.64***	-1.35***
	(0.04)	(0.06)
Other	-0.34***	-0.09
	(0.09)	(0.12)
Secondary	-0.96***	-0.48
	(0.26)	(0.33)

Table 6 (continued).

Inflate: Constant				-0.70***		-1.42***
				(0.05)		(0.08)
/lnalpha					0.28***	0.00
					(0.01)	(0.01)
Observations	63708	63708	63708	63708	63708	63708
Pseudo R^2	.z	0.47	.z	.z	0.07	.z

Standard errors are in parenthesis
**** p<0.01, ** p<0.05, * p<0.1*

Table 7

Regression Results for Selected Model 2017-18: Zero-Inflated Negative Binomial Regression

Out-Of-School Suspensions	IRR	Robust Std. Error	z	P>|z|	95% Confidence Interval	
African American Male Students						
25.01-49.99%	2.06	.04	41.87	0.000	2.00	2.14
50-74.99%	1.95	.11	12.27	0.000	1.75	2.17
75-100%	.50	.11	-3.12	0.002	.32	.77
Free-/Reduced-Price Lunch						
25.01-49.99%	1.84	.03	39.14	0.000	1.78	1.89
50-74.99%	2.93	.05	68.41	0.000	2.84	3.02
75-100%	3.87	.07	78.04	0.000	3.74	4.01
Students Served Under IDEA						
25.01-49.99%	.99	.03	-0.37	0.710	.92	1.06
50-74.99%	.49	.24	-1.48	0.139	.19	1.26
75-100%	.33	.11	-3.26	0.001	.17	.65
Population Density						
City: Mid-Size	1.14	.03	5.63	0.000	1.09	1.19
City: Small	1.24	.03	9.46	0.000	1.19	1.30
Suburb: Large	1.04	.02	2.29	0.022	1.01	.1.08
Suburb: Mid-size	1.18	.04	5.39	0.000	1.11	1.25
Suburb: Small	1.04	.04	1.05	0.292	.97	1.11
Town: Fringe	.86	.03	-5.01	0.000	.81	.91
Town: Distant	.79	.02	-9.66	0.000	.76	.83
Town: Remote	.71	.02	-11.63	0.000	.68	.76
Rural: Fringe	.94	.02	-2.79	0.005	.91	.98
Rural: Distant	.53	.01	-25.72	0.000	.50	.55
Rural: Remote	.31	.01	-29.11	0.000	.28	.33
School Level						
Middle	4.25	.05	130.67	0.000	4.16	4.34
High	6.64	.08	153.27	0.000	6.49	6.81
Other	2.85	.16	18.21	0.000	2.54	3.18
Secondary	5.58	.41	23.49	0.000	4.83	6.44
Constant	4.68	.10	73.47	0.000	4.49	4.88
Inflate						
African American Male Students						
25.01-49.99%	-.50	.11	-4.77	0.000	-.71	-.30
50-74.99%	-.58	.28	-2.08	0.037	-1.13	-.03
75-100%	2.78	.84	3.32	0.001	1.14	4.43
Free-/Reduced-Price Lunch						
25.01-49.99%	-.92	.06	-15.89	0.000	-1.03	-.81
50-74.99%	-1.22	.06	-19.20	0.000	-1.35	-1.10
75-100%	-1.09	.06	-17.03	0.000	-1.21	-.96
Students Served Under IDEA						
25.01-49.99%	.39	.10	3.93	0.000	.20	.58
50-74.99%	1.25	.59	2.13	0.033	.10	2.40
75-100%	1.94	.54	3.60	0.000	.88	3.00
Population Density						
City: Mid-Size	-.18	.13	-1.44	0.149	-.43	.06
City: Small	.01	.11	0.06	0.954	-.20	.22
Suburb: Large	.13	.08	1.66	0.098	-.02	.29
Suburb: Mid-size	-.61	.18	-3.34	0.001	-.97	-.25
Suburb: Small	-.39	.21	-1.82	0.068	-.80	.03
Town: Fringe	.03	.15	0.21	0.831	-.26	.33
Town: Distant	.10	.12	0.85	0.393	-.13	.34
Town: Remote	.54	.12	4.60	0.000	.31	.77
Rural: Fringe	-.21	.10	-2.10	0.036	-.41	-.01

Table 7 (continued).

Rural: Distant	.67	.09	7.23	0.000	.49	.85
Rural: Remote	2.03	.09	22.51	0.000	1.85	2.21
School Level						
Middle	-1.3	.07	-19.66	0.000	-1.4	-1.18
High	-1.35	.06	-21.76	0.000	-1.47	-1.23
Other	-.09	.12	-0.73	0.464	-.32	.146
Secondary	-.48	.33	-1.46	0.145	-1.13	.166
Constant	-1.4	.08	-17.74	0.000	-1.58	-1.26
lnalpha	.00	.01	0.01	0.989	-.017	.018
alpha	1.00	.01			.98	1.02
Mean Counts of Students Assigned out-of-school suspension	28.08	Std. Dev. Mean Counts of Students Assigned out-of-school suspension			47.34	
Number of Observations	68028	Wald $Chi^2(24)$			37239.48	
Prob > Chi^2	0.0000	Akaike Information Criterion (AIC)			486613.38	

Note. Regression results from the model of best-fit, the Zero-Inflated Negative Binomial regression model.

Table 8

Goodness-Of-Fit Model Comparison: 2017-18

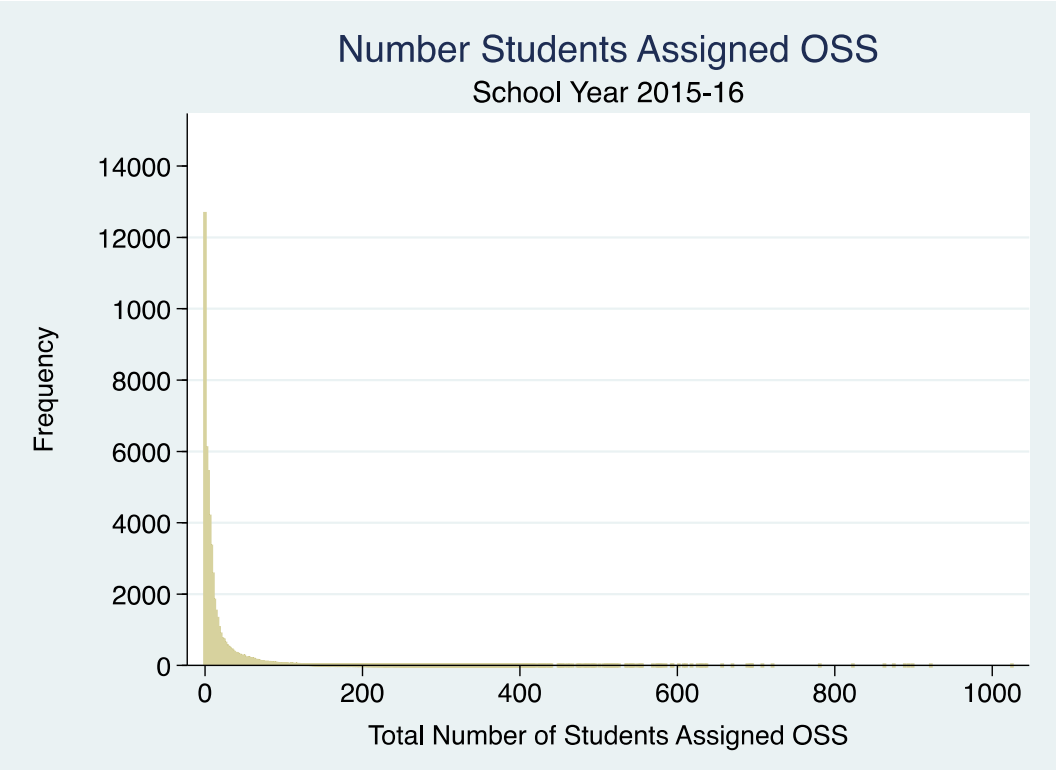
PRM		**BIC = 1.795e+06**	**AIC= 1.795e+06**	**Prefer**	**Over**	**Evidence**
	vs. NBRM	BIC = 491003.805	dif = 1.304e+06	NBRM	PRM	Very Strong
		AIC = 490768.191	dif = 1.304e+06	NBRM	PRM	
		LRX2 = 1.30e+06	prob = 0.000	NBRM	PRM	p = 0.000
	vs. ZIP	BIC = 1.567e+06	dif = 228111.852	ZIP	PRM	Very Strong
		AIC = 1.566e+06	dif = 228338.404	ZIP	PRM	
		Vuong = .	prob = .	ZIP	PRM	p = .
	vs. ZINB	BIC = 488728.958	dif = 1.306e+06	ZINB	PRM	Very Strong
		AIC = 488266.793	dif = 1.306e+06	ZINB	PRM	
NBRM		**BIC = 491003.805**	**AIC =490768.191**	**Prefer**	**Over**	**Evidence**
	vs. ZIP	BIC = 1.567e+06	dif = -1.076e+06	NBRM	ZIP	Very Strong
		AIC = 1.566e+06	dif = -1.075e+06	NBRM	ZIP	
	vs ZINB	BIC = 488728.958	dif = 2274.847	ZINB	NBRM	Very Strong
		AIC = 488266.793	dif = 2501.398	ZINB	NBRM	
		Vuong = .	prob = .	ZINB	NBRM	p = .
ZIP		**BIC = 1.567e+06**	**AIC = 1.566e+06**	**Prefer**	**Over**	**Evidence**
	vs. ZINB	BIC = 488728.958	dif = 1.078e+06	ZINB	ZIP	Very Strong
		AIC = 488266.793	dif = 1.078e+06	ZINB	ZIP	
		LRX2 = 1.08e+06	prob = 0.000	ZINB	ZIP	p = 0.000

Note: Table of AIC, BIC, and Chi-Square Likelihood Ratio tests used to determine best-fitting model. The ZINB regression model emerged as the model of best fit. Results were not reported for the Vuong test. It is not appropriate for testing zero-inflated models.

Figures

Figure 1

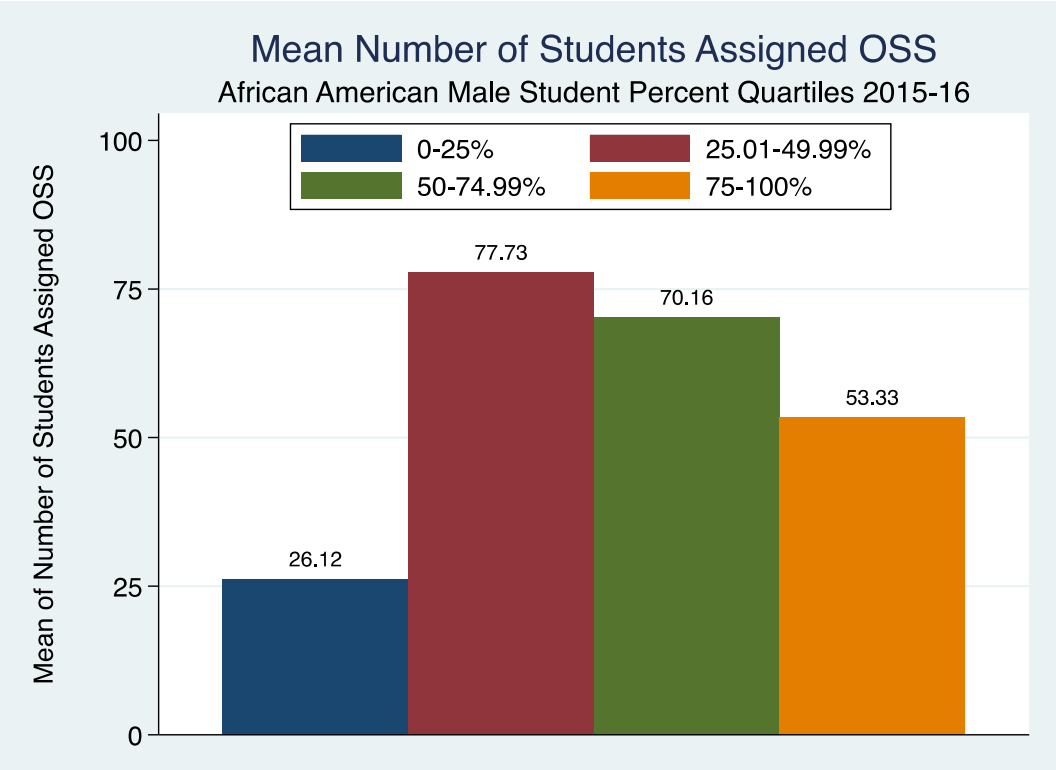
Frequency of Students Assigned Out-Of-School Suspension for 2015-16



Note. Graph depicting the outcome of interest, count of out-of-school suspensions.

