



ELSEVIER

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Journal of School Psychology

journal homepage: www.elsevier.com/locate/jschpsyc

The discipline gap in context: The role of school racial and ethnic diversity and within school positionality on out-of-school suspensions

Lora Henderson Smith ^{a,*}, Jessika H. Bottiani ^a, Joseph M. Kush ^b,
Catherine P. Bradshaw ^{a,c}

^a University of Virginia, School of Education and Human Development, United States of America

^b James Madison University, Center for Assessment and Research Studies & Department of Graduate Psychology, United States of America

^c Johns Hopkins University, Bloomberg School of Public Health, United States of America

ARTICLE INFO

Editor: Craig A. Albers
Action Editor: Desirée Vega

ABSTRACT

Disparities in exclusionary discipline practices are well-documented; however, variation in Black students' disciplinary experiences across different racial and ethnic school compositions remains understudied. Utilizing a state-wide dataset ($N = 769,050$ students in $J = 1296$ schools), we examined student- and school-level factors that contribute to suspensions for Black students across schools with varying racial and ethnic diversity. Consistent with prior research, we found that Black students were disproportionately suspended more often, for more days, and more likely for soft offenses. We also found that students in majority Black schools (i.e., those where $>50\%$ of the students were Black) had the highest unadjusted rates of suspension. However, when controlling for multiple other student- and school-level characteristics, including overall suspension rates, we found that Black students attending majority White schools had a higher adjusted risk of suspension than in majority Black or heterogenous diverse schools, suggesting higher rates of differential treatment in White majority schools. We discuss the implications of these results and the role school psychologists play in supporting professional development, training, and data-based decision making to reduce disproportionality.

1. Introduction

In the U.S., Black students are the most overrepresented among students who are suspended from school during an average school year (U.S. Department of Education, Office of Civil Rights, 2021). Of the 2.5 million students suspended from U.S. schools during the 2017–2018 academic year (most recently available national data), the most striking disparities exist for Black students, who represented just 15% of the public school enrollment but comprised 37% of suspensions (U.S. Department of Education, Office of Civil Rights, 2021). This overrepresentation in suspension and other exclusionary disciplinary practices has persisted despite increased attention, consistent calls for reform, and state and federal mandates (Gregory & Skiba, 2019; Skiba et al., 2002; Wallace Jr et al., 2008). Racial disproportionality in exclusionary discipline in education contributes to racialized processes in other sectors that put Black students at greater risk for involvement with the justice system that is more so due to school and district policies and practices

* Corresponding author.

E-mail address: ljh5sk@virginia.edu (L.H. Smith).

<https://doi.org/10.1016/j.jsp.2023.02.006>

Received 28 March 2022; Received in revised form 22 August 2022; Accepted 28 February 2023

Available online 14 March 2023

0022-4405/© 2023 Society for the Study of School Psychology. Published by Elsevier Ltd. All rights reserved.

than students' behaviors (Fabelo et al., 2011; Skiba et al., 2014). Furthermore, Black students have reported less favorable school climate and more adjustment problems in schools where racial discipline disparities were larger (Bottiani et al., 2017).

In addition to educational policies and practices (Welsh & Little, 2018), residential segregation of Black families to less desirable and under-resourced neighborhoods with poorer infrastructure, including schools (Sharkey, 2013), may partially explain racial disproportionality in school discipline (Owens & McLanahan, 2017). The segregation of Black families to under-resourced neighborhoods and schools is the legacy of government-sponsored policies and practices including redlining, the discriminatory practice of denying services (e.g., housing loans) in certain neighborhoods based on race and ethnicity. Residential segregation persists despite the *Fair Housing Act of 1968*, which prohibited redlining, just as school segregation has persisted following the *Brown v. Board of Education* ruling, despite subsequent initiatives to foster racially integrated neighborhoods and schools (Spader & Herbert, 2017). As a result, many children still attend schools that are segregated by both race and income, which especially disadvantages Black students on multiple levels (Owens, 2020) and likely contributes to racial disparities in school discipline (Owens & McLanahan, 2017). Specifically, research has found that schools with larger percentages of Black students use more frequent and severe punitive discipline practices (Welch & Payne, 2010) and that students attending schools with a higher number of students are at increased risk for suspension (Freeman & Steidl, 2016). A large proportion of Black students also attend high-poverty schools (45% of Black students, compared to 8% of White students; Hussar et al., 2020), where there is a continued reliance on zero-tolerance discipline policies (Owens & McLanahan, 2020) known to increase suspensions.

In this context of institutional and systemic racial inequity at the root of racial discipline disproportionality, it is likely that interpersonal racial bias also plays a role in differential treatment even when students from differing racial and ethnic backgrounds are displaying similar behaviors (e.g., Shi & Zhu, 2022). Multiple studies have demonstrated that actual differences in behavior between Black students and students of other races do not account for disparate discipline outcomes (Bradshaw et al., 2010; Lacoë & Manley, 2019; Skiba et al., 2002). Instead, bias has been identified as a potential contributor to current disparities in out-of-school suspensions (OSS; Carter et al., 2017; Staats, 2014, 2016) and office disciplinary referrals (ODRs; Bradshaw et al., 2010). Specifically, ODRs for subjective offenses (also called "soft" offenses) include behaviors such as defiance, disrespect, or disobedience, which require more personal judgment from the teacher than objective offenses such as vandalism or bringing a weapon to school (Girvan et al., 2017; Skiba et al., 2002). Research suggests that even after controlling for the teachers' ratings of students' behaviors, Black students are still 20%–30% more likely to receive an ODR than their White peers who display the same level of problem behavior (Bradshaw et al., 2010), and similar associations have been found for suspensions (Huang, 2020). Other studies suggest that differential treatment and support of students displaying similar behaviors may contribute to up to 46% of the racial gap in suspensions between Black and White students (Owens & McLanahan, 2020).

Despite emerging evidence of the role of racial bias at institutional and interpersonal levels, few studies have sought to examine both in tandem as contributing factors to racial discipline disparities. The present study aimed to address this gap through a stratified analysis focused on patterns of associations for Black students within differing school racial and ethnic composition categories to better understand the unique school contextual experiences for Black students that may be contributing to disproportionality. Specifically, we contrasted schools that were predominantly Black, predominantly Latine, and predominantly White with those that were predominantly heterogeneous (i.e., with no racial majority). Given research underscoring the importance of how school context impacts discipline outcomes (Tefera & Fischman, 2020), this study sought to contribute to our understanding of how schools' racial composition functions as a developmental context shaping exposure to suspension for Black students. We also highlight potential implications for school psychologists and administrators working to support efforts to reduce disproportionality and center equity in school discipline reform efforts (Gregory et al., 2021).

1.1. The discipline gap and school racial diversity: A critical race theory framing

This study was informed in part by critical race theory (CRT; Crenshaw et al., 1995), which emerged from legal studies in the 1970s and 80s and subsequently spread to other fields, including education (Ladson-Billings & Tate, 1995). CRT posits that structural racism exists, is maintained by law, and fundamentally underlies and organizes social life in the U.S. (Crenshaw et al., 1995). Structural racism refers to how systems interact to produce inequalities across sectors, including in education, justice, housing, and others (Bailey et al., 2017). In addition to these systemic and institutional forms of discrimination, structural racism also encompasses interpersonal forms of bias (Bailey et al., 2017). For example, systems are created and operated by individuals who hold their own implicit or even explicit biases about individuals from different racial and ethnic groups. Specifically, individual biases can cause harm at an interpersonal level and can contribute to the development and maintenance of biased policies at an institutional level. As such, disparities created by oppressive systems can reinforce the racial biases that started at an individual level but proceeded to permeate institutions. These biases at the individual level, together with structural racism at the system level, are related and can create a vicious cycle. Applied to education, a CRT perspective posits that schools are racialized institutions that enact and reproduce White privilege and power, often through race-neutral policies and practices that ignore racial disparities and realities and do not address systemic issues (Anyon et al., 2018). Punitive exclusionary discipline policies and practices and zero-tolerance policies are examples of race-neutral doctrine that results in the disproportionate discipline of Black students (Anyon et al., 2018; Howard, 2008; Simson, 2013).

How punitive discipline is enacted to disproportionately affect Black students is important to place in the school institutional context, particularly as it relates to the racial and socioeconomic composition of the school. Although *Brown v. Board of Education* was supposed to desegregate schools beginning in 1954, states and localities resisted this change for decades (Reardon et al., 2012). The Supreme Court allowed schools to abandon their desegregation plans in 1991, and since then, schools have become less racially diverse, with many Black and Latine students attending under-resourced, segregated Black and Brown schools (Orfield et al., 2012;

Reardon et al., 2012). Frankenberg et al. (2019) described how having more Black and Latine students can impact perceived school quality and even home prices, which in turn influences the tax base of resources available to students. Furthermore, students in schools with more students of color often have less qualified teachers and higher teacher turnover (Frankenberg et al., 2019; Williams et al., 2021) as well as lower standardized test scores (García, 2020). In sum, the complex, coinciding, and cumulative impacts of discriminatory policies and court rulings over time have created and sustained educational disparities over decades and diminished educational opportunities for Black students (Brittain & Kozlak, 2007). As such, discipline disproportionality research must investigate the legacy of structural racism (i.e., in particular, the form of diverse versus concentrated minoritized student enrollments) as it has shaped racial disparities in discipline outcomes, as well as its role in fostering Black students' exposure to disciplinary bias and discrimination.

1.2. Operationalizing measures of school racial diversity

“School racial diversity” is an umbrella term that has been used to refer to differing concepts of diversity in the literature examining the contextual impacts of school racial and ethnic composition on student outcomes. Measures of racial diversity in education often are assessed at differing levels, depending on the field. For example, the sociological literature has assessed racial segregation as a metric characterizing a pattern between schools within a school district (e.g., dissimilarity index; Reardon & Owens, 2014). Other literature has focused on school- or classroom-level metrics of diversity (Bottiani et al., 2016) and individual student-level metrics (i.e., same-race peer representation; e.g., Benner & Graham, 2013). Regarding metrics applicable at the school level, most pertinent to this study, there are two primary ways this has been operationalized. First, racial diversity has been used in the literature to refer to the heterogeneous racial and ethnic composition of the students in a given learning setting. This “heterogeneity diversity” conceptualization is typically measured using a metric variously called as the Simpson Diversity Index (SDI; Simpson, 1949; e.g., Williams & Hamm, 2018), the Gini coefficient (Gini, 1912; e.g., Bischoff & Tach, 2018), or the generalized variance index (Budescu & Budescu, 2012; e.g., Bottiani et al., 2017), hereafter referred to as the Gini coefficient. This metric represents the likelihood of randomly selecting two students from the same school (or classroom) belonging to two different racial/ethnic groups and is on a scale from zero to one, where zero represents no chance of selecting two students from different groups (i.e., 100% racial or ethnic homogeneity) and one represents the highest chance of selecting two students from different groups.