Figure 2

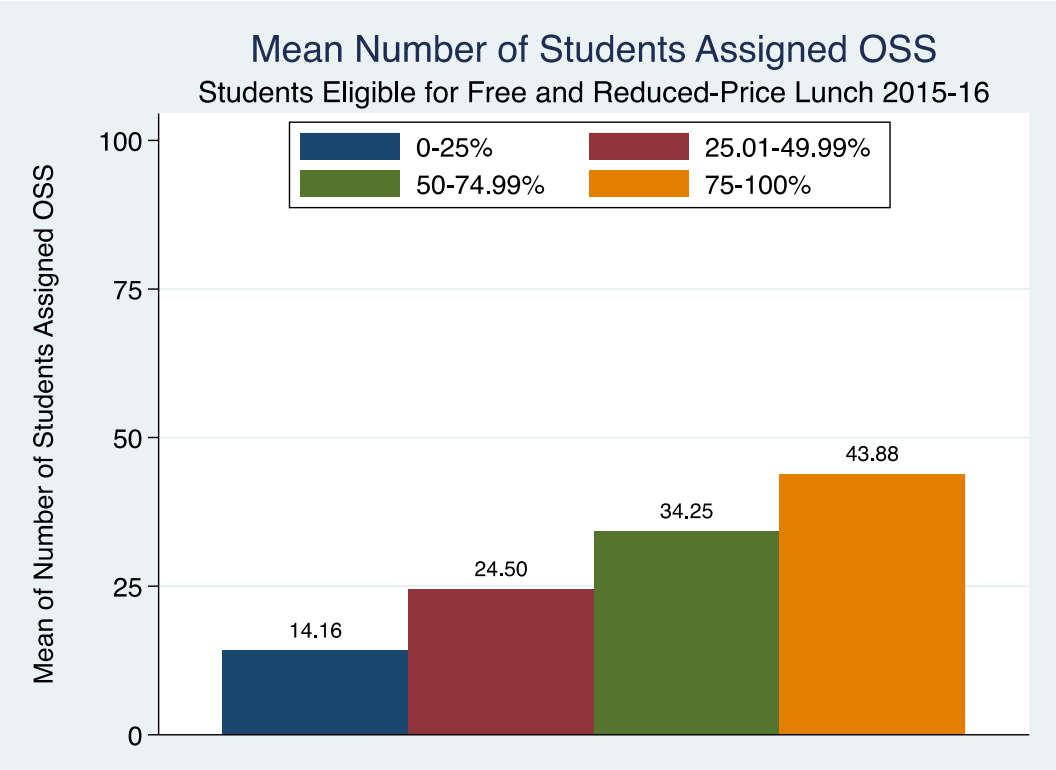
Mean Number of Out-Of-School Suspensions by Schools' African American Male Percent Quartiles 2015-16



Note. Graph depicting mean number of out-of-school suspensions by schools' African American male student percent quartiles for school year 2015-16.

Figure 3

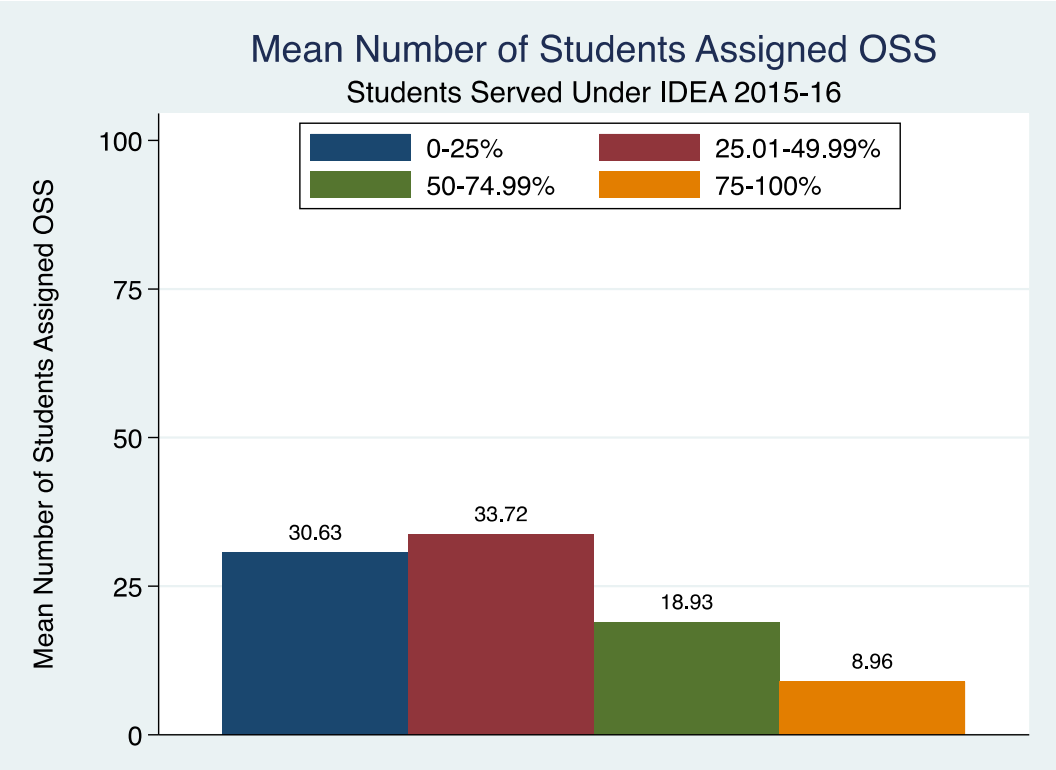
Mean Number of Out-Of-School Suspensions by Schools' Percent Quartiles of Students Eligible for Free-/Reduced-Price Lunch 2015-16



Note. Graph depicting mean number of out-of-school suspensions by schools' percent quartiles of students eligible for free and reduced-price lunch 2015-16.

Figure 4

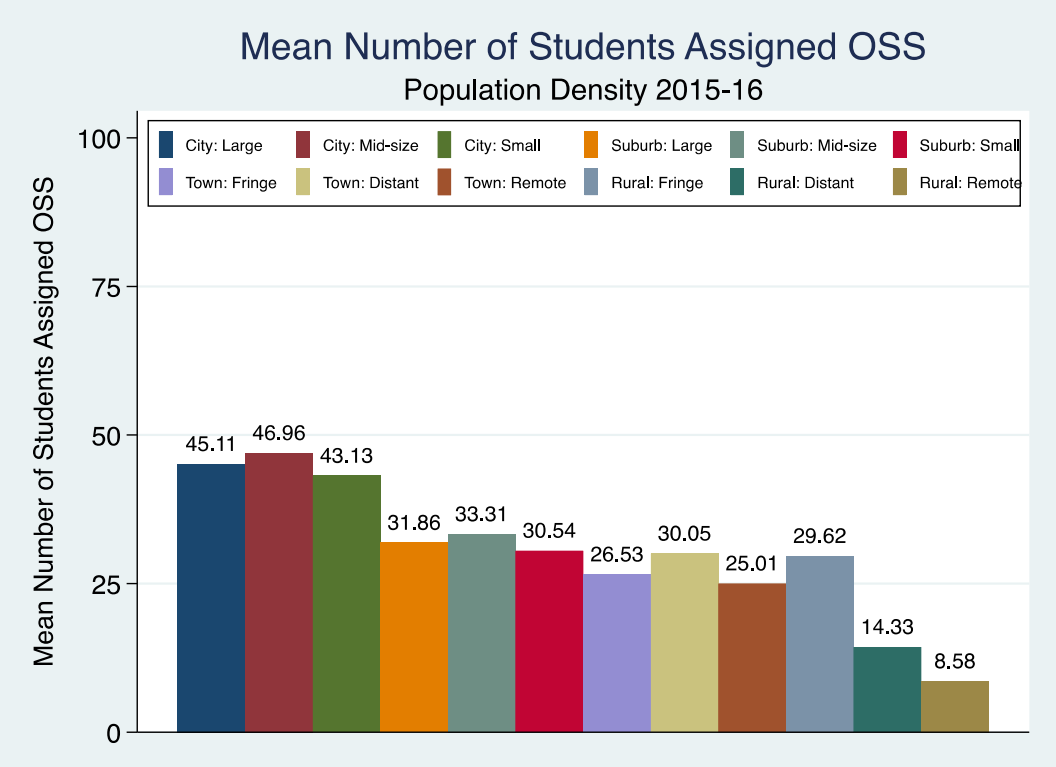
Mean Number of Out-Of-School Suspensions by Schools' Percent Quartiles of Students Served Under IDEA 2015-16



Note. Graph depicting mean number of out-of-school suspensions by schools' percent quartiles for students served under IDEA for school year 2015-16.

Figure 5

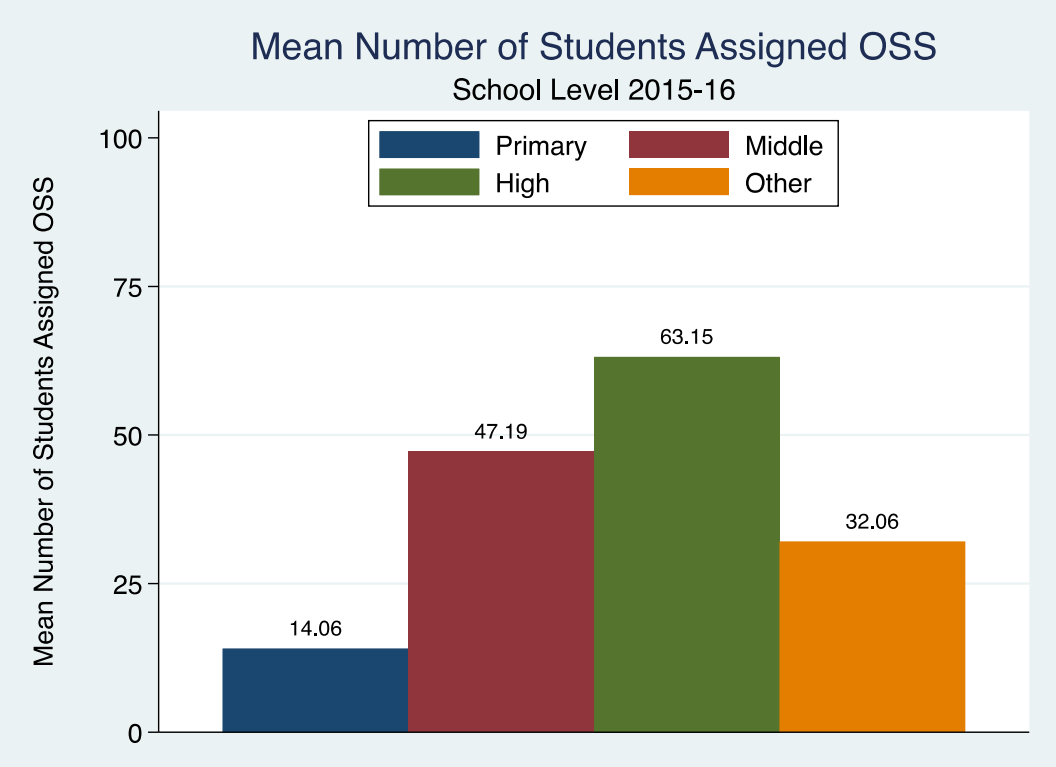
Mean Number of Out-Of-School Suspensions by Schools' Location Population Densities 2015-16



Note. Graph depicting mean number of out-of-school suspensions by the population density of the community in which the school is located for school year 2015-16.

Figure 6

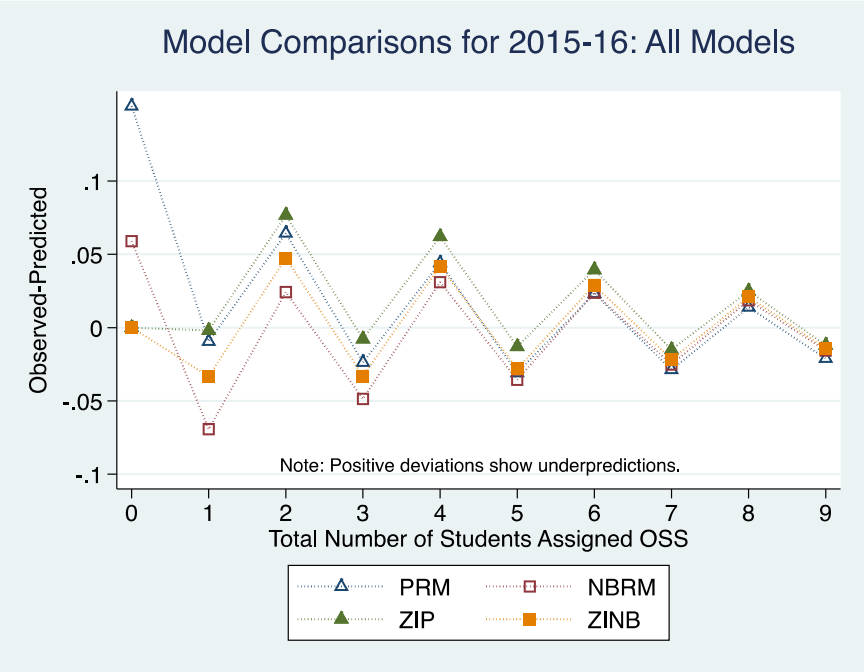
Mean Number of Out-Of-School Suspensions by School Levels 2015-16



Note. Graph depicting mean number of out-of-school suspensions by school level for school year 2015-16.