Another metric sometimes conflated as a measure of racial diversity is a school's or classroom's overall concentration of youth of color, where the higher the percentage, the greater the “diversity” inferred. However, this conceptualization of diversity reflects an outdated and inaccurate view of diversity as a static trait within certain (i.e., non-White) students, rather than a relational dynamic across students. In addition, this metric (e.g., concentration of Black youth) has also been used in empirical research more aptly as an indicator of disadvantage (Benner & Graham, 2013), especially when considered in tandem with resource metrics (e.g., percent of students on free and reduced-price meals, Bottiani et al., 2016; percent below poverty line, Sampson et al., 1997). Given that Black and Latine youth are more likely to attend high-poverty schools as described above, which in turn are associated with lower levels of teacher educational attainment and higher rates of crime and safety concerns (Aud et al., 2010), considering the percent of a minoritized student group (e.g., percent Black students enrolled) as a measure of “diversity” may contribute to mixed findings regarding associations with student outcomes. Specifically, whereas diversity, conceptualized as heterogeneity, has often been associated with positive outcomes in the literature (Bottiani et al., 2016; Williams & Hamm, 2018), in contrast, the percent of minoritized and impoverished students in a school has been associated with more negative outcomes empirically (Reardon, 2016; Reardon et al., 2018). Given the different outcomes associated with attending schools with varying racial diversity, we consider the positionality of Black students in the present study. Positionality specifically refers to the “external context in which a person is situated” and is a “set of processes describing a power relationship” (Tien, 2019, p. 531). We refer to students' positionality throughout this article as we discuss issues related to race and social status in public schools.

1.3. Student outcomes associated with racial heterogeneity and within-school positionality

1.3.1. Racially heterogeneous schools

Attendance at a racially heterogeneous school has been associated with greater social competence and academic performance for students (Williams & Hamm, 2018). Furthermore, racially heterogeneous school settings have been associated with prejudice reduction and better learning outcomes among other positive benefits for students (Orfield et al., 2012). Black and White students alike reported higher perceived equity in more racially heterogeneous schools compared to racially segregated (i.e., primarily Black, low-income) schools (Bottiani et al., 2016). However, when it comes to disciplinary outcomes, the effects of school racial heterogeneity are less clear. Fewer studies have specifically examined the association between school racial-ethnic heterogeneity and discipline outcomes. Of those that did, one study of 58 high schools across the state of Maryland examined school racial heterogeneity (as measured by the Gini coefficient) and found that school racial-ethnic heterogeneity diversity was positively and significantly correlated at the school-level (zero-order correlations) with higher suspension risk (Bottiani et al., 2016). In addition, another study found that school racial-ethnic heterogeneity diversity was associated with greater Black-White disparities in suspension risk (Bottiani et al., 2017), suggesting that school racial heterogeneity may be associated with higher rates of punitive discipline.

1.3.2. Black student positionality in majority white or minoritized student enrollments

In studies that have examined the racial composition of schools' student enrollments, Black students in predominantly Black schools had poorer academic outcomes (Reardon, 2016; Reardon et al., 2019). This pattern of findings has been attributed to structural

factors of under-resourced schools in other related studies (Frankenberg et al., 2010; Hanushek et al., 2009; Orfield et al., 2012). Furthermore, Black students have reported higher depressive and somatic symptoms in schools with higher percentages of White students, which may have to do with racial stress associated with navigating interpersonal and systemic forms of inequality in these settings (Walsemann et al., 2011).

With regard to school discipline outcomes specifically, studies that have examined Black racial composition of schools' student enrollments have generally found that a higher percentage of Black students in a school or district was associated with a higher overall rate of suspension (e.g., Anyon et al., 2014; Edwards, 2016; Mendez et al., 2002; Skiba et al., 2014; Welch & Payne, 2010, 2012), whereas rates were lower in schools with a higher percentage of White students (Christie et al., 2004; Mendez et al., 2002). Moreover, schools with higher percentages of Black students also demonstrated longer suspensions (Kinsler, 2011). In contrast, some studies have indicated the opposite trend for suspensions, such that more segregated schools, as measured by a dissimilarity index, had less racial disparity in suspensions (Eitle & Eitle, 2004; Freeman & Steidl, 2016) or no significant relationship was found between school-level demographics and risk of suspension (Sullivan et al., 2013). Compared with the research on Black and White students, considerably fewer studies have operationalized school racial segregation as the percentage of Latine students, although those that have found a higher risk of suspension (Anyon et al., 2014) and greater use of punitive practices such as out-of-school suspension (Welch & Payne, 2018) in schools with more Latine students. However, a limitation of this literature is that very few studies operationalized schools with a large number of Black students with low-income status (LIS) specifically (except the aforementioned study by Bottiani et al., 2016). In addition, very few studies have examined Black students' positionality within differing school contexts of diversity as a predictor of their disciplinary outcomes at the student level.

1.4. Present study

Whereas several studies have documented the high rates of discipline disproportionality for Black students, few studies have taken into consideration the overlap of diversity, race, and LIS when aiming to distinguish how racially diverse schools versus racially segregated schools impact discipline outcomes. In addition, there is little empirical evidence to support our understanding of how the within-school racial positionality of Black students in the context of under-resourced predominantly Black and Brown schools, versus well-resourced predominantly White schools, contributes to their increased risk of suspension. Finally, although much of the research on discipline disproportionality has focused on race alone, it is critical to consider race and LIS in tandem and in a sociocultural context to understand how students' positionality can shape their school experiences (Ayscue et al., 2017; Bottiani et al., 2016; Garcia Coll et al., 1996; Graham, 2018).

To address these gaps in the literature, we examined students' exposure to out-of-school suspensions with multilevel attention to student intersectional identity and positionality within the racial and socioeconomic context of their schools. We utilized state-wide data from 1260 elementary and secondary schools, which included 769,050 students, all from a single state in the Mideastern region of the United States. This study builds on prior research that operationalized school racial diversity and discipline disparities at the school level to examine school climate outcomes at the student-level (i.e., Bottiani et al., 2016, 2017). In this study, we leverage a new statewide, restricted-use dataset with discipline outcome data available at the student-level and devise a novel school-level diversity variable that classifies school diversity by using both the Gini coefficient and the racial majority group in the school. For each model, our predictor variable was school-level racial diversity as measured by our novel variable, which allows comparisons between Majority Black, Majority White, Majority Latine, and No Majority/Heterogenous schools, and which is described in detail in the Method section, and LIS at the student and school levels. Given past research identifying factors associated with the risk of suspension (Bradshaw et al., 2018; Pas et al., 2019), the following were included as covariates: truancy, enrollment, the percentage of students receiving special education services, the percentage of students receiving free and reduced-price meals (FARMs) as a proxy for LIS (Harwell & Lebeau, 2010), the percent of students with limited English proficiency, student-teacher ratio, suspension rate, and math test scores.

From a CRT perspective and given that students attend schools that are part of systems with inherent issues of racial power and privilege, examining the effects of race on school discipline through the lens of heterogeneity diversity or the percent of Black students alone was insufficient. Instead, we took a novel approach to measuring school racial composition by creating a variable that accounted for the percentage of students from a particular racial background *and* school racial and ethnic heterogeneity as measured by the Gini coefficient (Gini, 1912). By categorizing schools based on their racial majority and school racial heterogeneity, we were able to compare schools with racial compositions that were majority Black, White, or Latine to racially diverse schools.

1.4.1. Aim 1

In our first aim, we sought to replicate prior research showing discrete associations between student race, LIS, and school suspensions at the student-level. Specifically, we explored the direct effects of student-level FARMs and race on our discipline outcomes of one or more suspension events, the number of days suspended for a given infraction, and the offense type (i.e., whether or not the suspension was for a soft offense), with a particular interest in the relative effect sizes for each of these risk factors while controlling for other student and school-level characteristics. We anticipated that students receiving FARMs (a proxy for low-income), Black students, and Black students receiving FARMs (operationalized with an interaction term of Black race x LIS) would have increased odds of suspensions, number of days suspended, and suspensions for soft offenses, as compared to students not receiving FARMs, White students, and White students not receiving FARMs, respectively.

1.4.2. Aim 2

Our second research aim examined level 2 (school-level) racial composition and LIS as it related to the three aforementioned out-of-

school suspension outcomes (ever suspended, number of days suspended, and nature of the offense). To distinguish between racially and ethnically diverse schools and racially concentrated schools, we created a metric that combined the Gini coefficient and the percentage of students from different racial backgrounds (described further in the Method). In addition, we also examined school-level LIS (operationalized as the percent of the student enrollment receiving FARMS) as a level-2 predictor of the three suspension outcomes. We hypothesized that majority White schools (as compared to majority Black, majority Latine, and diverse/no majority schools) and higher income schools would be associated with less likelihood overall and less severe (fewer number of days suspended) out-of-school suspensions. We hypothesized no associations with offense type in the overall sample.

1.4.3. Aim 3

In our third research aim, we focused on the within-school positionality of Black students only as it related to the three suspensions outcomes in the context of predominantly Black, predominantly Latine, and predominantly White schools, and LIS of schools in comparison to more racially and ethnically heterogeneous schools and schools with higher income statuses. Given the benefits of school diversity and the increased opportunities for intergroup contact for teachers and students, and the potential harms of attending racially concentrated schools (Ayscue et al., 2017; Graham, 2018), we hypothesized that Black students in more diverse schools would have lower odds of suspension, fewer days of suspension, and fewer suspensions for soft offenses than Black students in majority White or Majority Black schools. However, we hypothesized that Black students in predominantly White schools would fare worse than students in other school contexts about discipline outcomes. We included Majority Latine schools in the analyses but did not make any specific hypotheses given the small sample size and limited literature on the experiences of Black students in majority Latine schools.

Taken together, this study aimed to fill important gaps in the literature regarding Black students' risk of exposure to punitive and exclusionary discipline by examining the student intersectional racial and socioeconomic identities and positionality within the context of racial segregation versus racial diversity. This study may also provide insight into how factors such as racial and LIS composition of the school play a role in OSSs. Moreover, our multi-level and contextual approach allows for a more nuanced discussion of how the legacy of structural racism in the form of housing and school district zoning can be linked to racial disproportionality in punitive and exclusionary discipline practices.

Table 1
Demographic Characteristics of the Sample.

	Full Sample		Restricted Sample					
Student-level (<i>N</i> = 769,050 students)	<i>N</i>	%	<i>N</i>	%				
White	319,972	41.6	0	0				
Latine	104,865	13.6	0	0				
Black	267,267	34.8	267,267	100				
Asian and Native Hawaiian	52,920	6.9	0	0				
Native American	29,392	3.8	0	0				
Multi-Racial	67,254	8.8	0	0				
Special Education	84,471	11.0	37,042	13.9				
FARMS	340,273	44.3	165,104	65.5				
Male	392,894	51.0	136,242	51.0				
School-level (<i>J</i> = 1260 schools)	<i>M</i>	<i>SD</i>						
Enrollment	646.9	379.1						
% Truant	9.4	7.9						
% Special Education	11.6	6.3						
% FARMS	49.1	27.8						
% LEP	8.5	10.7						
Student-Teacher Ratio	19.4	3.5						
Suspension Rate	5.7	8.3						
Math	73.5	18.6						
	<i>N</i>	%						
Secondary School	425	32.8						
Majority White	367	28.3						
Majority Black	301	23.2						
Majority Latine	44	3.4						
No Majority/High Diversity	584	45.1						
School-level characteristics by diversity type	Majority White		Majority Black		Majority Latine		No Majority/High Diversity	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Enrollment	603.7	346.4	545.6	331.8	759.5	413.9	718.0	402.7
% Truant	6.8	3.4	12.3	11.9	8.2	6.6	8.1	5.6
% Special Education	10.4	3.8	14.5	10.3	9.4	3.6	11.0	4.1
% FARMS	28.4	17.8	74.4	20.0	85.6	7.9	46.4	24.4
% LEP	3.2	1.5	5.2	4.5	46.8	12.2	10.6	9.7
Student-Teacher Ratio	19.3	2.8	20.8	5.1	17.6	2.5	19.0	2.5
Suspension Rate	3.4	4.7	9.0	9.7	2.2	3.5	5.7	8.9
% Math Proficiency	85.7	10.2	54.7	18.8	62.0	12.9	76.3	14.7
% of Black Students Suspended	5.0	9.4	6.3	7.4	3.7	4.8	5.0	7.1

Note. FARMS = Free and Reduced-Price Meals; LEP = Limited English Proficient.

2. Method

2.1. Participants and procedures

Data came from a state-level dataset from the Mideastern region of the U.S. The state has a total of 24 districts or local education agencies. According to U.S. Census data, the state population is about 60% White and 30% Black with about 22% of the population being under 18 years old. Just under 1 million students attend public schools with about 300,000 of those students identifying as Black, about 320,000 identifying as White, and about 175,000 of the student population identifying as Hispanic. For this study, data from traditional public elementary, middle, and high schools were used, whereas special education and alternative settings were excluded given that the students in these schools are often overrepresented in exclusionary discipline. Following the procedures described in Pas et al. (2019), configurations of elementary schools included Grades K–5, K–6, and K–8. Likewise, we also included traditional middle schools (Grades 6–8), traditional high schools (Grades 9–12), and combined middle and high schools (Grades 6–12) in a single secondary school grouping following procedures used by Losen and Martinez (2013) and Pas et al. (2019). This resulted in 835 secondary schools and 425 elementary schools. We focused on data from the most recently available school year (2013–14), resulting in a final analytic sample of $N = 769,050$ students ($n = 319,972$, 42% White; $n = 267,267$, 35% Black; $n = 104,865$, 14% Latine; $n = 67,254$, 9% Multi-Racial; $n = 52,920$, 7% Asian and Native Hawaiian; $n = 29,392$, 4% Native American) from $J = 1296$ schools. Table 1 provides additional demographic details of the sample at both the student-level and school-level. These restricted data are not available for public use and were secured through an Institute of Education Sciences funded Partnership project between Johns Hopkins University, the University of Virginia, and the Department of Education for a state in the Mideastern region of the U.S.

3. Measures

3.1. Outcome variables

We focused exclusively on OSS, operationalizing three distinct outcome variables at the student-level. First, for the outcome *One or More OSS* (during the target academic year), we considered a dichotomous OSS indicator variable, in which students not receiving an OSS were coded as 0, whereas students receiving one or more OSS were coded as 1. Next, we examined *Days Suspended*, which was equal to the sum of the days of removal due to OSS during the target academic year. Given our focus on the school-level context, we took this approach for the sake of clarity in conveying our primary findings; however, examining the average length of suspensions or the number of distinct suspensions may be a more nuanced approach for future studies. Finally, we considered the type of offense, operationalizing soft offenses as a dichotomous variable, where receiving an OSS attributed to any other offense type was coded as 0, and receiving one or more soft offenses was coded as 1. Consistent with prior work by Skiba et al. (2002), we coded *Soft Offenses* as behaviors that were more subjective in nature including OSS based on disrespect or insubordination, whereas *Hard Offenses* were due to less subjective offenses such as those related to drugs, weapons, violence, sexual offenses, and property crimes. Table 2 provides suspension offense categories, examples, and counts, as well as classification coding.

3.2. Predictor variables

Predictor variables at both the student-level (level-1) and the school-level (level-2) were used. At level-1, we included five dichotomous indicators of race, including Latine, Black, Asian and Native Hawaiian, Native American, and Multi-racial; each dummy

Table 2
Out-of-school Suspension Classification Codes, Examples, and Counts.

	N (%)
Soft Offenses	15,846 (38.3%)
Disrespect	
Insubordination	
Classroom disruption	
Inciting or participating in a disturbance	
Academic dishonesty or cheating	
Inappropriate use of telecommunications	
Refusal to obey school rules	
Hard Offenses	25,493 (61.7%)
Drugs, Alcohol, Inhalants, Tobacco	
Theft, Trespassing Vandalism, Unauthorized Sale	
Physical attacks, Fights, Arson, Extortion, Threats	
Firearm possession, Other Guns, Other Weapons	
Truancy, Tardiness, Class Cutting	
Bullying, Harassment, Sexual Offense	
Immunization/Health	
Total Offenses	41,339

indicator represented a level-1 predictor of interest in the present study. In addition, we included as a predictor a dichotomous variable indicating if a student received FARMs (0 = *No*, 1 = *Yes*) as a proxy for LIS. Estimated coefficients for each indicator variable are interpreted in comparison to White students. In addition to the race predictors of interest, we also included two level-1 covariates in the analyses to control for gender (0 = *Female*, 1 = *Male*) and a dichotomous variable indicating if a student had an Individual Education Program (IEP; 0 = *No*, 1 = *Yes*). Furthermore, to understand how the effects of income status differed by race, we created an interaction term of race \times LIS to examine the association of OSS with race and FARMs representing the second predictor of interest at level 1.

School-level demographic information was obtained from the state Department of Education in the participating Mideastern state. At level 2, these covariates included the total enrollment of students in each school, truancy rates (i.e., the percentage of students missing 20 or more days of school), the percentage of students receiving special education services, the percentage of students qualifying for FARMs, the percentage of students receiving English language services, the student to teacher ratio (total enrollment divided by the total number of teachers), suspension rates (i.e., total suspension events divided by total school enrollment times 100), the percentage of students who scored proficient or advanced on the state-wide standardized test for mathematics, a dichotomous variable indicating if the school was a secondary school (0 = *No*, 1 = *Yes*), and a categorical indicator of school diversity. Below is a description of how a novel school diversity variable was computed, representing the level-2 predictor of interest.

Following Budescu and Budescu (2012) and Gini (1912), we constructed a generalized variance index:

$$GV_j = \sum_{ij=1}^{C_j} P_{ij}(1 - P_{ij})$$

where the generalized variance index for school j is equal to the sum of the variances of the proportion of cases in category i in school j , across the C categories in school j . This can be interpreted as the probability that two randomly selected students from the same school belong to different racial/ethnic groups, where a lower value reflects a lower degree of diversity. For example, a school that is 70% Black, 20% White, and 10% Latine would have a generalized variance index of 0.46. However, we believe the generalized variance index alone does not adequately capture certain nuances of diversity. Consider another example, in which a school is 70% White, 20% Black, and 10% Latine. Although this school would have the same generalized variance index as the school from the prior example, researchers would likely interpret results differently given the differing contexts. As a result, we extended the generalized variance index approach by considering the index in conjunction with the percentage of students belonging to a certain racial/ethnic group.

First, the generalized variance index was calculated for each school, and schools were classified as either high diversity or low diversity using a median split (i.e., above or below the median; $M = 0.43$, $Mdn = 0.48$, $SD = 0.22$, range = 0.76). This resulted in 648 schools being classified as high diversity schools and 648 schools being classified as lower diversity schools. Next, schools were classified as either majority White, majority Black, majority Latine, or No Majority/Diverse. In all instances, the majority of students belonging to a particular racial group was defined as >50% of students. As a result, schools in which no one particular racial group established a true majority were classified as No Majority/High Diversity, meaning that these schools represented some level of racial and ethnic heterogeneity diversity. This group was used as the comparison group. Finally, schools were assigned to one of four groups based on whether a single racial or ethnic group held a majority at the school and their Gini coefficient: school groupings consisted of (a) Majority White/Low Diversity, (b) Majority Black/Low Diversity, (c) Majority Latine/Low Diversity, and (d) No Majority/High Diversity. Table 1 provides the number of schools in each category. This type of classification allows for a more contextually-relevant comparison between schools with varying racial school composition.

3.3. Analyses

To estimate the effects of variables at different levels while simultaneously accounting for the nested structure of the data, two-level models were fit using Stata software (14.2; StataCorp., 2015) where student-level predictors were included at level-1 and school-level predictors were included at level-2. The series of models estimated and described in detail below address the three research aims, consisting of (a) the direct effects of race and LIS on our discipline outcomes of interest, (b) the role of school racial composition in disciplinary outcomes for Black students relative to White students, and (c) discipline outcomes for Black students only across schools with varying racial compositions. Intraclass correlation coefficients (ICCs) were calculated from the model estimates. The ICC is defined as the level-2 variance divided by the sum of the level-1 and level-2 variance (i.e., total variance). ICCs can be interpreted as the proportion of variance in the outcome that can be explained solely by the school a student attends. We note that ICCs were not calculated from the multilevel negative binomial models, as there is no clear latent response formulation (see Leckie et al. (2020), for more information). The study design and analysis plan were not pre-registered.

3.3.1. Aim 1: Direct effects of race and low-income status on discipline outcomes

Our first aim was to explore the effects of race and LIS on our discipline outcomes of interest. In the first model, we estimated the probability of a student receiving any type of OSS during the given school year. Here, a multilevel logistic regression was used, in which the outcome variable of receiving an OSS was coded (0 = *No*, 1 = *Yes*). We then exponentiated log-coefficient results so they could be interpreted as odds ratios (ORs), in which OR values >1 indicate increased odds for a particular group in comparison to another, whereas OR values <1 indicate decreased odds. Moreover, the use of ORs has been the recommended calculation for effect sizes for dichotomous outcomes (What Works Clearinghouse, 2020). A graphical depiction of this model is provided in Fig. 1.

Whereas Model 1 provides insight into the probability of receiving a suspension, Model 2 considers the number of days suspended, which was equal to the sum of the days of removal due to OSS. Note that for this reason, only those who had received one or more OSS

were included in the sample for Model 2. A multilevel negative binomial regression model was estimated to understand how the various predictors were associated with length of suspension. Like a Poisson regression model, the negative binomial model appropriately handles count data but allows for the variance or dispersion to be greater than a Poisson model allows. As dispersion was considerable in the length of suspensions variable, we examined the fit of a negative binomial model to the data using a likelihood-ratio test and found the negative binomial regression model fit the data better than the Poisson model, $\chi^2 [df = 1] = 71,981.3, p < .001$. Moreover, exponentiating the log-coefficients transforms estimates to incidence-rate ratios (IRRs), in which IRR values >1 indicate an increased rate for a particular group in comparison to another, whereas IRR values <1 indicate a decreased rate. Fig. 1 also represents a graphical display of Model 2.

Finally, to estimate the odds of a student receiving a soft offense, a multilevel logistic regression model was fit to the data in which the outcome variable of a soft offense type OSS was coded (0 = *Hard Offense*, 1 = *Soft Offense*). As noted above, Table 2 provides full details on the OSS offense types and coding of these as soft offenses. Again, for the same reason, note that it was only possible to include those who had received one or more OSS in the sample for Model 3. See Fig. 1 for a depiction of this model.

3.3.2. Aim 2: School racial composition and discipline outcomes

To address our second research aim regarding the association between school heterogeneity and Black students’ risk of suspension outcomes relative to White students, we examined the role of race as a within student characteristic within the full sample to provide a baseline understanding of discipline outcomes in the Mideastern state. This set of models considered the full sample of students, with all three models (i.e., *One or More OSS*, *Days Suspended*, and *Type of Offense*) fit to the entire sample. Again, we included all categories of OSS in the model.

3.3.3. Aim 3: School racial composition and discipline outcomes for black students

Given the ongoing overrepresentation of Black students in exclusionary discipline practices, we then restricted the sample to Black students only to address the school contextual research questions; this was for ease of interpretation as an alternative to examining and interpreting multiple cross-level interactions for each of the dummy coded school contextual variables. This restricted set of analyses included a stratified sample of only Black students to better understand the experiences of Black students across the various racial school compositions. Thus, in the restricted analyses for Black students only, no dichotomous race variables or interactions with race were included, which simplified both the analyses and interpretation of the results. This model is restricted to include only individuals who had received a suspension.