Figure 7

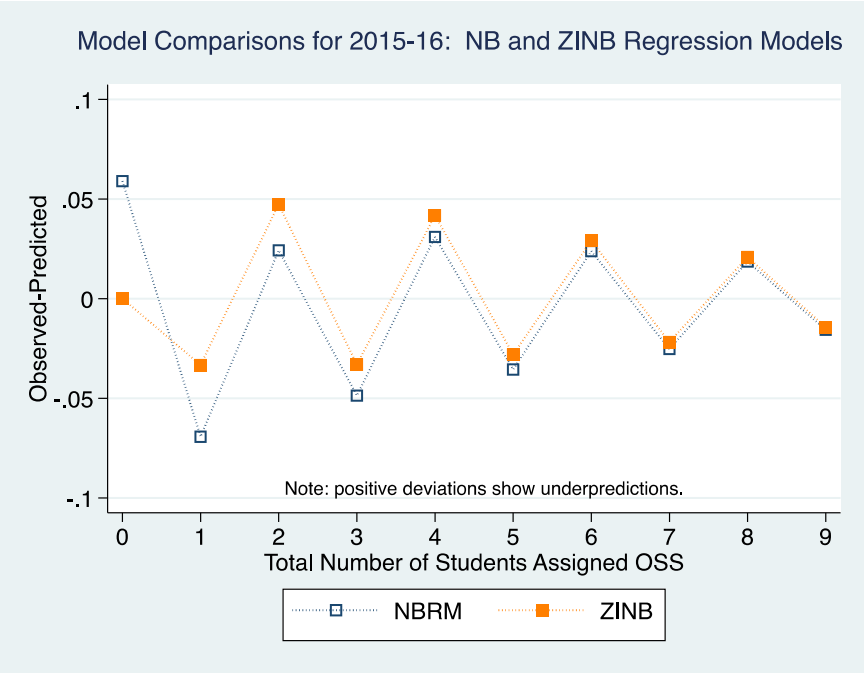
Comparison of the Poisson, Zero-Inflated Poisson, Negative Binomial, and Zero-Inflated Regression Models



Note. Visual depiction of model comparison among the Poisson, Zero-Inflated Poisson, Negative Binomial, and Zero-Inflated Negative Binomial regression models.

Figure 8

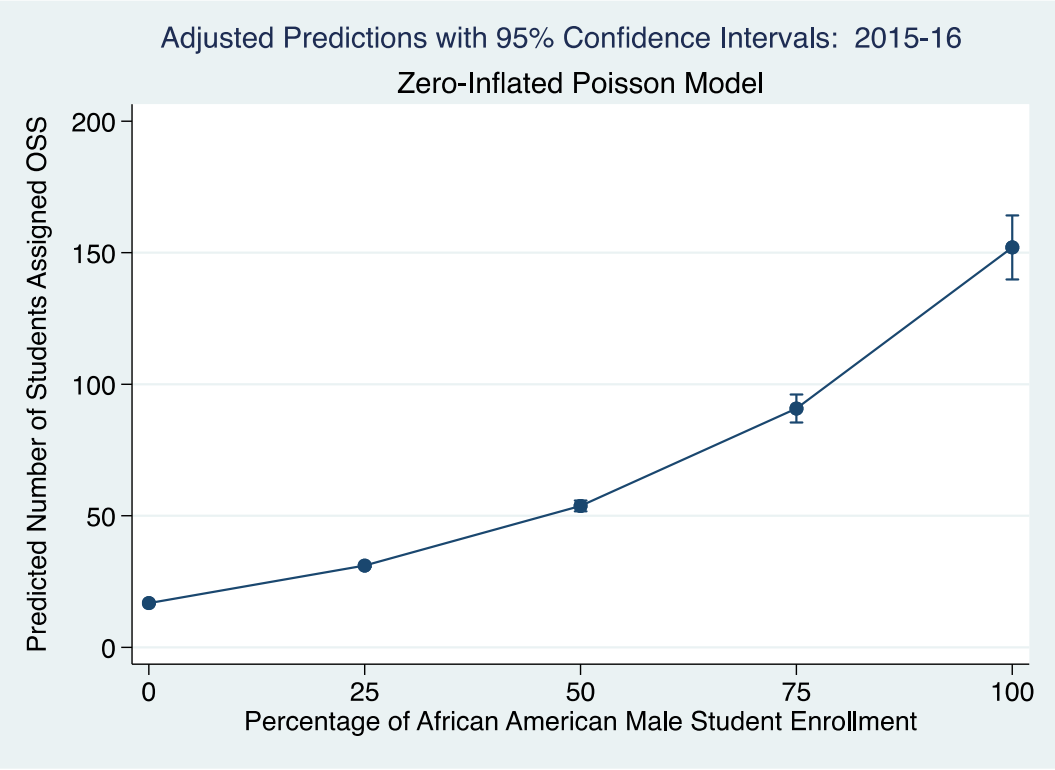
Comparison of the Negative Binomial and Zero-Inflated Negative Binomial Regression Models



Note. Visual depiction of model comparison between the Negative Binomial and Zero-Inflated Negative Binomial regression models.

Figure 9

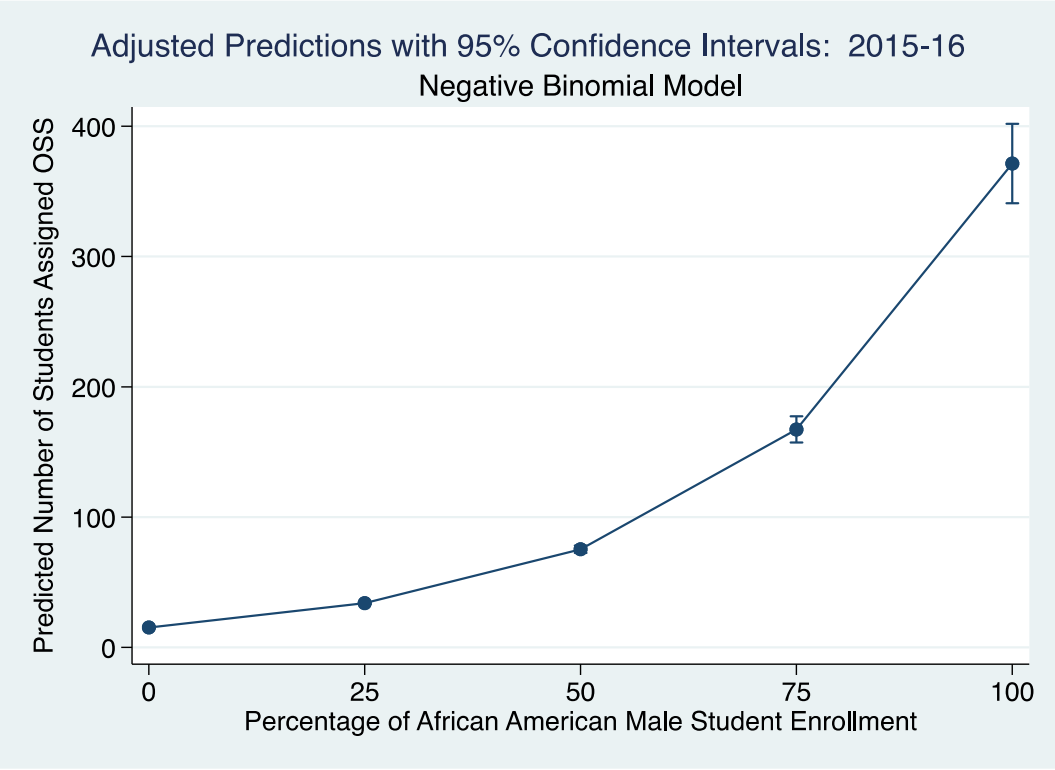
Adjusted Predictions by African American Male Student Enrollment with 95% Confidence Intervals for Number of Out-Of-School Suspensions Utilizing the Zero-Inflated Poisson Model



Note. Predicted number of out-of-school suspensions based on schools' percent African American male students utilizing the Zero-Inflated Poisson Model.

Figure 10

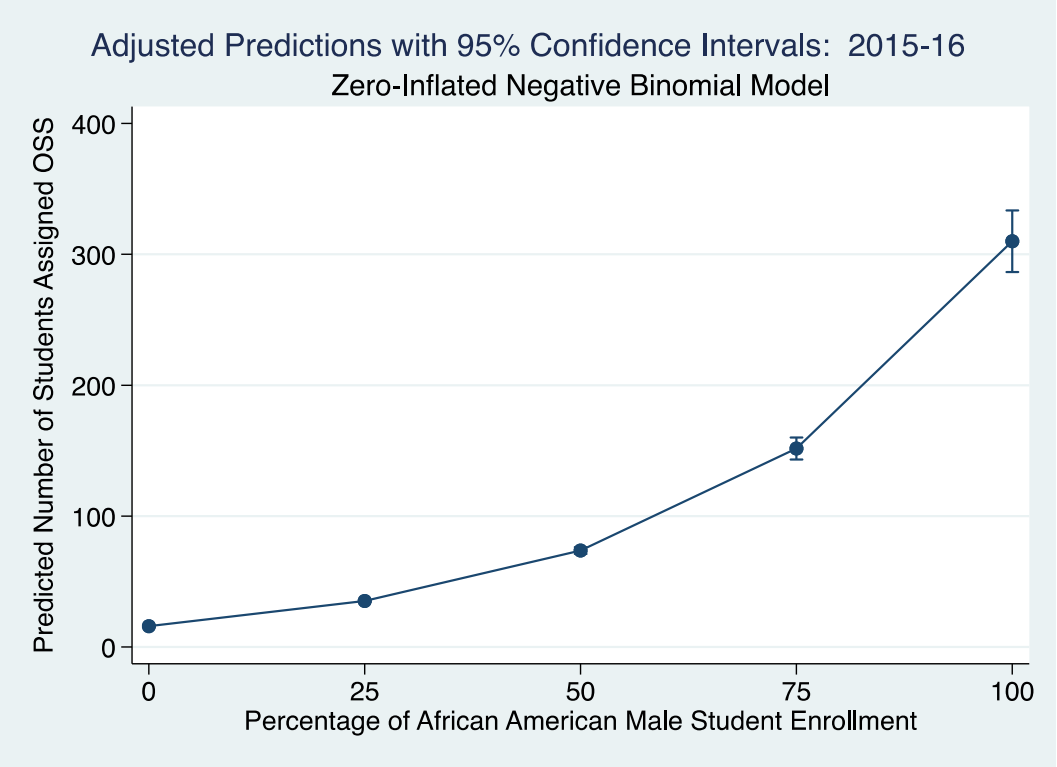
Adjusted Predictions by African American Male Student Enrollment with 95% Confidence Intervals for Number of Out-Of-School Suspensions Utilizing the Negative Binomial Model



Note. Predicted number of out-of-school suspensions based on schools' percent African American male students utilizing the Negative Binomial Model.

Figure 11

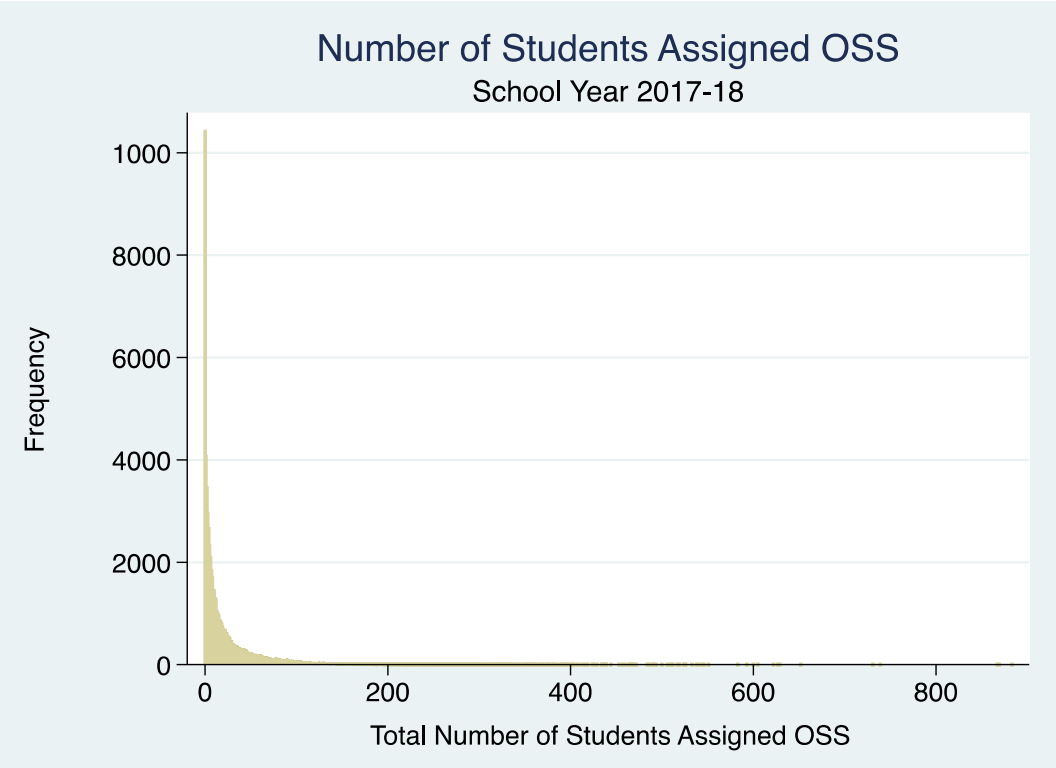
Adjusted Predictions by African American Male Student Enrollment with 95% Confidence Intervals for Number of Out-Of-School Suspensions Utilizing the Zero-Inflated Negative Binomial Model



Note. Predicted number of out-of-school suspensions based on schools' percent African American male students utilizing the Zero-Inflated Negative Binomial Model.