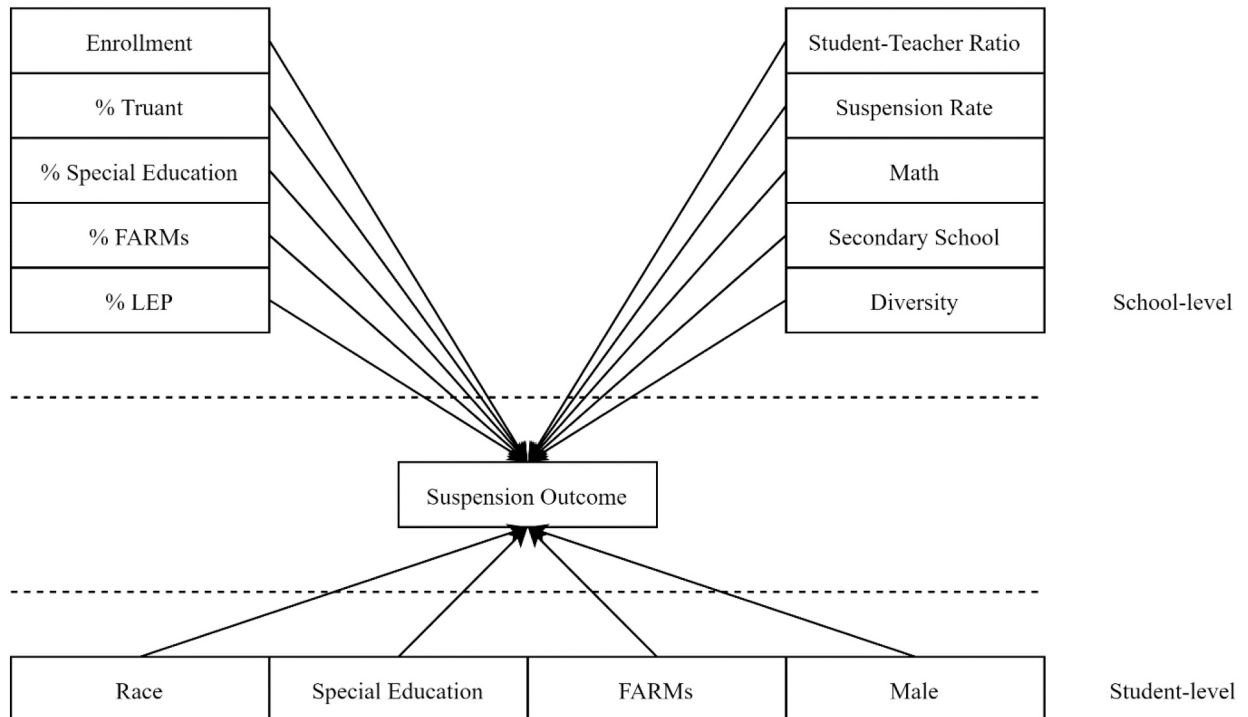


Fig. 1. Graphic of the Multilevel Model.

Note. For the school-level diversity variable, schools were assigned to one of four groups based on whether a single racial or ethnic group held a majority at the school and their Gini coefficient: (a) Majority White/Low Diversity, (b) Majority Black/Low Diversity, (c) Majority Latine/Low Diversity, and (d) No Majority/High Diversity.

4. Results

4.1. Descriptive findings

Overall, 5.4% of students ($n = 41,491$) received one or more OSS during the school year. Of those who had received at least one OSS, the summed length of days of suspension was 3.8 days ($SD = 5.6$ days) on average. However, this variable was positively skewed, as >80% of students with a suspension received lengths of OSS < 5 days. Additionally, of those with at least one OSS, 37.2% of suspensions were soft offense type ($n = 15,436$), whereas 62.8% were hard offense type ($n = 26,055$). The suspension rate by school racial and ethnic composition type was Majority White (3.4%), Majority Black (9.0%), Majority Latine (2.2%), and No Majority/High Diversity (5.7%). Below we summarize the findings across the three models, first for the full sample, followed by results for the restricted sample of Black students only.

4.1.1. Aim 1: Direct effects of race and low-income status on discipline outcomes

4.1.1.1. Model 1: One or More OSS. We began by considering the probability of receiving one or more OSS (see Table 3). The ICC was 0.115. Results indicated students in secondary schools had significantly higher odds of receiving an OSS than those in elementary schools ($OR = 2.86, p < .001$). When compared to elementary school students, middle school students had increased odds of suspension ($OR = 2.41, p < .001$) as did high school students ($OR = 3.79, p < .001$). Latine ($OR = 0.83, p < .001$), Asian and Native Hawaiian ($OR = 0.44, p < .001$), and Native American students ($OR = 0.79, p < .001$) had significantly lower odds of receiving an OSS than White students. Conversely, Black ($OR = 2.18, p < .001$) and multi-racial students ($OR = 1.36, p < .001$) had significantly higher odds of receiving an OSS than White students. Also, there were higher odds of receiving an OSS for special education students as compared to general education students ($OR = 1.93, p < .001$), students qualifying for FARMs as compared to students not eligible for FARMs ($OR = 2.28, p < .001$), and male students as compared to female students ($OR = 2.17, p < .001$). The main effect of FARMs was associated with an increased odds of receiving an OSS, as noted above; however, this effect was stronger for Black students than non-Black students ($OR = 0.79, p < .001$). A graphical depiction of this effect is plotted in Fig. 2. Thus, LIS moderated the relationship between race and the odds of receiving an OSS.

Table 3
Results for Full Sample.

	One or More OSS			Length of OSS			Soft Offense		
	$N = 763,245$			$N = 41,374$			$N = 41,374$		
	$J = 1276$			$J = 1170$			$J = 1170$		
	OR	95% C.I.	p	IRR	95% C.I.	p	OR	95% C.I.	p
Student-level									
Black	2.54	[2.40, 2.68]	< 0.001	1.17	[1.11, 1.24]	< 0.001	1.19	[1.08, 1.30]	< 0.001
Latine	0.80	[0.75, 0.86]	< 0.001	0.98	[0.93, 1.04]	0.612	0.85	[0.77, 0.94]	0.002
Asian and Native Hawaiian	0.44	[0.40, 0.49]	< 0.001	0.94	[0.84, 1.04]	0.237	0.81	[0.67, 0.98]	0.029
Native American	0.78	[0.70, 0.88]	< 0.001	0.99	[0.89, 1.09]	0.799	0.98	[0.82, 1.17]	0.830
Multi-Racial	1.36	[1.29, 1.43]	< 0.001	1.08	[1.02, 1.15]	0.008	1.06	[0.96, 1.17]	0.231
Special Education	1.92	[1.85, 2.00]	< 0.001	1.13	[1.08, 1.18]	< 0.001	1.34	[1.26, 1.43]	< 0.001
FARMs	2.60	[2.48, 2.72]	< 0.001	1.24	[1.18, 1.30]	< 0.001	1.30	[1.20, 1.41]	< 0.001
Male	2.17	[2.09, 2.25]	< 0.001	1.11	[1.08, 1.15]	< 0.001	1.11	[1.05, 1.18]	< 0.001
FARMs × Black	0.79	[0.73, 0.82]	< 0.001	0.95	[0.89, 1.01]	0.087	0.99	[0.89, 1.11]	0.871
School-level									
Enrollment	1.00	[1.00, 1.00]	0.036	1.00	[1.00, 1.00]	< 0.001	1.00	[1.00, 1.00]	0.438
% Truant	1.00	[0.99, 1.01]	0.908	1.01	[1.00, 1.01]	0.001	1.00	[1.00, 1.01]	0.394
% Special Education	0.98	[0.97, 0.99]	0.001	1.01	[1.00, 1.02]	0.014	1.00	[0.98, 1.01]	0.541
% FARMs	1.01	[1.01, 1.01]	< 0.001	1.00	[1.00, 1.00]	0.721	1.00	[0.99, 1.00]	0.319
% LEP	0.98	[0.97, 0.97]	< 0.001	1.01	[1.00, 1.01]	0.038	1.01	[0.99, 1.02]	0.341
Student-Teacher Ratio	1.01	[0.99, 1.02]	0.570	1.03	[1.01, 1.04]	< 0.001	1.03	[1.01, 1.06]	0.014
Suspension Rate	1.07	[1.06, 1.07]	< 0.001	1.01	[1.01, 1.01]	< 0.001	1.05	[1.04, 1.06]	< 0.001
Math	1.00	[0.99, 1.00]	0.347	1.00	[1.00, 1.00]	0.168	1.01	[1.00, 1.01]	0.023
Secondary School	2.85	[2.48, 3.28]	< 0.001	1.45	[1.31, 1.62]	< 0.001	0.97	[0.80, 1.17]	0.753
Majority White	1.44	[1.28, 1.62]	< 0.001	0.92	[0.83, 1.02]	0.112	1.17	[0.97, 1.40]	0.092
Majority Black	0.74	[0.64, 0.86]	< 0.001	1.14	[1.05, 1.24]	0.002	1.18	[0.99, 1.41]	0.065
Majority Latine	1.04	[0.75, 1.45]	0.780	0.83	[0.61, 1.14]	0.260	1.26	[0.71, 2.24]	0.431
ICCs									
One or more OSS	0.115								
Length of OSS	n/a								
Soft offense	0.151								

Note. FARMs = Free and Reduced-Price Meals. LEP = Limited English Proficiency. % Truant = percentage of students missing 20 or more days of school, nonconsecutively. ICC = Intra-class correlation.

4.1.1.2. Model 2: Days suspended. Regarding the length of the OSS as the outcome, students in secondary schools had significantly longer suspensions than students in elementary schools ($IRR = 1.45, p < .001$). Black students had significantly longer lengths of suspension than White students ($IRR = 1.13, p < .001$). Specifically, this can be interpreted as the length of suspension being 1.13 times longer for Black students as compared to White students. There were also significantly longer suspensions for special education students as compared to general education students ($IRR = 1.13, p < .001$), students qualifying for FARMs as compared to students not eligible for FARMs ($IRR = 1.20, p < .001$), and male students as compared to female students ($IRR = 1.11, p < .001$).

4.1.1.3. Model 3: Soft offense. Finally, considering the probability of receiving an OSS for a soft offense relative to hard offenses, among students who were suspended, Latine ($OR = 0.85, p = .002$) and Asian and Native Hawaiian students ($OR = 0.81, p = .029$) were significantly less likely to receive an OSS for a soft offense as compared to White students, whereas Black students were significantly more likely than White students ($OR = 1.12, p < .001$; see Table 3). Similar to previous findings, special education students ($OR = 1.34, p < .001$), students qualifying for FARMs ($OR = 1.29, p < .001$), and male students ($OR = 1.11, p < .001$) were significantly more likely to receive soft offense OSS than their counterparts.

4.1.2. Aim 2: School racial composition and discipline outcomes

4.1.2.1. Model 1: One or more OSS. Regarding the diversity classification of the school, results indicated that students in Majority White/Low Diversity schools had significantly higher odds of receiving an OSS ($OR = 1.44, p < .001$) than students in No Majority/High Diversity school types, whereas students in Majority Black/Low Diversity had significantly lower odds of receiving an OSS ($OR = 0.74, p < .001$) than students in No Majority/High Diversity school types, when controlling for other school factors including suspension rate.

4.1.2.2. Model 2: Days suspended. In examining the diversity classification of the school, results indicated that students in Majority Black/Low Diversity schools had significantly longer OSS ($IRR = 1.14, p = .002$) than students in No Majority/High Diversity school types (schools with no clear racial majority). See Table 3 for model estimates.

4.1.2.3. Model 3: Soft offense. There was no association between the odds of receiving a soft offense and the diversity classification of the school.

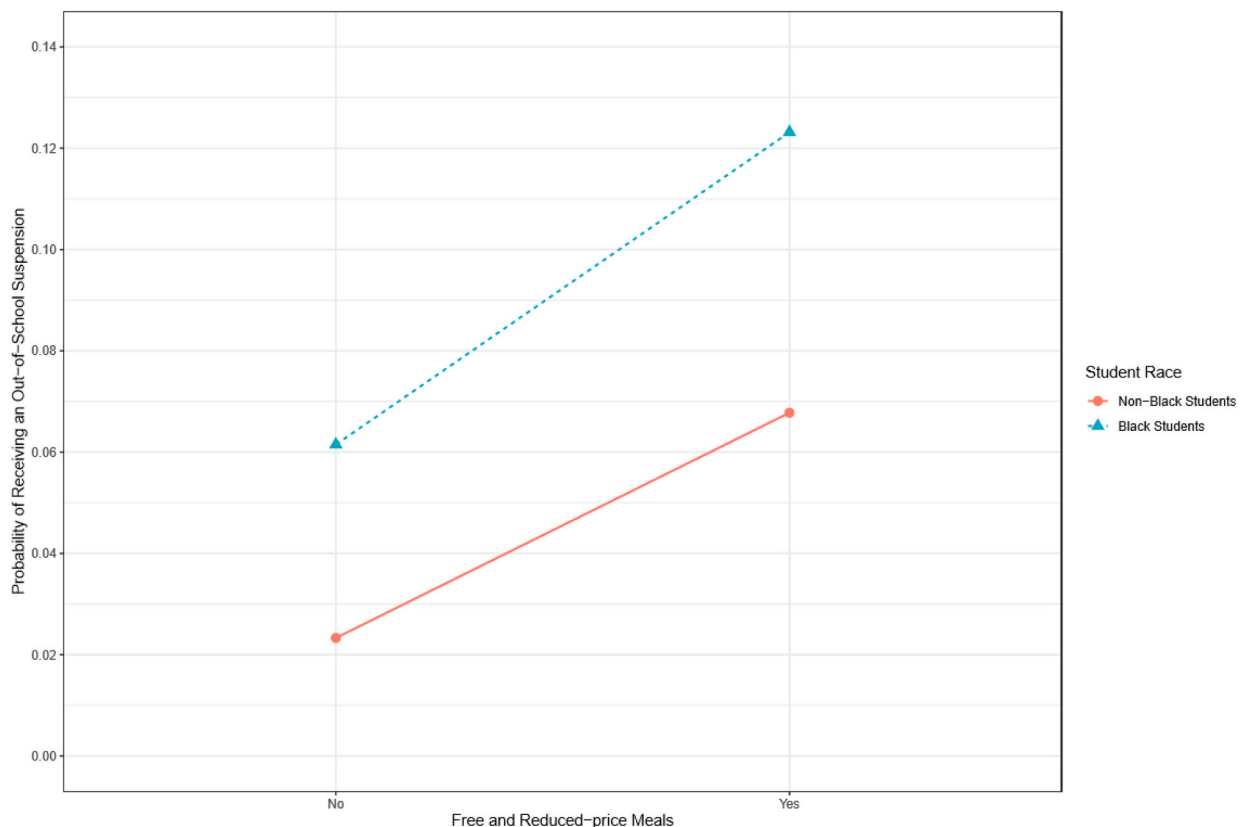


Fig. 2. Significant Interaction of FARMs Black for Ever Suspended Outcome with Full Sample.

4.1.3. Aim 3: School racial composition and discipline outcomes for black students

4.1.3.1. *Model 1: One-or-more suspension.* Next, we consider model estimates across all three models with a restricted sample of Black students only ($n = 267,267, j = 1266$). The ICC for this model was 0.094. As reported in Table 4, among Black students only, special education students ($OR = 1.78, p < .001$), students qualifying for FARMs ($OR = 2.00, p < .001$), and male students ($OR = 1.96, p < .001$) had significantly greater odds of receiving an OSS as compared to general education students, students not eligible for FARMs, and female students, respectively. Considering the diversity of the school, Black students in Majority White/Low Diversity schools had significantly higher odds of receiving an OSS than Black students in No Majority/High Diversity type schools ($OR = 1.34, p < .001$). In contrast, Black students in Majority Black/Low Diversity schools had significantly lower odds of receiving an OSS than Black students in No Majority/High Diversity type schools ($OR = 0.77, p < .001$).

4.1.3.2. *Model 2: Days suspended.* Regarding the number of days suspended among Black students, special education students ($IRR = 1.16, p < .001$), students qualifying for FARMs ($IRR = 1.16, p < .001$), and male students ($IRR = 1.09, p < .001$) received significantly longer suspensions than non-Special education, non-FARMs, and female Black students, respectively (see Table 4). At the school-level, Black students in Majority Black/Low Diversity schools had significantly longer suspensions than Black students in No Majority/High Diversity type schools ($IRR = 1.18, p < .001$).

4.1.3.3. *Model 3: Soft offense.* Finally, considering the odds of receiving an OSS for a soft offense, special education students ($OR = 1.30, p < .001$) and students receiving FARMs ($OR = 1.26, p < .001$) had significantly higher odds of receiving an OSS for a soft offense than other Black students. However, there was no association between the probability of receiving an OSS for a soft offense and the diversity classification of the school among this stratified sample of Black students. See Table 4 for model estimates. The ICC for this model was 0.127.

5. Discussion

This study sought to build upon the existing literature on disproportionality in OSS for Black students by examining the role of race, FARMs as a proxy for LIS, and school racial composition in relation to the odds of OSS, the number of days suspended, and odds of suspensions for soft offenses in a large state-level dataset from the Mideastern U.S. There are documented benefits for students who attend racially and ethnically diverse schools (Ayscue et al., 2017; Graham, 2018); however, the association between school diversity and school discipline outcomes appears to be more complex. We were particularly interested in the role of race and LIS in discipline outcomes and the experiences of Black students across schools of varying racial compositions. Although a great deal of research has focused on the benefits of school racial and ethnic diversity, the actuality for Black students is that this type of diversity is more nuanced and differential depending on both student and school-level factors.

Table 4
Results for Restricted Sample of Black Students Only.

	One or More OSS			Length of OSS			Soft Offense		
	OR	95% C.I.	p	IRR	95% C.I.	p	OR	95% C.I.	p
	N = 264,735			N = 24,417			N = 24,417		
	J = 1266			J = 996			J = 996		
	OR	95% C.I.	p	IRR	95% C.I.	p	OR	95% C.I.	p
Student-level									
Special Education	1.78	[1.70, 1.87]	< 0.001	1.16	[1.10, 1.22]	< 0.001	1.30	[1.20, 1.41]	< 0.001
FARMs	2.00	[1.91, 2.08]	< 0.001	1.16	[1.11, 1.21]	< 0.001	1.26	[1.17, 1.37]	< 0.001
Male	1.96	[1.87, 2.04]	< 0.001	1.09	[1.05, 1.13]	< 0.001	1.07	[0.99, 1.15]	0.068
School-level									
Enrollment	1.00	[1.00, 1.00]	0.112	1.00	[1.00, 1.00]	< 0.001	1.00	[1.00, 1.00]	0.120
% Truant	1.01	[1.00, 1.01]	0.063	1.01	[1.00, 1.01]	< 0.001	1.00	[1.00, 1.01]	0.373
% Special Education	0.98	[0.96, 0.99]	< 0.001	1.00	[1.00, 1.01]	0.134	0.99	[0.98, 1.01]	0.331
% FARMs	1.01	[1.00, 1.01]	0.006	1.00	[1.00, 1.00]	0.305	1.00	[0.99, 1.00]	0.470
% LEP	0.98	[0.98, 0.99]	< 0.001	1.00	[1.00, 1.01]	0.095	1.01	[1.00, 1.02]	0.247
Student-Teacher Ratio	0.99	[0.97, 1.01]	0.408	1.02	[1.01, 1.014]	0.002	1.00	[0.98, 1.03]	0.834
Suspension Rate	1.06	[1.05, 1.07]	< 0.001	1.01	[1.01, 1.02]	< 0.001	1.05	[1.04, 1.05]	< 0.001
Math	1.00	[0.99, 1.00]	0.116	1.00	[1.00, 1.00]	0.410	1.01	[1.00, 1.01]	0.072
Secondary School	2.30	[1.99, 2.66]	< 0.001	1.40	[1.26, 1.56]	< 0.001	0.90	[0.73, 1.11]	0.328
Majority White	1.34	[1.17, 1.53]	< 0.001	0.91	[0.80, 1.03]	0.117	1.24	[0.99, 1.56]	0.064
Majority Black	0.77	[0.67, 0.88]	< 0.001	1.18	[1.08, 1.29]	< 0.001	1.18	[0.99, 1.41]	0.062
Majority Latine	0.89	[0.63, 1.24]	0.484	0.91	[0.68, 1.24]	0.560	1.21	[0.65, 2.25]	0.542
ICCs									
One or more OSS	0.094								
Length of OSS	n/a								
Soft offense	0.127								

Note. FARMs = Free and Reduced-Price Meals; LEP = Limited English Proficiency; ICC = Intra-class correlation.

For our first research aim related to the association between race, LIS, and discipline outcomes, consistent with our hypothesis, Black students who were eligible for FARMs (student-level) had increased odds of suspensions, more days suspended, and were more likely to be suspended for soft offenses compared to White students. These findings are consistent with the decades of literature highlighting the discipline gap for Black students (Bottiani et al., 2016; Gregory et al., 2010, 2021; Skiba et al., 2002, 2011).

For our second research aim, we found partial support for our hypothesis that school diversity would be associated with decreased risk of suspension in the full sample. When examining the raw suspension rates, the overall suspension rate was highest (9%) for students in predominantly Black schools and lowest for students in predominantly Latine schools (2.2%). The raw suspension rate was 3.4% in majority White schools and 5.7% in schools with no racial or ethnic majority. It is only when controlling for several school-level and individual factors, including school average suspension rates, that students in Majority White schools became at highest risk of suspension while students in Majority Black schools became at lowest risk. In other words, the adjusted risk, when controlling for several other variables that have been found to be related to OSS, was lower for students in Majority Black schools ($OR = 0.77, p < .001$). These findings highlight the differential experiences that Black students may be having in majority White schools.

In our restricted sample of Black students for aim three, Black students attending majority White schools were more likely to be suspended whereas Black students in majority Black schools were less likely when compared to Black students attending more diverse schools. However, when Black students in Majority Black schools were suspended, they were suspended for significantly longer periods of time than Black students in other schools, consistent with past findings on Black students receiving longer suspensions in schools with larger percentages of Black students (Kinsler, 2011). It is important to note that the suspension rate was not lower in Majority Black schools, although the risk of suspension was lower. We also want to highlight that for all three research aims, there were no significant results related to students in Majority Latine schools. This may be due to the relatively small number of Majority Latine schools in the study.

Our findings suggested that when controlling for student and school-level factors including suspension rate, Black students may be at lower or higher risk of suspension based on the racial context of their school and that Black students from lower-income backgrounds may have heightened risks. Welch and Payne's (2010) findings that schools with larger percentages of Black students use more punitive and more extreme punitive discipline practices, as well as fewer mild disciplinary practices, was not completely true in our case. It appears that schools with higher percentages of Black students in our study did use more severe punishments (longer suspensions); however, the lower odds of suspension suggest that perhaps some milder disciplinary methods (e.g., handling discipline problems at the classroom level, restorative practices) may have been used in the schools instead, or there may have been fewer behaviors where discipline of any type was deemed necessary.