Figure 12

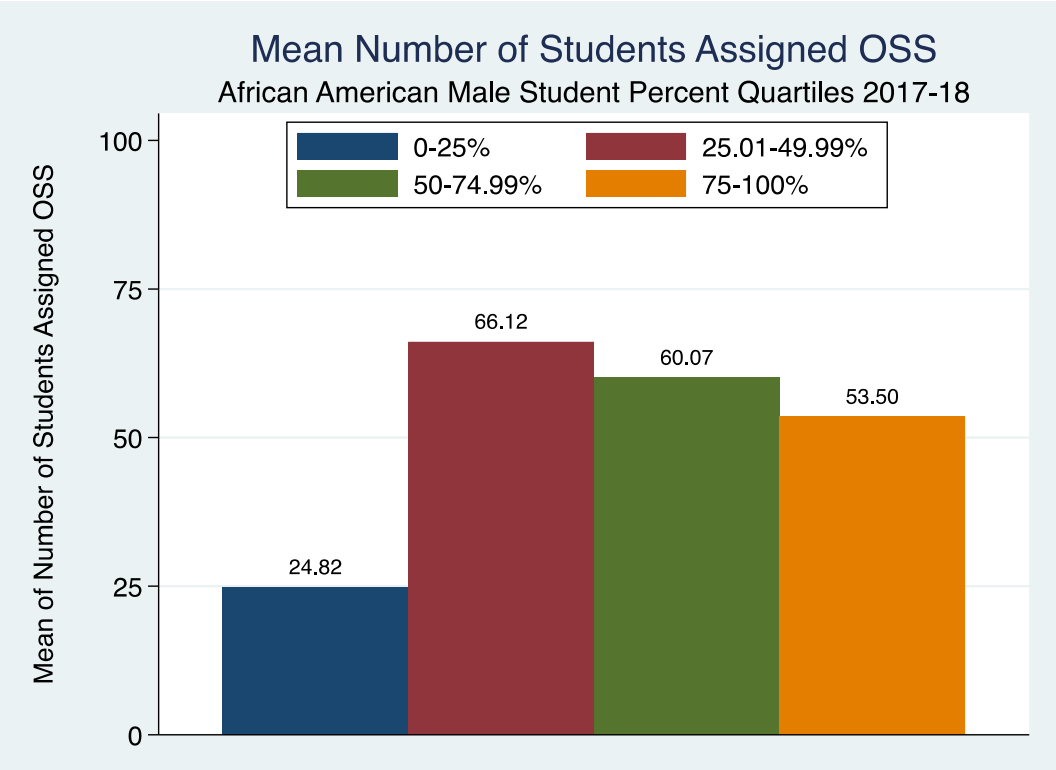
Frequency of Students Assigned Out-Of-School Suspensions for 2017-18



Note. Graph depicting the outcome of interest, count of out-of-school suspensions.

Figure 13

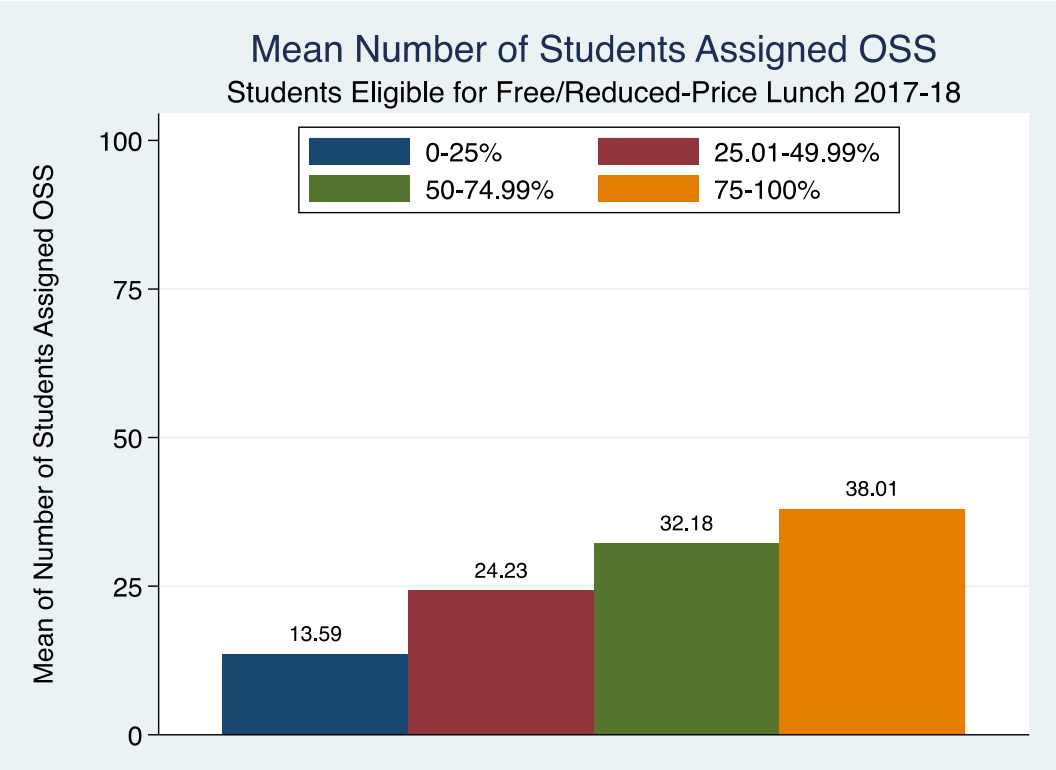
Mean Number of Out-Of-School Suspensions by Schools' African American Male Percent Quartiles 2017-18



Note. Graph depicting mean number of out-of-school suspensions by schools' African American male student percent quartiles for school year 2017-18.

Figure 14

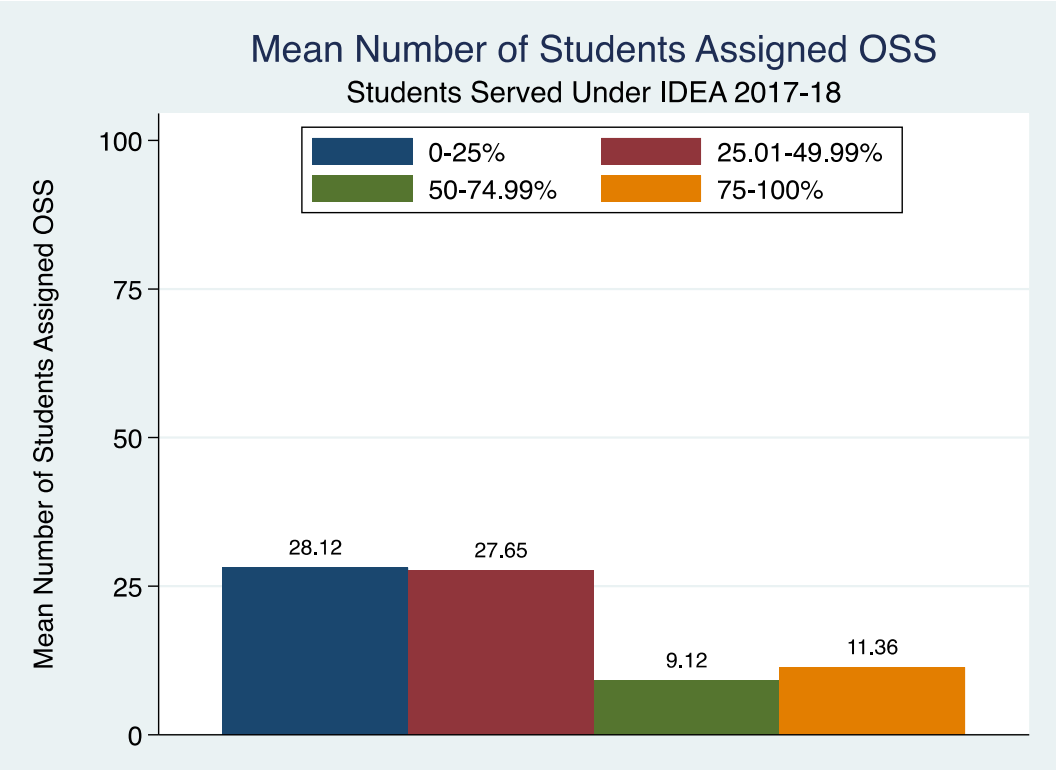
Mean Number of Out-Of-School Suspensions by Schools' Percent Quartiles of Students Eligible for Free-/Reduced-Price Lunch 2017-18



Note. Graph depicting mean number of out-of-school suspensions by schools' percent quartiles of students eligible for free and reduced-price lunch 2017-18.

Figure 15

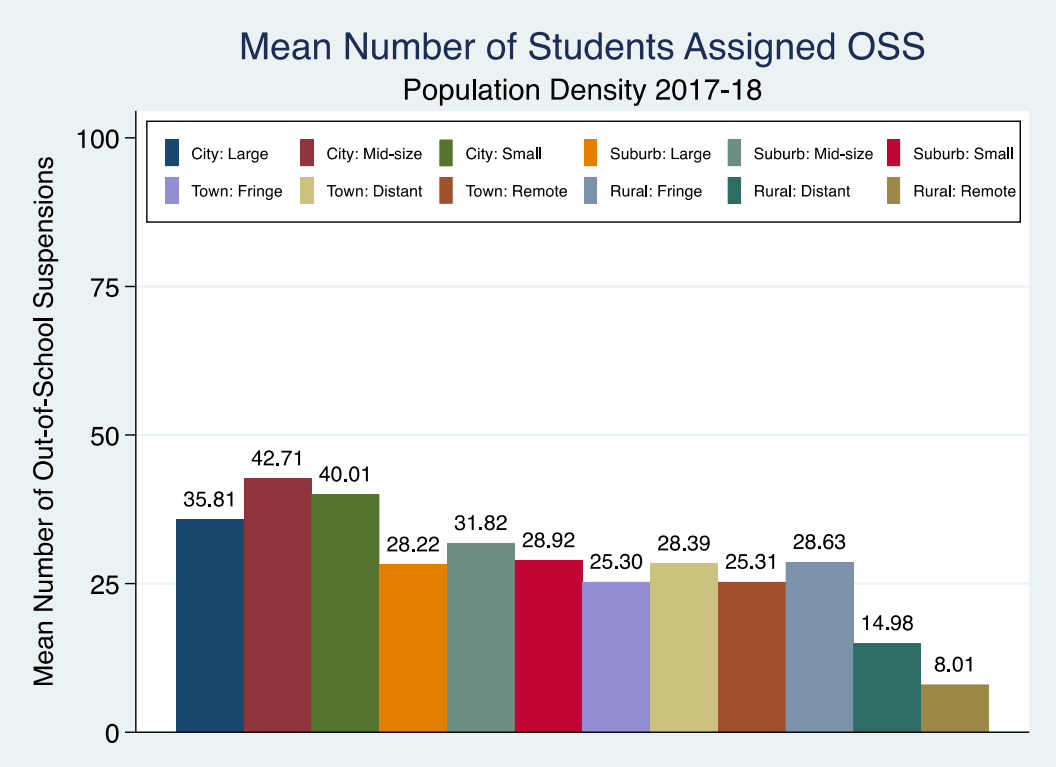
Mean Number of Out-Of-School Suspensions by Schools' Percent Quartiles of Students Served Under IDEA 2017-18



Note. Graph depicting mean number of out-of-school suspensions by schools' percent quartiles for students served under IDEA for school year 2017-18.

Figure 16

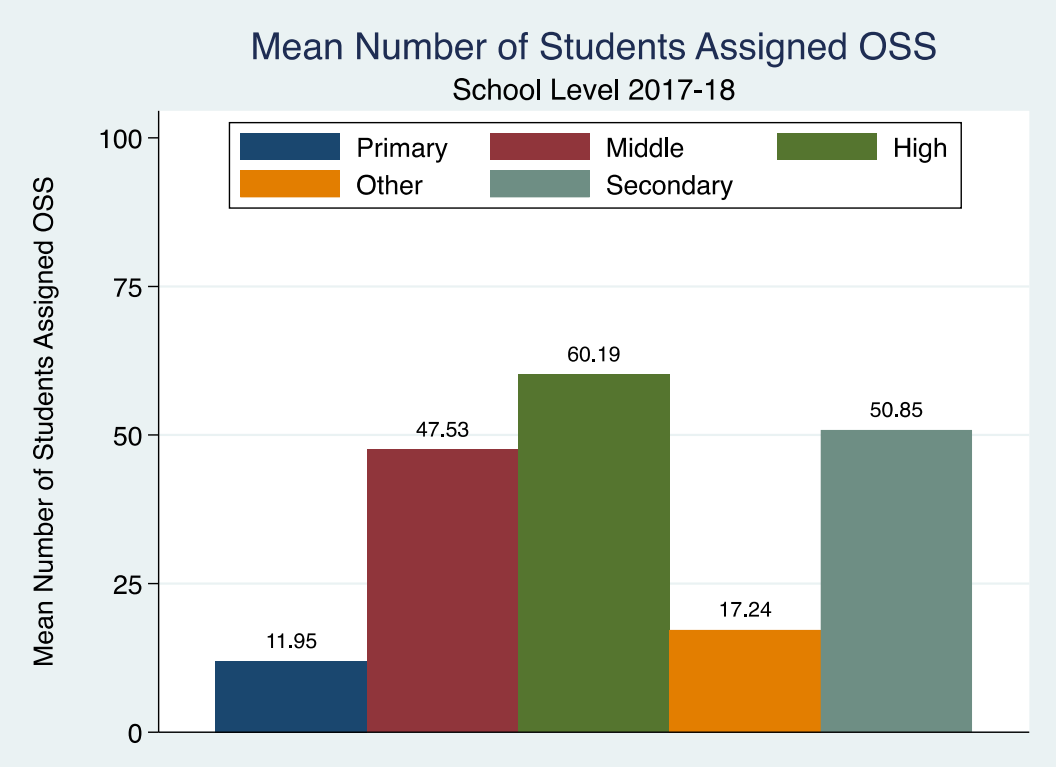
Mean Number of Out-Of-School Suspensions by Schools' Location Population Densities 2017-18



Note. Graph depicting mean number of out-of-school suspensions by the population density of the community in which the school is located for school year 2017-18.