Structural racism has contributed to the lack of diversity in schools and to the negative discipline outcomes that exist across the different school types and impact the educational experiences of Black students. Segregated neighborhoods and school zoning decisions impact the racial and ethnic composition of the student body at schools. Our findings raise concerns about the experiences of Black students across school types. Our results suggest that regardless of class and other variables, Black students may experience differential treatment and higher rates of suspension in predominantly White schools. Furthermore, a Black student may be at a lower odds of suspension in a predominantly Black school, but if suspended, they may be at higher odds of receiving a longer suspension. These findings are concerning and speak to the risks that Black students experience regarding exclusionary discipline across schools of varying racial compositions. These findings suggest that Black students might be more protected in predominantly Black schools. One study found that Black students were more likely to be suspended in more diverse schools (Ksinan et al., 2019). However, a parent should not have to decide, if they even have a choice, about their child attending a school where they are less likely to be suspended or one where they might be suspended for longer, if suspended. Additionally, parents of Black students must consider that predominantly Black schools are often under-resourced and underfunded. All these issues in the schooling experiences and educational achievement of Black students are directly related to the ongoing systemic and structural racism that is often perpetuated by individuals with good intentions. Without accepting these facts and making strategic plans for moving forward and making progress, the disparities in discipline outcomes nor the many other disparities that exist will be effective at improving the educational experiences for Black students.

5.1. Implications for school psychologists and administrators

There are systemic and individual interventions that can address disparities in exclusionary discipline practices. As this study focused on how school racial composition impacts OSS, we start with a discussion of system and school-wide considerations given the impact of policies and administrative decisions on which students attend which schools. First, school leaders must consider how school district zoning and residential segregation may be creating inequitable schools with high concentrations of students of color and students from low-income backgrounds, which are associated with a host of negative outcomes. Simply examining school racial composition is not enough as we know that there are different risks associated with which school a Black student attends. Orfield et al. (2012) offered numerous recommendations to combat the re-segregation of schools since desegregation orders were rolled back in the 1990s. Some of these recommendations included government assistance and incentives for voluntary integration, the reinstatement of policies that require the integration of schools, and increased advocacy and policy related to diversifying neighborhoods to reduce residential and thus school racial segregation.

Fiel and Zhang (2019) identified the racial composition of an area as one of the biggest threats to desegregation efforts. These efforts may be thwarted when the Black population reaches or surpasses 40% and true integration efforts may pose a perceived "racial threat" to White members of the community who fear losing some power. Careful considerations must be made in determining how to best approach efforts to diversify schools to ensure community support and quality and equitable experiences for students in schools

regardless of race. Districts lacking racial diversity in their student body may benefit from examining the distribution of lower-income students across schools. Furthermore, in relation to exclusionary discipline practices, diversifying the educator workforce may reduce the suspension risk for Black students, as diversity in the teacher workforce has been found to reduce discipline disparities (Hughes et al., 2020) and intergroup contact between school board members of different racial and ethnic groups has also reduced suspensions for all students (Hughes et al., 2017).

At the school and district levels, school psychologists and administrators must examine policies and procedures from office referrals through expulsions to identify potential points of bias or inequitable decision making (McIntosh et al., 2018). Simply examining suspensions and expulsions is not enough given that teachers first assess whether a behavior warrants addressing and then if it should be handled in the classroom or with an ODR. Next, an administrator determines if an ODR should result in an OSS, some other form of discipline, or a return to the classroom. These multiple decision points all require discretionary consideration by teachers, psychologists, school leaders, and school teams; if left unchecked, school leaders may be less likely to reflect on and identify the differential treatment that may be occurring as they handle perceived student misbehaviors. In other words, implicit biases may contribute to student ODRs and suspensions, and examining the data can reveal troubling patterns that could be addressed.

School leaders might also consider the ways in which hard and soft offenses are defined and assigned. For example, some hard offenses, such as getting into a physical fight or carrying a knife, are easily identified objectively as behaviors that warrant an immediate consequence to maintain safety. Conversely, truancy and tardiness also are hard offenses; however, they are much less concerning than offenses that are immediate threats to safety. Yet as another example, bullying and sexual harassment are also hard offenses, even though they may be assigned more subjectively than bringing a weapon to school or engaging in a physical assault. Overall, regardless of offense type, schools may consider implementation of restorative practices and other alternatives to exclusionary discipline given that removing students from school who are already experiencing challenges and may feel disconnected from school may further exacerbate the situation.

With regard to prevention programming, many schools aim to reduce disproportionality by implementing School-Wide Positive Behavioral Interventions and Supports (SWPBIS), which is a multi-tiered system of support with the general expectations used school-wide (i.e., Tier 1) for all students and then some students receive Tier 2 and Tier 3 behavior support for more intensive needs (Horner & Sugai, 2015). Through SWPBIS training, students are taught behavioral expectations and educators reinforce those expectations, correct behaviors as needed, and collect data (Horner & Sugai, 2015). Given that SWPBIS identifies clear expectations and consequences, it may be able to reduce ambiguity and unfairness in discipline decisions, thus reducing racial discipline disparities (McIntosh et al., 2014); however, disparities may still exist in schools implementing these practices (Zakszeski et al., 2021). In a comparison study of schools in California who were and were not using SWPBIS, those implementing SWPBIS had less OSS and less days of school missed due to OSS (Grasley-Boy et al., 2019). In addition to SWPBIS, Brann et al. (2022) have offered the Participatory Culture-Specific Intervention Model as another model that can be used to make changes in schools that may be more inclusive. This multi-step consultation approach involves incorporating key community members in the planning and implementation process of new initiatives and has been offered as a possible mechanism for making systems change to address the ongoing racial disproportionality in discipline referrals (Brann et al., 2022).

Building on the SWPBIS framework and taking a more participatory approach, Culturally Responsive Positive Behavioral Intervention Supports (CRPBIS) also include a Learning Lab consisting of stakeholders who work together to change existing discipline systems that have not worked well for students from minoritized backgrounds (Bal, 2018). School leaders use data to examine outcomes and practices to ultimately effect systemic change (Bal, 2018). Although Learning Labs include community members and caregivers, bringing these stakeholders into conversations about disproportionality is important regardless of whether CRPBIS Learning Labs are used.

Many school psychologists and other school leaders have tried to address racial disproportionality in exclusionary discipline practices through teacher professional development. Although professional development may have some benefits, teacher coaching holds great promise for effecting changes in teacher behaviors (Bradshaw et al., 2018; Pas et al., 2022). For example, the Double Check teacher professional development and coaching program is designed to reduce exclusionary discipline practices by increasing teacher culturally responsive practices (Bradshaw et al., 2018; Hershfeldt et al., 2009). Double Check is multi-component, where schools implementing SWPBIS also receive professional development centered around the CARES framework (i.e., Connection to the Curriculum, Authentic Relationships, Reflective Thinking, Effective Communication, and Sensitivity to Students' Culture); teachers then receive individual coaching related to behavior management in the classroom. Teachers receiving the Double Check professional development reported improvements in culturally responsive behavior management and self-efficacy. In addition, trained observers recorded more proactive behavior management and less disruptive behavior in classrooms where the teacher had participated in the coaching arm of the intervention (Bradshaw et al., 2018). Whether implementing Double Check or other teacher focused professional development, the facilitator should consider tailoring the intervention to the school context. School psychologists should consider factors such as the school racial composition, school-level discipline data, and teacher demographics. In the current political climate, one should also be aware of varying levels of interest, comfort, and willingness to discuss issues of race and income status. When working with individuals who are taking a color-evasive approach or who are resistant to the terminology related to culturally responsive practice, school psychologists and administrators might capitalize on existing relationships with colleagues to provide education on the importance of such practices. Furthermore, helping teachers to focus on their students' individual strengths and needs may be another way to increase positive teacher-student interactions and authentic relationships while continuing to work towards increasing overall cultural responsiveness.

At the individual level, it is critical that school psychologists, teachers, and school leaders all engage in self-reflection and be mindful as they make decisions about discipline. McIntosh et al. (2014) recommended a self-review process immediately before

making a discipline decision as a way of potentially minimizing implicit bias. Other individual strategies from the healthcare field have been suggested for teachers, such as individuation, which entails focusing on important details about a person to decrease the importance of social identities such as race or gender in an effort to reduce implicit bias (Isipa-Landa, 2018). Teachers who display empathy and engage in perspective taking may also make less racially charged discipline decisions (Isipa-Landa, 2018).

Overall, Black students have different school experiences based on the racial composition of their school and one-size-fits-all reforms, or interventions may not be appropriate across school contexts. For example, school reform efforts in Philadelphia that limited suspensions for nonviolent offenses and increased principal discretion for addressing violent offenses had mixed effects; there were fewer suspensions for nonviolent offenses, more for violent offenses, and an overall unchanged number of suspensions (Lacoe & Steinberg, 2018). Conversely, policies in California have resulted in fewer suspensions across the state and narrowing of the Black-White gap in suspension; however, Black students are still suspended at the highest rates. It is notable that although in-school-suspension (ISS) is often used as an alternative to OSS, Black students are also disproportionately given ISS (Cholewa et al., 2018). The impact of this reform is important to consider when addressing the role of school racial and ethnic composition and suspension risk for Black students to ensure that there are no unintended negative outcomes for students. Overall, school psychologists can play a key role in implementing interventions and influencing policies designed to address the disparities in exclusionary discipline practices that students of color experience (Gregory et al., 2021).

5.2. Limitations

Despite the many strengths of our study, including the novel approach to examining school diversity using the generalized variance and school racial composition, there are some limitations to discuss. Determining differences in OSS and discipline disproportionality based on school racial composition is challenging given the many different ways that terms such as diversity, school racial composition, and segregation are defined. More consistency in the field may help with accurately assessing outcomes and being able to make comparisons across studies. One limitation of our study is related to the age and cross-sectional nature of the data. Although these data were collected in the 2010s, racial and socioeconomic disparity patterns captured in this study persist locally and nationally, highlighting the ongoing relevance of this research (Fadus et al., 2021; Lehmann et al., 2022; Wiley, 2021). Future studies using more recent datasets and our data analysis approach may provide insight into how school racial composition relates to OSS and more recent trends in disproportionality. For example, recent data indicate modest declines in overall school discipline rates, but continued disproportionality, as well as increased school-based arrests, referrals to law enforcement, and expulsions (U.S. Department of Education, Office of Civil Rights, 2021).

In addition, we note that a limitation of operationalizing suspensions as binary (ever/never) is that we were not able to assess repeat suspensions as an outcome. Future studies exploring the effects of school diversity on repeat suspensions could be an important contribution to the field. There are also limitations associated with using FARMS as a proxy for LIS such as the potential misclassification of some students and other factors associated with economic stability that are not necessarily captured by the federal government's poverty guidelines that are used to determine FARMS eligibility (Harwell & LeBeau, 2010). However, we felt that using FARMS status would offer a broad picture of the interplay between school racial and socioeconomic characteristics for our study. Furthermore, although we recognize that there are developmental differences between middle and high school students, we balanced a priority for power to detect effects and intentionally examined suspensions in elementary and secondary schools with middle and high schools grouped together. We followed procedures used by Losen and Martinez (2013) and Bradshaw et al. (2018) to group schools in prior studies. In the future, studies that examine suspensions in elementary, middle, and high schools will be able to speak to the developmental differences in exclusionary discipline. In regard to the assignment of OSS, we used a robust state-level dataset from the Mideastern region of the U.S. with student data; however, we are uncertain whether these data generalize to other states or schools. Moreover, we do not have information on the ODRs or processes leading up to the OSSs recorded in the data, which at times may be influenced by implicit or explicit biases and other structural factors that perpetuate the discipline gap that exists between Black and White students. There may also be selection biases related to what causes Black students to attend minority/majority schools which could contribute to differences in offenses and outcomes. For example, Black students may attend majority Black schools with fewer resources due to housing segregation and these school factors put them at higher risk of suspension and being impacted by ineffective policies such as zero-tolerance. Lastly, our findings cannot be generalized given regional differences in suspensions (Ksinan et al., 2019).