Figure 17

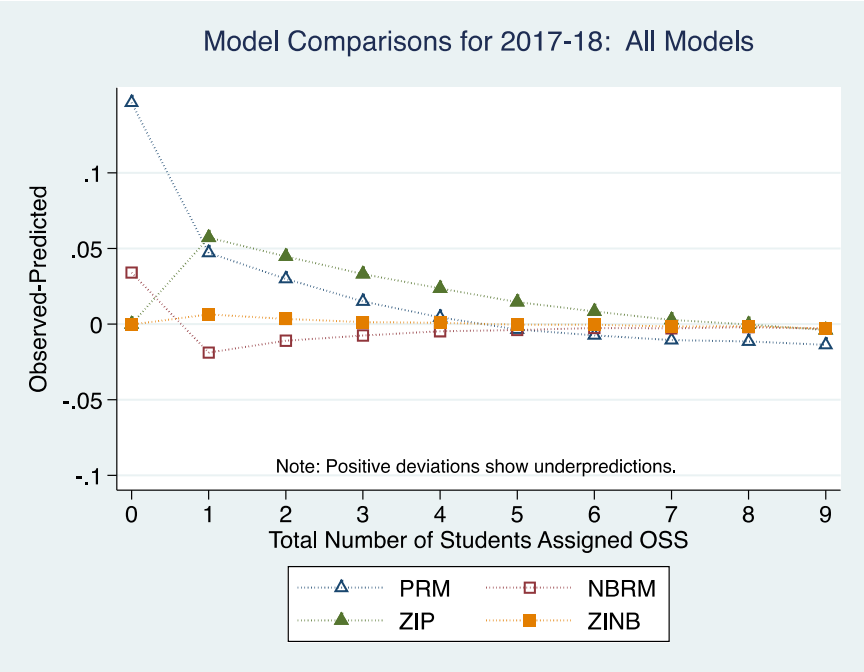
Mean Number of Out-Of-School Suspensions by School Levels 2017-18



Note. Graph depicting mean number of out-of-school suspensions by school level for school year 2017-18.

Figure 18

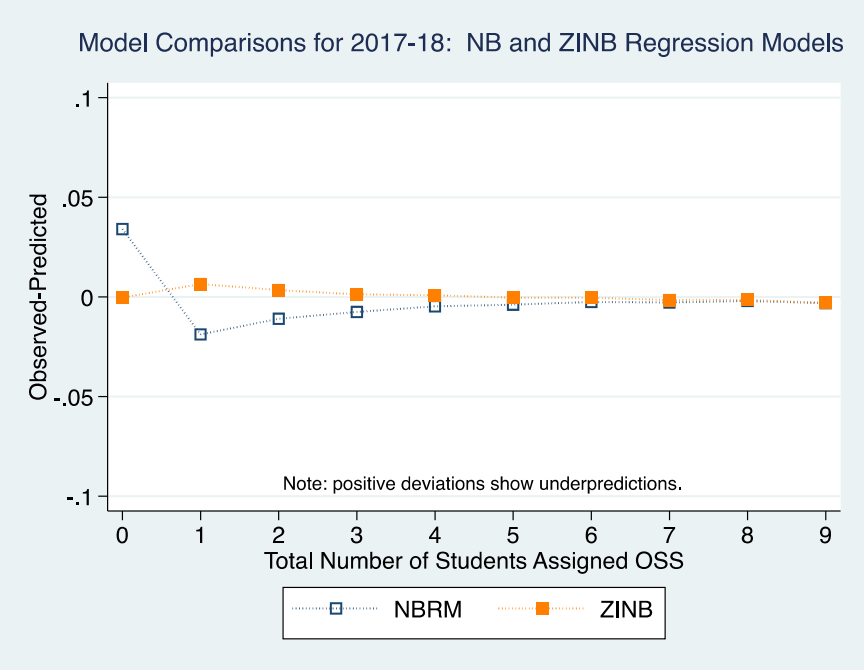
Comparison of the Poisson, Zero-Inflated Poisson, Negative Binomial, and Zero-Inflated Regression Models



Note. Visual depiction of model comparison among the Poisson, Zero-Inflated Poisson, Negative Binomial, and Zero-Inflated Negative Binomial regression models.

Figure 19

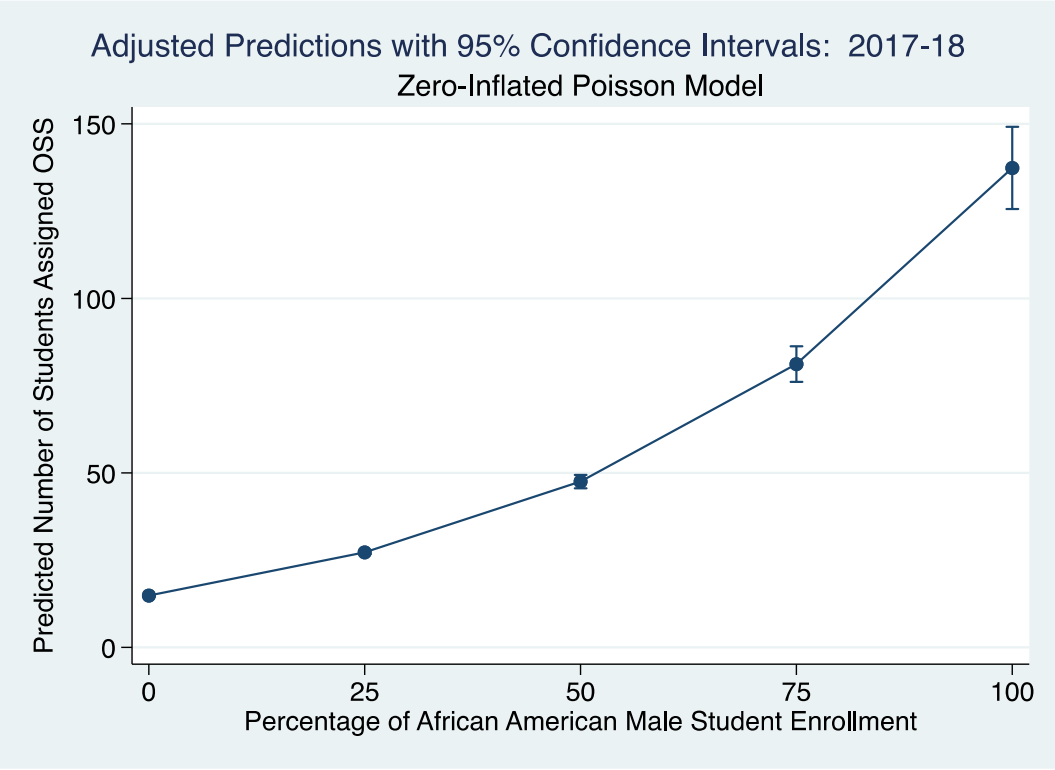
Comparison of the Negative Binomial and Zero-Inflated Negative Binomial Regression Models



Note. Visual depiction of model comparison between the Negative Binomial and Zero-Inflated Negative Binomial regression models.

Figure 20

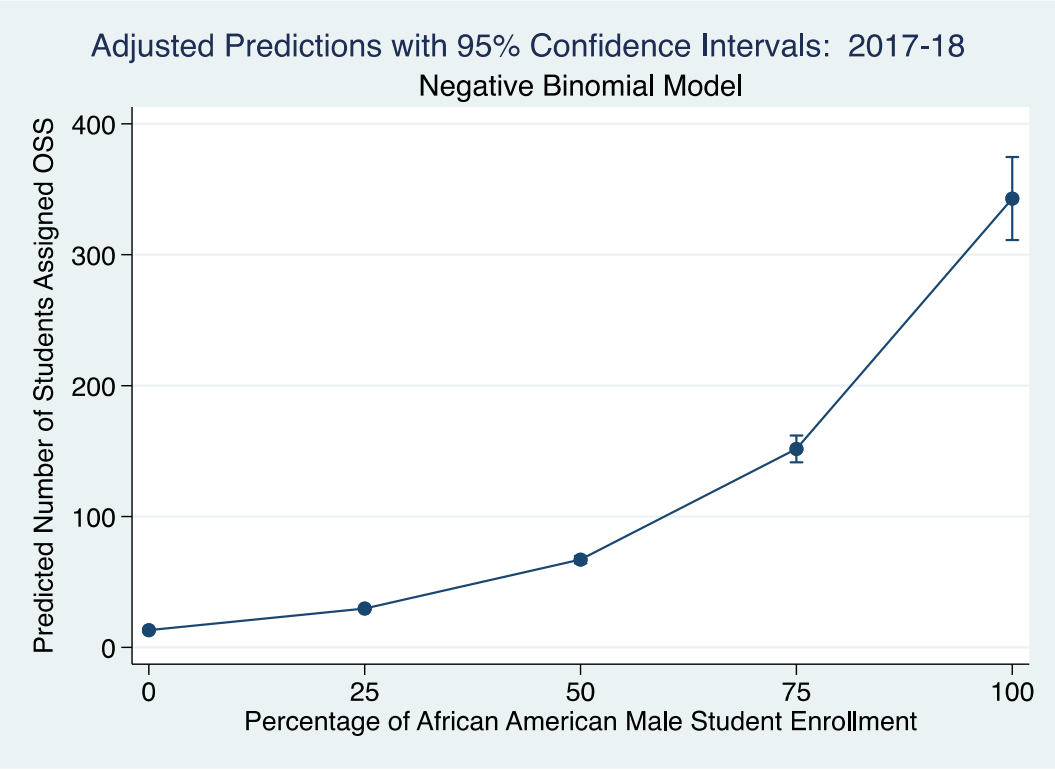
Adjusted Predictions by African American Male Student Enrollment with 95% Confidence Intervals for Number of Out-Of-School Suspensions Utilizing the Zero-Inflated Poisson Model



Note. Predicted number of out-of-school suspensions based on African American male students' percent using the Zero-Inflated Poisson Model.

Figure 21

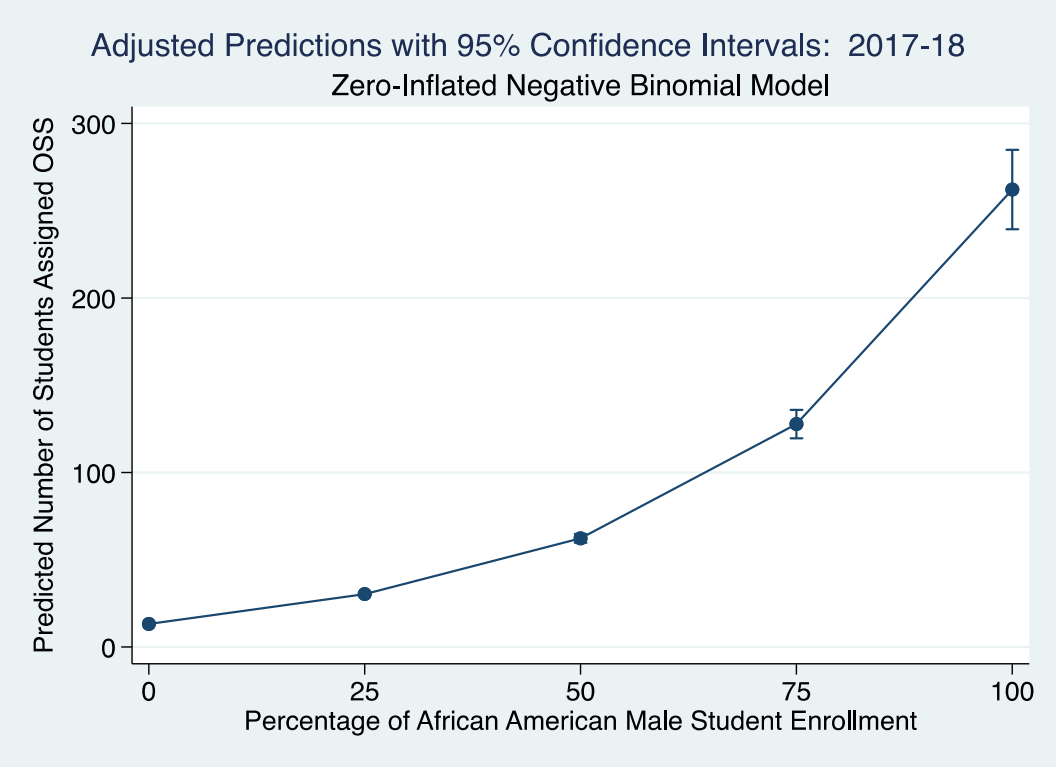
Adjusted Predictions by African American Male Student Enrollment with 95% Confidence Intervals for Number of Out-Of-School Suspensions Utilizing the Negative Binomial Model



Note. Predicted number of out-of-school suspensions based on African American male students' percent using the Negative Binomial Model.