5.3. Future directions

Additional research is needed to replicate and extend these findings using more recent data; however, even replications from older datasets could contribute to our understanding about how patterns of out-of-school suspensions have changed over time in schools with different types of racial compositions. Furthermore, it will be important to assess if there are any changes in disproportionality after the educational disruptions caused by COVID during the 2020–2021 and 2021–2022 school years. The novel school-level diversity variable used in this study could also be helpful in future studies, thereby adding yet another way to quantify and operationalize diversity. Although we focused on the experiences of Black students, there are other minoritized groups represented in the dataset (e.g., Native American, Asian, Pacific Islander) that could be the focus of future studies. Beyond this dataset, studies examining how students' perceptions of school climate and cultural responsiveness are associated with the school-level diversity variable are also of interest. Given research demonstrating that Black students are at lower risk of suspension when the educator workforce is more racially diverse (Hughes et al., 2017), other empirical studies might examine how the diversity of school leadership and educators and support

related to culturally responsive behavior management are associated with suspension outcomes. Lastly, with increasing percentages of students of color in public schools, new longitudinal research may focus on how shifts in diversity in schools over time predict higher rates of discipline of students of color.

6. Conclusions

Taking a novel methodological approach to examining the role of school racial and low-income composition in out-of-school suspensions, we found that Black students in a Mideastern state experienced differential suspension risks depending on the racial and socioeconomic context of their school. Black students are generally at higher risk of suspension than other students, but their adjusted risk was highest in predominantly White schools. Risk is also heightened for Black students from lower-income backgrounds. School district leaders and policymakers should consider how structural racism, housing segregation, and racially segregated schools all contribute to the racial disparities that exist within exclusionary discipline practices. Within districts and schools, steps must be taken to ensure that neither race, low-income status, nor school racial composition put any student at increased risk for disciplinary outcomes.

Acknowledgements

This work was funded by the W.T. Grant Foundation (Grant IDs: 187957 & 190026; PI: Bottiani) and the Institute of Education Sciences (R305A150221 & R305H150027; PI: Bradshaw). The authors would also like to acknowledge Maryland PBIS Collaborative, which includes the Maryland State Department of Education, Sheppard Pratt, the University of Virginia, Johns Hopkins University, and the 24 local school districts. We give special thanks to Katrina Debnam and Elise Pas for their support of this project.

References

- Anyon, Y., Jenson, J. M., Altschul, I., Farrar, J., McQueen, J., Greer, E., ... Simmons, J. (2014). The persistent effect of race and the promise of alternatives to suspension in school discipline outcomes. *Children and Youth Services Review*, *44*, 379–386.
- Anyon, Y., Lechuga, C., Ortega, D., Downing, B., Greer, E., & Simmons, J. (2018). An exploration of the relationships between student racial background and the school sub-contexts of office discipline referrals: A critical race theory analysis. *Race, Ethnicity, and Education*, *21*(3), 390–406.
- Aud, S., Hussar, W., Planty, M., Snyder, T., Bianco, K., Fox, M. A., Frohlich, Lauren, Kemp, Jana, & Drake, L. (2010). *The condition of education 2010*. NCES 2010-028. National Center for Education Statistics.
- Ayscue, J., Frankenberg, E., & Siegel-Hawley, G. (2017). *The complementary benefits of racial and socioeconomic diversity in schools*. Research Brief No. 10. National Coalition on School Diversity.
- Bailey, Z. D., Krieger, N., Agénor, M., Graves, J., Linos, N., & Bassett, M. T. (2017). Structural racism and health inequities in the USA: Evidence and interventions. *The Lancet*, *389*(10077), 1453–1463.
- Bal, A. (2018). Culturally responsive positive behavioral interventions and supports: A process-oriented framework for systemic transformation. *Review of Education, Pedagogy, and Cultural Studies*, *40*(2), 144–174.
- Benner, A. D., & Graham, S. (2013). The antecedents and consequences of racial/ethnic discrimination during adolescence: Does the source of discrimination matter? *Developmental Psychology*, *49*(8), 1602–1613.
- Bischoff, K., & Tach, L. (2018). The racial composition of neighborhoods and local schools: The role of diversity, inequality, and school choice. *City & Community*, *17*(3), 675–701. <https://doi.org/10.1111/cico.12323>.
- Bottiani, J. H., Bradshaw, C. P., & Mendelson, T. (2016). Inequality in Black and White high school students' perceptions of school support: An examination of race in context. *Journal of Youth and Adolescence*, *45*(6), 1176–1191.
- Bottiani, J. H., Bradshaw, C. P., & Mendelson, T. (2017). A multilevel examination of racial disparities in high school discipline: Black and white adolescents' perceived equity, school belonging, and adjustment problems. *Journal of Educational Psychology*, *109*(4), 532–545. <https://doi.org/10.1037/edu0000155>.
- Bradshaw, C. P., Mitchell, M. M., O'Brennan, L. M., & Leaf, P. J. (2010). Multilevel exploration of factors contributing to the overrepresentation of black students in office disciplinary referrals. *Journal of Educational Psychology*, *102*(2), 508–520.
- Bradshaw, C. P., Pas, E. T., Bottiani, J. H., Debnam, K. J., Reinke, W. M., Herman, K. C., & Rosenberg, M. S. (2018). Promoting cultural responsiveness and student engagement through double check coaching of classroom teachers: An efficacy study. *School Psychology Review*, *47*(2), 118–134.
- Brann, K. L., Naser, S. C., & Clough, M. (2022). Organizational consultation to promote equitable school behavioral data practices using the Participatory Culture-Specific Intervention Model. *Journal of Educational and Psychological Consultation*, 1–23.
- Brittain, J., & Kozlak, C. (2007). Racial disparities in educational opportunities in the United States. *Seattle Journal for Social Justice*, *6*(2), 3.
- Budescu, D. V., & Budescu, M. (2012). How to measure diversity when you must. *Psychological Methods*, *17*(2), 215–227. <https://doi.org/10.1037/a0027129>.
- Carter, P. L., Skiba, R., Arredondo, M. I., & Pollock, M. (2017). You can't fix what you don't look at: Acknowledging race in addressing racial discipline disparities. *Urban Education*, *52*(2), 207–235.
- Cholewa, B., Hull, M. F., Babcock, C. R., & Smith, A. D. (2018). Predictors and academic outcomes associated with in-school suspension. *School Psychology Quarterly*, *33*(2), 191–199.
- Christie, C. A., Nelson, C. M., & Jolivet, K. (2004). School characteristics related to the use of suspension. *Education and Treatment of Children*, *27*(4), 509–526.
- Crenshaw, K., Gotanda, N., Peller, G., & Thomas, K. (Eds.). (1995). *Critical race theory: The key writings that formed the movement*. The New Press.
- Edwards, L. (2016). Homogeneity and inequality: School discipline inequality and the role of racial composition. *Social Forces*, *95*(1), 55–76.
- Eitle, T. M., & Eitle, D. J. (2004). Inequality, segregation, and the overrepresentation of African Americans in school suspensions. *Sociological Perspectives*, *47*(3), 269–287.
- Fabelo, T., Thompson, M. D., Plotkin, M., Carmichael, D., Marchbanks, M. P., & Booth, E. A. (2011). *Breaking schools' rules: A statewide study of how school discipline relates to students' success and juvenile justice involvement*. Council of State Governments Justice Center.
- Fadus, M. C., Valadez, E. A., Bryant, B. E., Garcia, A. M., Neelon, B., Tomko, R. L., & Squeglia, L. M. (2021). Racial disparities in elementary school disciplinary actions: Findings from the ABCD study. *Journal of the American Academy of Child & Adolescent Psychiatry*, *60*(8), 998–1009.
- Fiel, J. E., & Zhang, Y. (2019). With all deliberate speed: The reversal of court-ordered school desegregation, 1970–2013. *American Journal of Sociology*, *124*(6), 1685–1719.
- Frankenberg, E., Ee, J., Ayscue, J. B., & Orfield, G. (2019). Harming our common future: America's segregated schools 65 years after Brown. Retrieved from www.civilrightsproject.ucla.edu.
- Frankenberg, E., Siegel-Hawley, G., & Wang, J. (2010). *Choice without equity: Charter school segregation and the need for civil rights standards*. Civil Rights Project/Proyecto Derechos Civiles.

- Freeman, K. J., & Steidl, C. R. (2016). Distribution, composition and exclusion: How school segregation impacts racist disciplinary patterns. *Race and Social Problems*, 8(2), 171–185.
- Garcia Coll, C., Crnic, K., Lamberty, G., Wasik, B. H., Jenkins, R., Garcia, H. V., & McAdoo, H. P. (1996). An integrative model for the study of developmental competencies in minority children. *Child Development*, 67(5), 1891–1914.
- García, E. (2020). *Schools are still segregated, and black children are paying a price*. Economic Policy Institute. Retrieved from <https://files.eric.ed.gov/fulltext/ED603475.pdf>.
- Gini, C. (1912). *Variabilità e mutabilità: Contributo alla studio delle distribuzioni e delle relazioni statistiche [variability and changeability: Contribution to the study of distributions and statistical relations]*. Cuppini.
- Girvan, E. J., Gion, C., McIntosh, K., & Smolkowski, K. (2017). The relative contribution of subjective office referrals to racial disproportionality in school discipline. *School Psychology Quarterly*, 32(3), 392–404.
- Graham, S. (2018). Race/ethnicity and social adjustment of adolescents: How (not if) school diversity matters. *Educational Psychologist*, 53(2), 64–77.
- Grasley-Boy, N. M., Gage, N. A., & Lombardo, M. (2019). Effect of SWPBIS on disciplinary exclusions for students with and without disabilities. *Exceptional Children*, 86(1), 25–39.
- Gregory, A., Osher, D., Bear, G. B., Jagers, R. J., & Sprague, J. R. (2021). Good intentions are not enough: Centering equity in school discipline reform. *School Psychology Review*, 50(2–3), 206–220. <https://doi.org/10.1080/2372966X.2020.1861911>.
- Gregory, A., & Skiba, R. J. (2019). Reducing suspension and increasing equity through supportive and engaging schools. In J. A. Fredricks, A. L. Reschly, & S. L. Christenson (Eds.), *Handbook of student engagement interventions: Working with disengaged students* (pp. 121–134). Elsevier Academic Press. <https://doi.org/10.1016/B978-0-12-813413-9.00009-7>.
- Gregory, A., Skiba, R. J., & Noguera, P. A. (2010). The achievement gap and the discipline gap: Two sides of the same coin? *Educational Researcher*, 39(1), 59–68.
- Hanushek, E. A., Kain, J. F., & Rivkin, S. G. (2009). New evidence about Brown v. Board of Education: The complex effects of school racial composition on achievement. *Journal of Labor Economics*, 27(3), 349–383.
- Harwell, M., & LeBeau, B. (2010). Student eligibility for a free lunch as an SES measure in education research. *Educational Researcher*, 39(2), 120–131.
- Hershfeldt, P. A., Sechrest, R., Pell, K. L., Rosenberg, M. S., Bradshaw, C. P., & Leaf, P. J. (2009). Double-check: A framework of cultural responsiveness applied to classroom behavior. *Teaching Exceptional Children Plus*, 6(2), 2–18.
- Horner, R. H., & Sugai, G. (2015). School-wide PBIS: An example of applied behavior analysis implemented at a scale of social importance. *Behavior Analysis in Practice*, 8(1), 80–85. <https://doi.org/10.1007/s40617-015-0045-4>.
- Howard, T. (2008). Who really cares? The disenfranchisement of African American males in preK-12 schools: A critical race theory perspective. *Teachers' College Record*, 110(5), 954–985.
- Huang, F. L. (2020). Prior problem behaviors do not account for the racial suspension gap. *Educational Researcher*, 49(7), 493–502.
- Hughes, C., Bailey, C. M., Warren, P. Y., & Stewart, E. A. (2020). "Value in diversity": School racial and ethnic composition, teacher diversity, and school punishment. *Social Science Research*, 92, Article 102481.
- Hughes, C., Warren, P. Y., Stewart, E. A., Tomaskovic-Devey, D., & Mears, D. P. (2017). Racial threat, intergroup contact, and school punishment. *Journal of Research in Crime and Delinquency*, 54(5), 583–616.
- Hussar, B., Zhang, J., Hein, S., Wang, K., Roberts, A., Cui, J., ... Rita, Dilig (2020). *The condition of education 2020. NCES 2020-144*. National Center for Education Statistics.
- Ispa-Landa, S. (2018). Persistently harsh punishments amid efforts to reform: Using tools from social psychology to counteract racial bias in school disciplinary decisions. *Educational Researcher*, 47(6), 384–390.
- Kinsler, J. (2011). Understanding the black–white school discipline gap. *Economics of Education Review*, 30(6), 1370–1383.
- Ksinan, A. J., Vazsonyi, A. T., Jiskrova, G. K., & Peugh, J. L. (2019). National ethnic and racial disparities in disciplinary practices: A contextual analysis in American secondary schools. *Journal of School Psychology*, 74, 106–125.
- Lacoe, J., & Manley, M. (2019). Disproportionality in school discipline: An assessment in Maryland through 2018. Study snapshot. Regional Educational Laboratory Mid-Atlantic. Retrieved from: <https://files.eric.ed.gov/fulltext/ED598820.pdf>.
- Lacoe, J., & Steinberg, M. P. (2018). Rolling back zero tolerance: The effect of discipline policy reform on suspension usage and student outcomes. *Peabody Journal of Education*, 93(2), 207–227.
- Ladson-Billings, G., & Tate, W. F. (1995). Toward a critical race theory of education. *Teachers College Record*, 97(1), 47–68.
- Leckie, G., Browne, W. J., Goldstein, H., Merlo, J., & Austin, P. C. (2020). Partitioning variation in multilevel models for count data. *Psychological Methods*, 25(6), 787–801. <https://doi.org/10.1037/met0000265>.
- Lehmann, P. S., Azimi, A. M., Fortney, K., & Alaniz, K. (2022). Racial and ethnic disparities in school discipline: The interactive effects of gender and parental educational attainment. *Crime & Delinquency*, 68(10), 1631–1669.
- Losen, D. J., & Martinez, T. E. (2013). *Out of school and off track: The overuse of suspensions in American middle and high schools*. Los Angeles: University of California.
- McIntosh, K., Barnes, A., Eliason, B., & Morris, K. (2014). Using discipline data within SWPBIS to identify and address disproportionality: A guide for school teams. In *OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports*. www.pbis.org.
- McIntosh, K., Girvan, E. J., Horner, R. H., Smolkowski, K., & Sugai, G. (2018). A 5-point intervention approach for enhancing equity in school discipline. *OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports*. <https://www.pbis.org/resource/a-5-point-intervention-approach-for-enhancing-equity-in-school-discipline>.
- Mendez, L. M. R., Knoff, H. M., & Ferron, J. M. (2002). School demographic variables and out-of-school suspension rates: A quantitative and qualitative analysis of a large, ethnically diverse school district. *Psychology in the Schools*, 39(3), 259–277 and student outcomes: A meta-analysis. *School Psychology Review*, 44(2), 224–240.
- Orfield, G., Kucsera, J., & Siegel-Hawley, G. (2012). E pluribus... separation: Deepening double segregation for more students. Retrieved from: <https://escholarship.org/content/qt8g58m2v9/qt8g58m2v9.pdf>.
- Owens, A. (2020). Unequal opportunity: School and neighborhood segregation in the USA. *Race and Social Problems*, 12(1), 29–41.
- Owens, J., & McLanahan, S. (2017). The origins of the racial gap in school suspension and expulsion. In *Working papers wp17–15-ff*. Princeton University, School of Public and International Affairs, Center for Research on Child Wellbeing.
- Owens, J., & McLanahan, S. S. (2020). Unpacking the drivers of racial disparities in school suspension and expulsion. *Social Forces*, 98(4), 1548–1577.
- Pas, E. T., Borden, L., Debnam, K. J., De Lucia, D., & Bradshaw, C. P. (2022). Exploring profiles of coaches' fidelity to double Check's motivational interviewing-embedded coaching: Outcomes associated with fidelity. *Journal of School Psychology*, 92, 285–298.
- Pas, E. T., Ryoo, J. H., Musci, R. J., & Bradshaw, C. P. (2019). A state-wide quasi-experimental effectiveness study of the scale-up of school-wide positive behavioral interventions and supports. *Journal of School Psychology*, 73, 41–55.
- Reardon, S. F. (2016). School segregation and racial academic achievement gaps. *RSF: The Russell Sage Foundation Journal of the Social Sciences*, 2(5), 34–57.
- Reardon, S. F., Grewal, E. T., Kalogrides, D., & Greenberg, E. (2012). Brown fades: The end of court-ordered school desegregation and the resegregation of American public schools. *Journal of Policy Analysis and Management*, 31(4), 876–904.
- Reardon, S. F., & Owens, A. (2014). 60 years after Brown: Trends and consequences of school segregation. *Annual Review of Sociology*, 40(1), 199–218.
- Reardon, S. F., Weathers, E. S., Fahle, E. M., Jang, H., & Kalogrides, D. (2019). Is separate still unequal? New evidence on school segregation and racial academic achievement Gaps (CEPA Working Paper No.19-06). <http://cepa.stanford.edu/wp19-06>.
- Reardon, T., Harvey, K., Young, B., O'Brien, D., & Creswell, C. (2018). Barriers and facilitators to parents seeking and accessing professional support for anxiety disorders in children: qualitative interview study. *European Child & Adolescent Psychiatry*, 27, 1023–1031. <https://doi.org/10.1007/s00787-018-1107-2>
- Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, 277(5328), 918–924.
- Sharkey, P. (2013). *Stuck in place: Urban neighborhoods and the end of progress toward racial equality*. University of Chicago Press.
- Shi, Y., & Zhu, M. (2022). Equal time for equal crime? Racial bias in school discipline. *Economics of Education Review*, 88, Article 102256.

- Simpson, E. H. (1949). Measurement of diversity. *Nature*, 688(1). <https://doi.org/10.1038/163688a0>.
- Simson, D. (2013). Exclusion, punishment, racism, and our schools: A critical race theory perspective on school discipline. *UCLA L. Rev.*, 61, 506.
- Skiba, R. J., Chung, C. G., Trachok, M., Baker, T. L., Sheya, A., & Hughes, R. L. (2014). Parsing disciplinary disproportionality: Contributions of infraction, student, and school characteristics to out-of-school suspension and expulsion. *American Educational Research Journal*, 51(4), 640–670.
- Skiba, R. J., Horner, R. H., Chung, C. G., Rausch, M. K., May, S. L., & Tobin, T. (2011). Race is not neutral: A national investigation of African American and Latino disproportionality in school discipline. *School psychology review*, 40(1), 85–107.
- Skiba, R. J., Michael, R. S., Nardo, A. C., & Peterson, R. L. (2002). The color of discipline: Sources of racial and gender disproportionality in school punishment. *The Urban Review*, 34(4), 317–342.
- Spader, J., & Herbert, C. (2017). Waiting for homeownership: Assessing the future of homeownership, 2015–2035. *BCJL & Soc. Just.*, 37, 267.
- Staats, C. (2014). *Implicit racial bias and school discipline disparities (special rep.)*. Columbus, OH: Kirwan Institute.
- Staats, C. (2016). Understanding implicit bias: What educators should know. *American Educator*, 39(4), 29.
- StataCorp.. (2015). *Stata statistical software: Release 14*. StataCorp LP.
- Sullivan, A. L., Klingbeil, D. A., & Van Norman, E. R. (2013). Beyond behavior: Multilevel analysis of the influence of sociodemographics and school characteristics on students' risk of suspension. *School Psychology Review*, 42(1), 99–114.
- Tefera, A. A., & Fischman, G. E. (2020). How and why context matters in the study of racial disproportionality in special education: Toward a critical disability education policy approach. *Equity & Excellence in Education*, 53(4), 433–448.
- Tien, J. (2019). Teaching identity vs. positionality: Dilemmas in social justice education. *Curriculum Inquiry*, 49(5), 526–550.
- U.S. Department of Education, Office of Civil Rights. (2021). Civil rights data collection (CRDC), 2017 to 2018 [Data set]. Retrieved from <http://ocrdata.ed.gov/>.
- Wallace, J. M., Jr., Goodkind, S., Wallace, C. M., & Bachman, J. G. (2008). Racial, ethnic, and gender differences in school discipline among US high school students: 1991–2005. *Negro Educational Review*, 59(1–2), 47–62.
- Walsemann, K. M., Bell, B. A., & Maitra, D. (2011). The intersection of school racial composition and student race/ethnicity on adolescent depressive and somatic symptoms. *Social Science & Medicine*, 72(11), 1873–1883.
- Welch, K., & Payne, A. A. (2010). Racial threat and punitive school discipline. *Social Problems*, 57(1), 25–48.
- Welch, K., & Payne, A. A. (2012). Exclusionary school punishment: The effect of racial threat on expulsion and suspension. *Youth Violence and Juvenile Justice*, 10(2), 155–171.
- Welch, K., & Payne, A. A. (2018). Latino/a student threat and school disciplinary policies and practices. *Sociology of Education*, 91(2), 91–110.
- Welsh, R. O., & Little, S. (2018). The school discipline dilemma: A comprehensive review of disparities and alternative approaches. *Review of Educational Research*, 88(5), 752–794.
- What Works Clearinghouse. (2020). What Works Clearinghouse procedures handbook. Version 4.1. <https://www.ies.ed.gov/ncee/wwc/handbooks>.
- Wiley, K. E. (2021). A tale of two logics: School discipline and racial disparities in a “mostly white” middle school. *American Journal of Education*, 127(2), 163–192.
- Williams, J. L., & Hamm, J. V. (2018). Peer group ethnic diversity and social competencies in youth attending rural middle schools. *The Journal of Early Adolescence*, 38(6), 795–823. <https://doi.org/10.1177/0272431617699945>.
- Williams, S. M., Swain, W. A., & Graham, J. A. (2021). Race, climate, and turnover: An examination of the teacher labor market in rural Georgia. *AERA Open*, 7(1), 1–23.
- Zakszeski, B., Rutherford, L., Heidelberg, K., & Thomas, L. (2021). In pursuit of equity: Discipline disproportionality and SWPBIS implementation in urban schools. *School Psychology*, 36(2), 122–130. <https://doi.org/10.1037/spq0000428>.