Figure 22

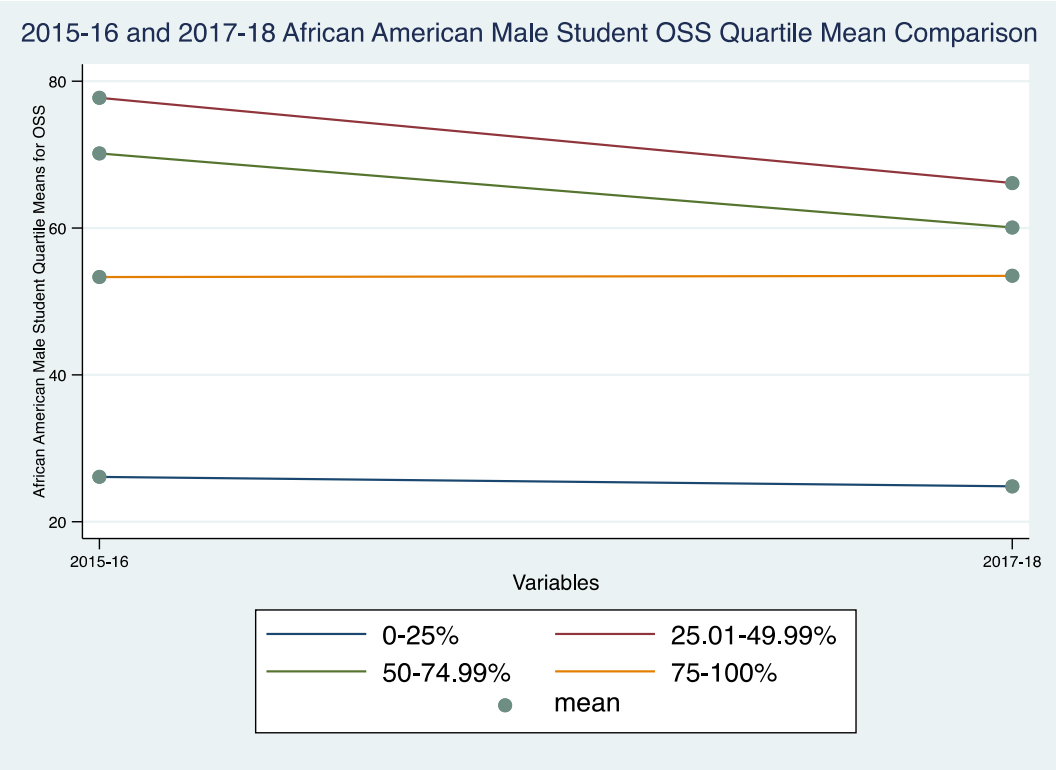
Adjusted Predictions by African American Male Student Enrollment with 95% Confidence Intervals for Number of Out-Of-School Suspensions Utilizing the Zero-Inflated Negative Binomial Model



Note. Predicted number of out-of-school suspensions based on African American male students' percent using the Zero-Inflated Negative Binomial Model.

Figure 23

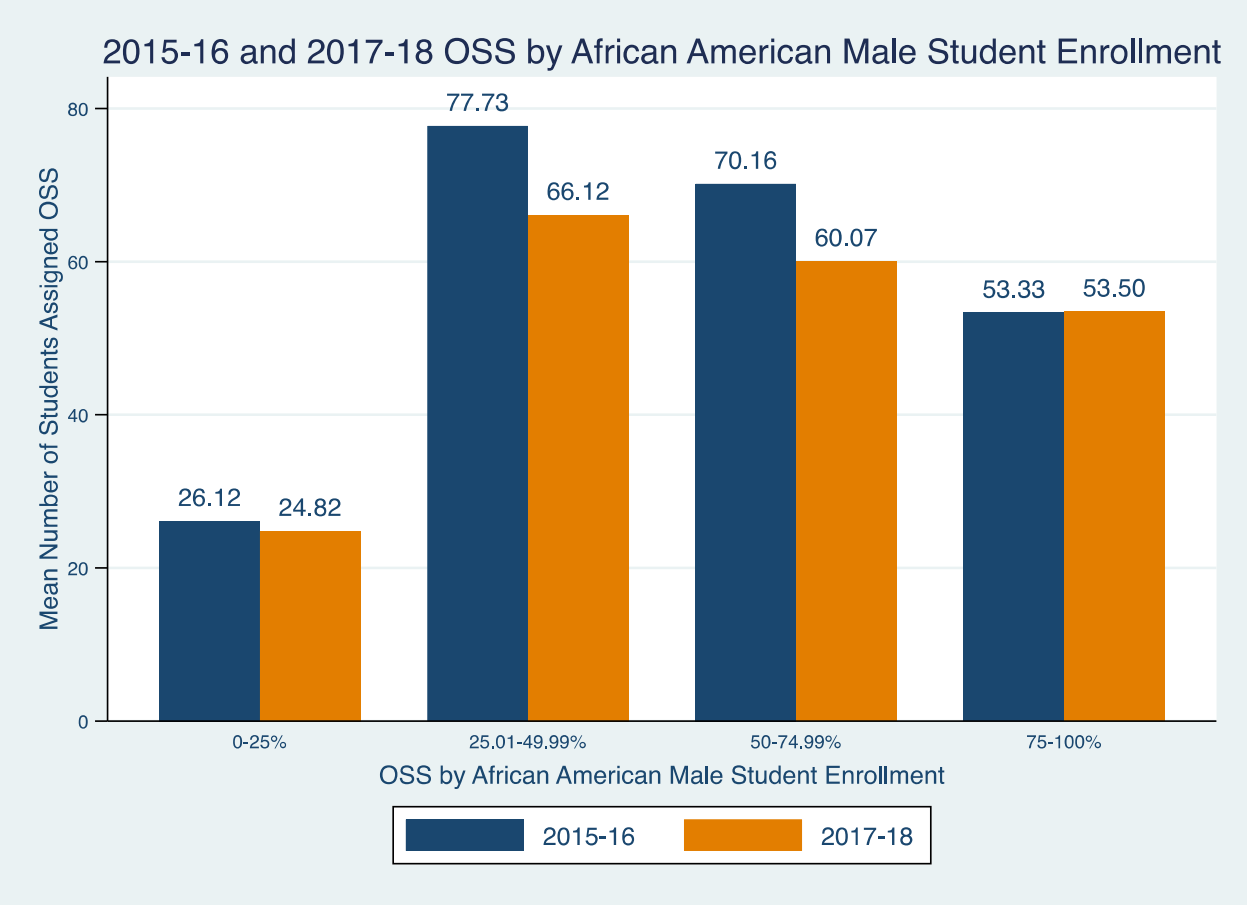
2015-16 and 2017-18 African American Male Student Out-of-School Suspension Quartile Mean Comparison



Note. Comparison of 2015-16 and 2017-18 quartile means for out-of-school suspension by African American male student quartiles.

Figure 24

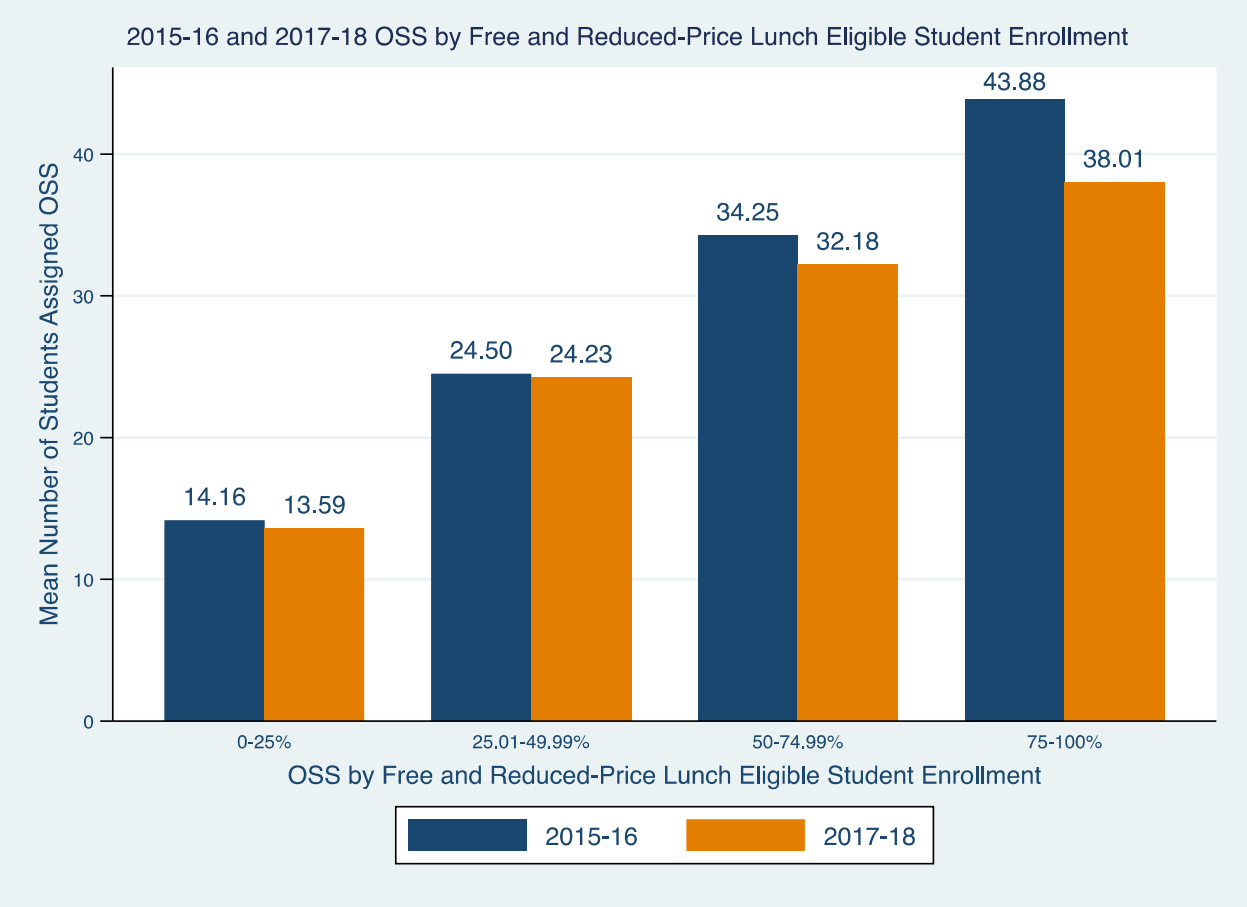
Comparison of 2015-16 and 2017-18 Out-Of-School Suspension Means by African American Male Student Enrollment



Note. Comparison of 2015-16 and 2017-18 quartile means for out-of-school suspension by African American male quartiles.

Figure 25

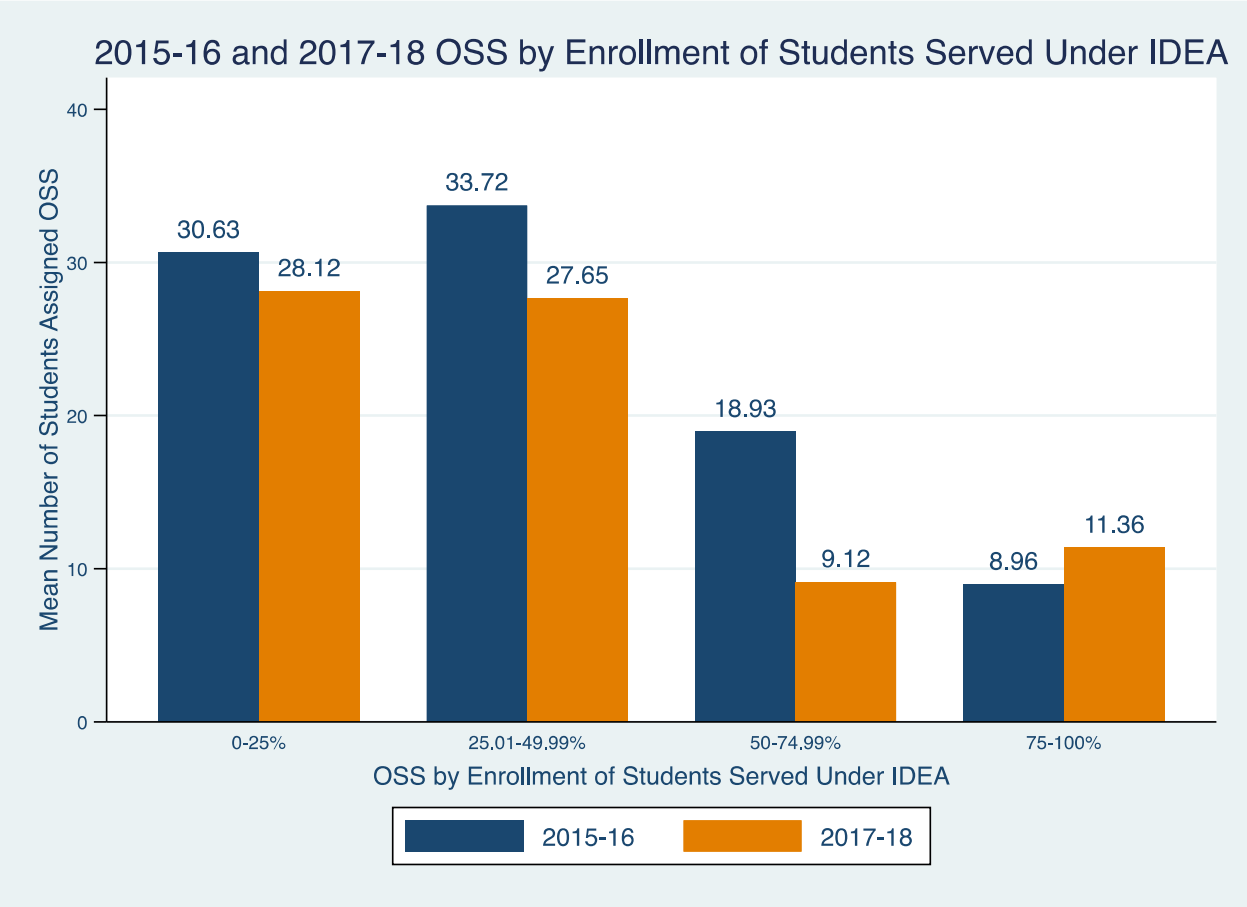
Comparison of 2015-16 and 2017-18 Out-Of-School Suspension Means by Enrollment of Free and Reduced-Price Lunch Eligible Students



Note. Comparison of 2015-16 and 2017-18 quartile means for out-of-school suspension by enrollment of students eligible to receive free and reduced-price lunch quartiles.

Figure 26

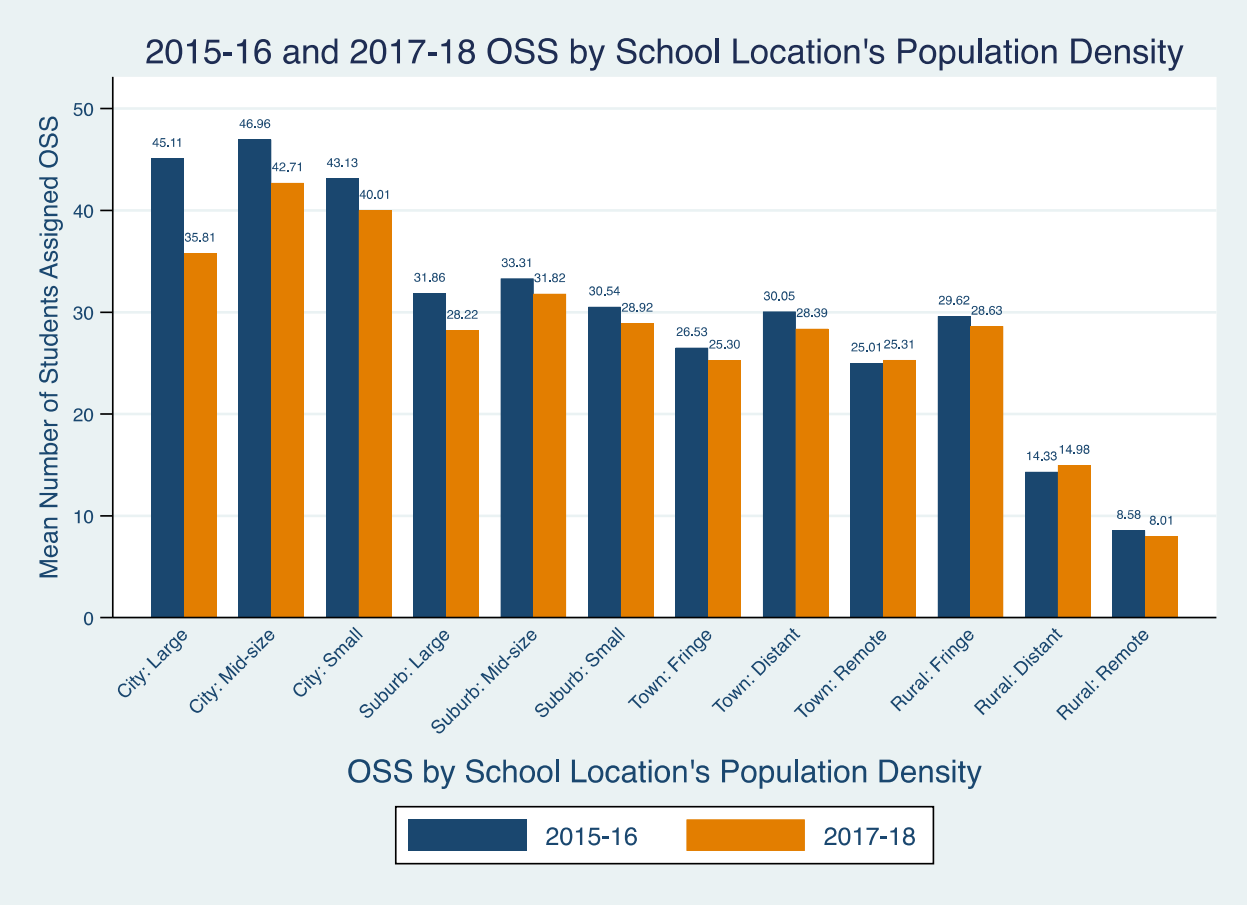
Comparison of 2015-16 and 2017-18 Out-Of-School Suspension Means by Enrollment of Students Served Under IDEA



Note. Comparison of 2015-16 and 2017-18 quartile means for out-of-school suspension by enrollment of students served under IDEA.

Figure 27

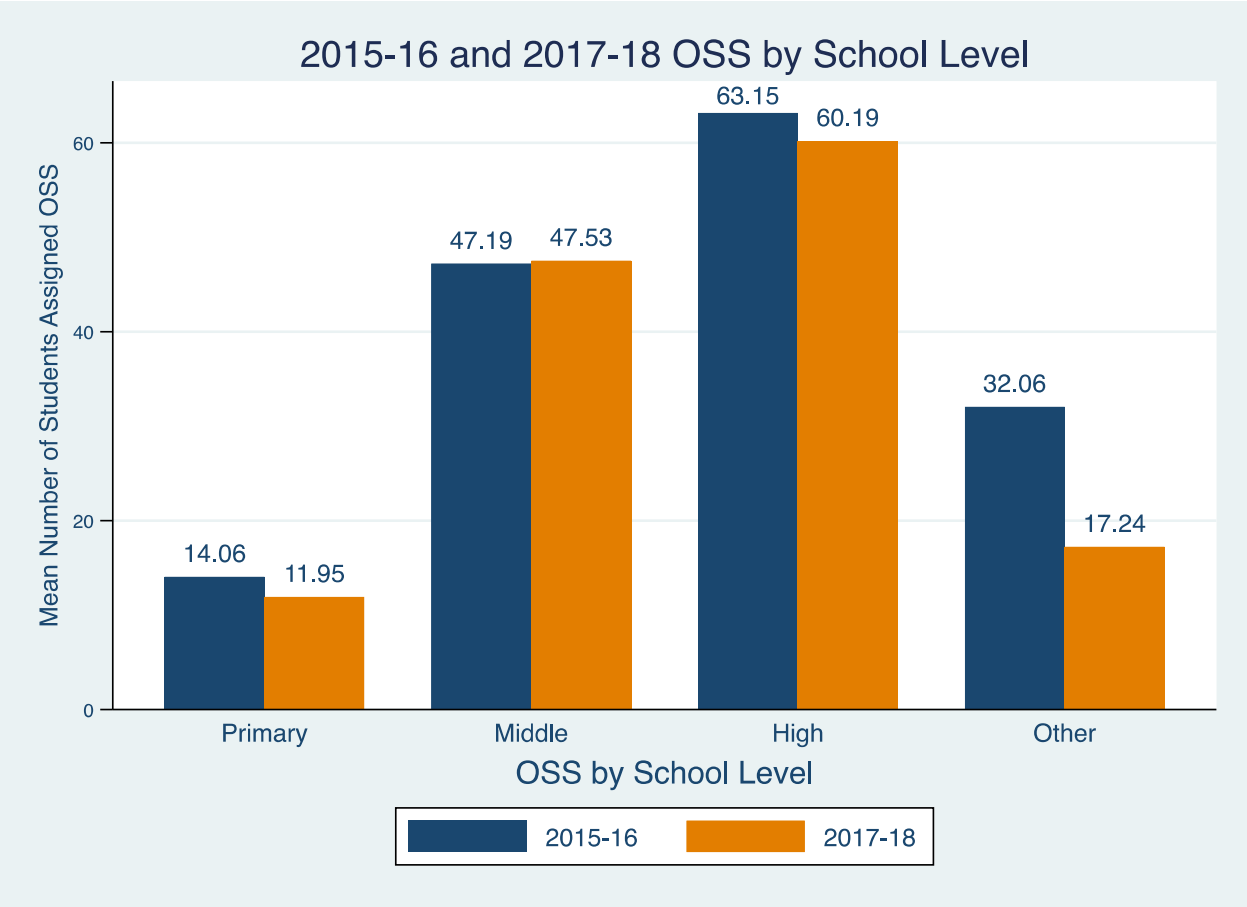
Comparison of 2015-16 and 2017-18 Out-Of-School Suspension Means by School Population Density



Note. Comparison of 2015-16 and 2017-18 quartile means for out-of-school suspension by school population density.

Figure 28

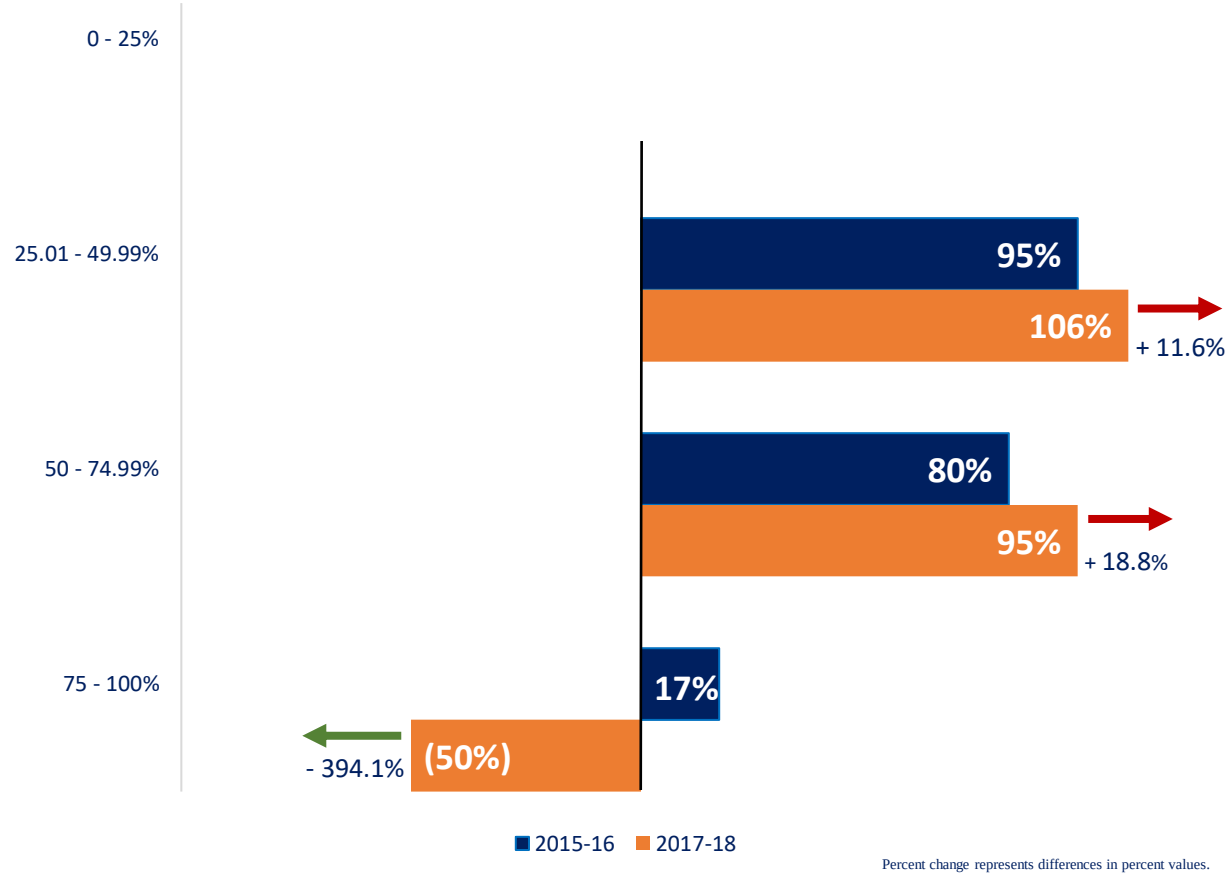
Comparison of 2015-16 and 2017-18 Out-Of-School Suspension Means by School Level



Note. Comparison of 2015-16 and 2017-18 quartile means for out-of-school suspension by school level.

Figure 29

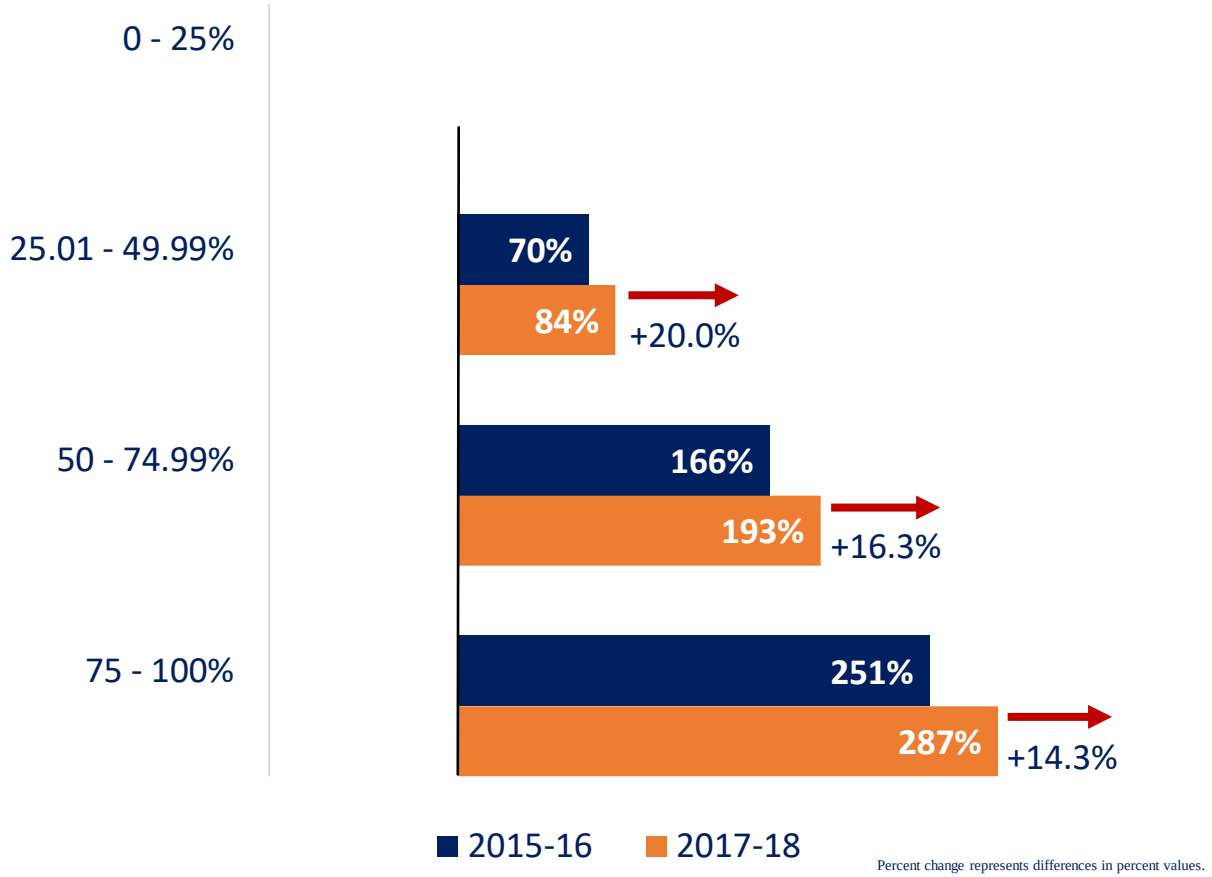
Comparison of 2015-16 and 2017-18 Incident Rates for School Counts of Students Assigned Out-of-School Suspension: African American Male Student Enrollment



Note. Comparison of 2015-16 and 2017-18 out-of-school suspension incident rates by African American male student enrollment.

Figure 30

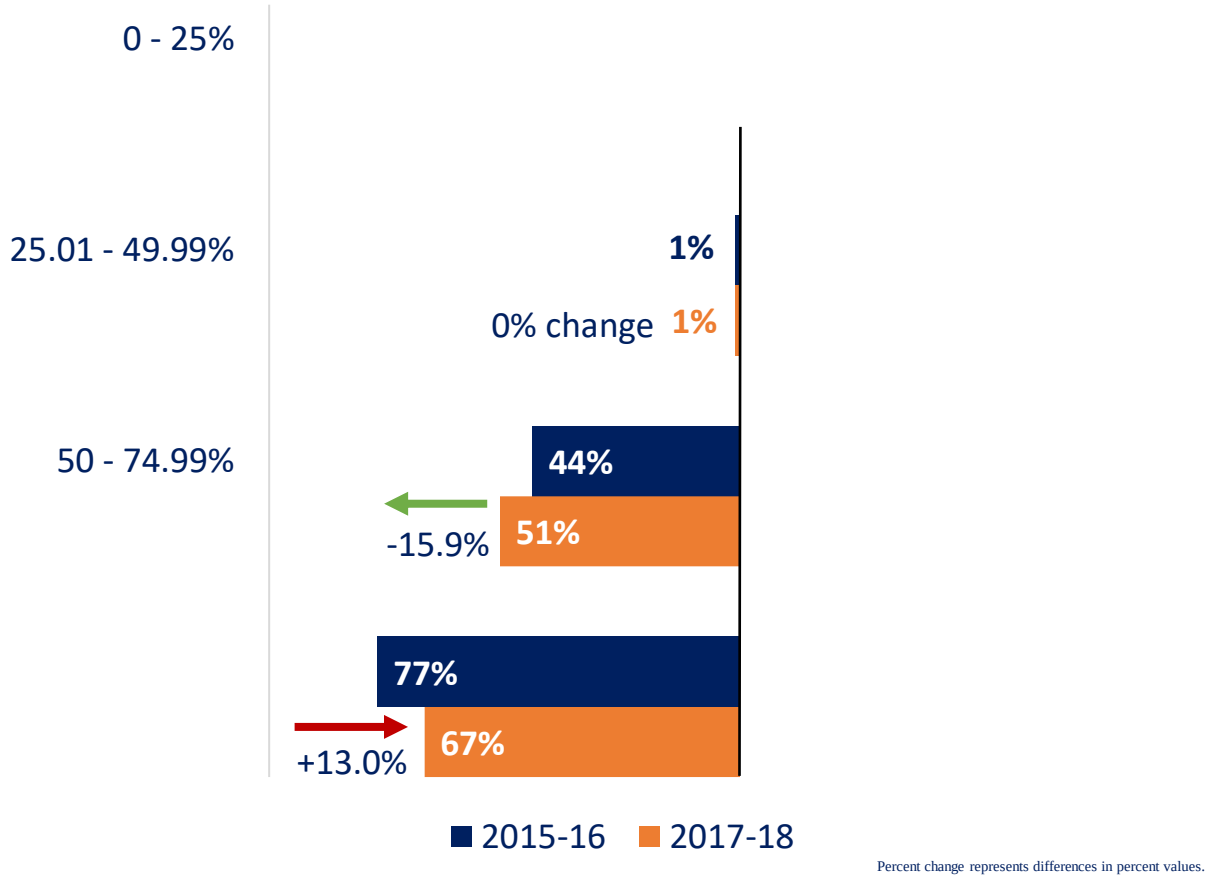
Comparison of 2015-16 and 2017-18 Incident Rates for School Counts of Students Assigned Out-of-School Suspension: Enrollment of Free and Reduced-Price Lunch Eligible



Note. Comparison of 2015-16 and 2017-18 out-of-school suspension incident rates by enrollment of free and reduced-price lunch eligible students.

Figure 31

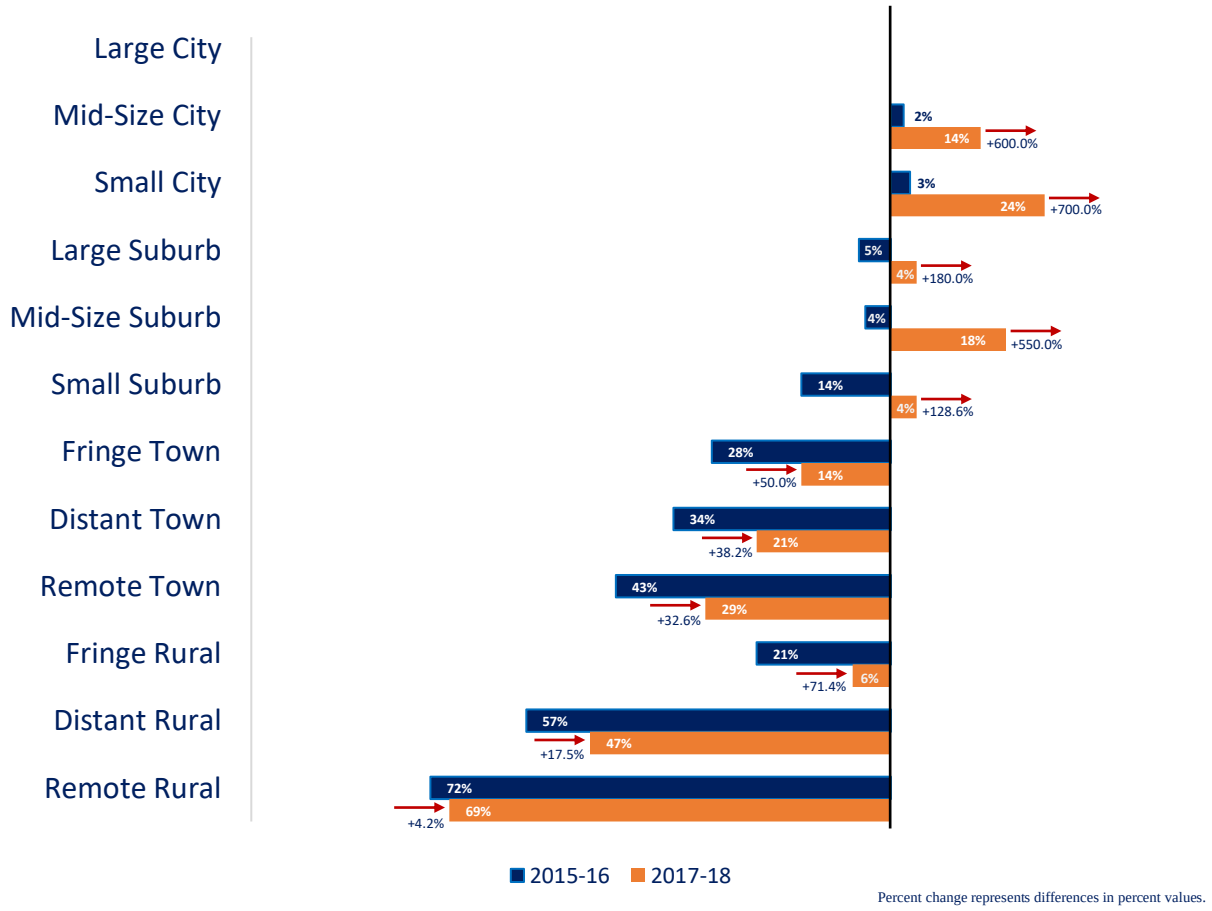
Comparison of 2015-16 and 2017-18 Incident Rates for School Counts of Students Assigned Out-of-School Suspension: Enrollment of Students Served Under IDEA



Note. Comparison of 2015-16 and 2017-18 out-of-school suspension incident rates by enrollment of students served under IDEA.

Figure 32

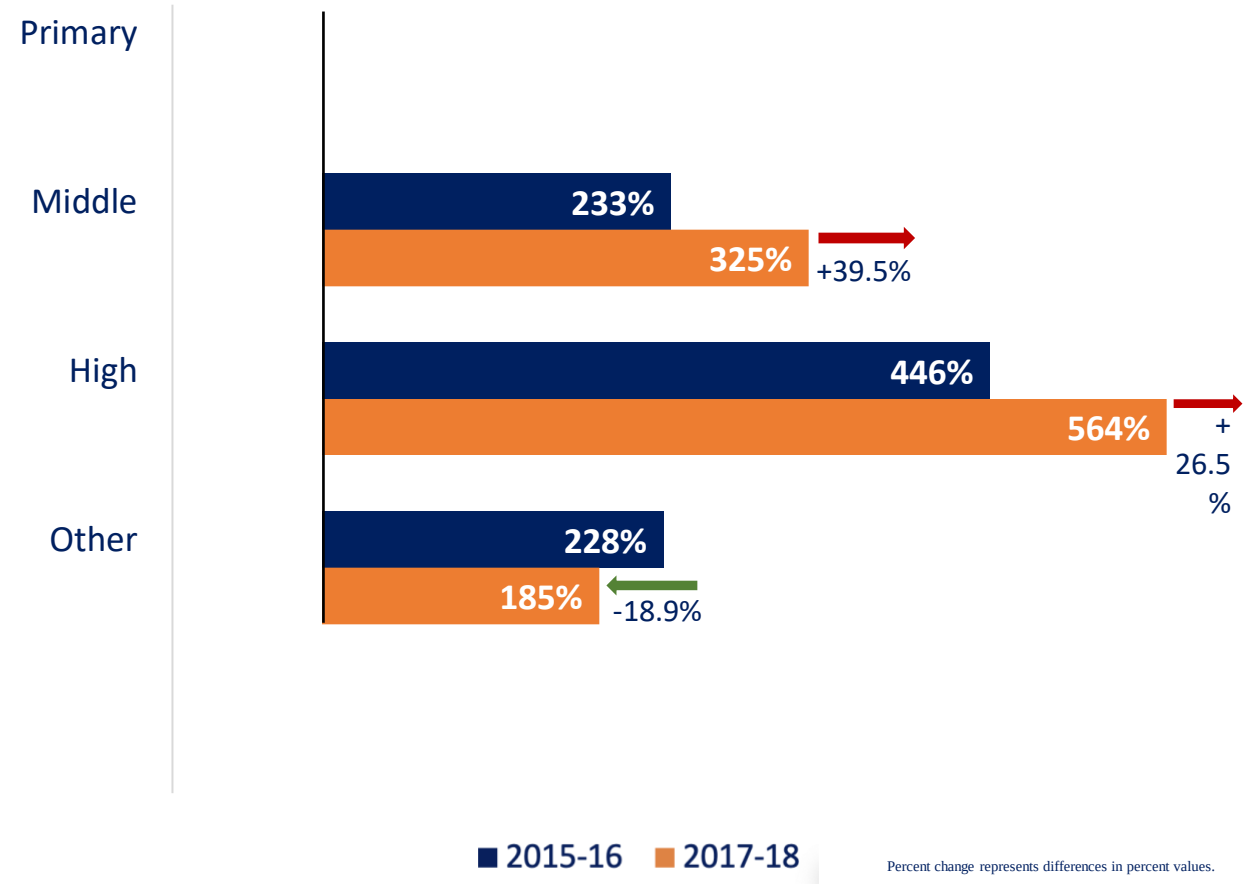
Comparison of 2015-16 and 2017-18 Incident Rates for School Counts of Students Assigned Out-of-School Suspension: School Population Density



Note. Comparison of 2015-16 and 2017-18 out-of-school suspension incident rates by population density.

Figure 33

Comparison of 2015-16 and 2017-18 Incident Rates for School Counts of Students Assigned Out-of-School Suspension: School Level



Note. Comparison of 2015-16 and 2017-18 out-of-school suspension incident rates by school level.