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A QuantCrit Analysis of Context, Discipline, Special Education, and Disproportionality

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Using a dis/ability critical race theory (DisCrit) and critical quantitative (QuantCrit) lens, we examine disproportionate application of exclusionary discipline on multiply marginalized youth, foregrounding systemic injustice and institutionalized racism. In doing so, we examined temporal-, student-, and school-level factors that may result in exclusion and othering (i.e., placing into special education and punishing with out-of-school suspensions) within one school district. We frame this study in DisCrit and QuantCrit frameworks to connect data-based decision making to sociocultural understandings of the ways in which schools use both special education and discipline to simultaneously provide and limit opportunities for different student groups. Results showed a complex interconnectedness between student sociodemographic labels (e.g., gender, race, and socioeconomic status) and factors associated with both special education identification and exclusionary discipline. Our findings suggest that quantitative studies lacking in-depth theoretical justification may perpetuate deficit understandings of the racialization of disability and intersections with exclusionary discipline.

Keywords: *overrepresentation, disproportionality, special education, exclusionary discipline, race/ethnicity, quant/crit*

Disproportionality is the extent to which group membership (e.g., gender, race/ethnicity, socioeconomic strata) differentially affects the probability of an outcome, such as exclusion from classroom learning opportunities. Disparities in academic achievement have dominated educational equity discourse in recent years (e.g., Reardon et al., 2019), and these have been explored in critical discussions related to opportunity gaps and educational debt (Carter & Welner, 2013; Ladson-Billings, 2006; Tate et al., 2008). However, examinations of additional metrics of inequity, including disproportionate representation of multiply marginalized youth (e.g., Black, Indigenous, and People of Color [BIPOC] placed in special education) in exclusionary discipline, are needed (Annamma et al., 2018) to gain a full understanding of the ways in which educational systems perpetuate inequities through exclusion.

Although federal and state agencies have identified racial disproportionality in both special education placement and exclusionary discipline enactment as a significant problem, research has presented inconsistent findings regarding causes of disproportionality in special education (see Morgan & Farkas, 2016; Skiba et al., 2016), and studies related to reduction of discipline disparities remain scant (see Cruz et al., 2021). Furthermore, Cruz et al. found that studies of school-based programs meant to reduce discipline disparities have rarely focused on the intersecting forms of oppression, exclusion, and erasure (see Annamma et al., 2018; Blake et al., 2017) that cause multiply marginalized students (i.e., those who experience multiple and intersecting oppressions in schools) to experience these exclusionary outcomes at higher rates. Understanding these phenomena as embedded in deficit discourses and interventions that center White, "neurotypical" students may be the first step in mitigating these inequities. Deficit approaches focus on finding and remediating rather than acknowledging and sustaining individual differences as valuable parts of the human experience; alternative approaches consider the disabling aspects of society and the inaccessibility of the built environment (see Artiles et al., 2016; Lambert, 2018). Thus, there is a need for equity-centered studies that interrogate whiteness, smartness, and goodness as ideological properties that are leveraged in school systems (see Leonardo & Broderick, 2011).

Qualitative work on disproportionality has highlighted the manner in which deficit ideologies are embedded in school systems (Bal et al., 2014; Harry et al., 2005; Lambert, 2019; Leonardo & Broderick, 2011; Lewis-McCoy, 2016) and the ways in which disparate discipline and labeling practices affect students' and families' lived experiences (Annamma et al., 2019; Banks, 2017; Connor et al., 2019). However, quantitative and qualitative works often speak past one another in attempts to uncover complexities that are subject to *agency–structure dualism*; individual actors within schools can enact agency, but outcomes remain subject to embedded structural inequities (Ahram et al., 2021; Mehan, 1992). Both discipline and special education identification represent processes that are subject to the agency–structure divide, and there are multiple points in each process at which bias may be introduced (see Smolkowski et al., 2016, for discipline, and Artiles, 2019, for special education). Therefore, schools that attempt to address these disparities without an explicit rejection of deficit ideologies (i.e., racism and ableism) in educational systems may exacerbate entrenched inequities.

Deficit ideologies are reified as schools exclude multiply marginalized students from general education through both special education assignment (e.g., Waitoller et al., 2010) and exclusionary discipline enactment (e.g., Welsh & Little, 2018). Exclusionary decisions are a result of *ideology–ontology circuits* that fortify one another (Artiles & Jacks, n.d.), in which subjective assessments reinforce structural inequities and deficit ideologies and affect stakeholders' perceptions of students. "There are clear connections between the ways students are perceived to be abnormal emotionally, cognitively, or behaviorally, and life outcomes" (Annamma et al., 2014, p. 60), and what schools have historically considered "normal" remains tightly connected to dominant ideology (Leonardo & Broderick, 2011; Tyack, 1974). Thus, we must examine both institutional and individual factors that affect the ways in which students experience particular outcomes.

Purpose of the Study

Our positionalities draw from our experiences working across special education, disability, and disproportionality as both practitioners and researchers. All three of the authors have worked as practitioners serving multiply marginalized, disabled youth of color and advocating for inclusive education in school systems. Our experiences as researchers also encompass a wide range of quantitative, qualitative, and mixed methodologies meant to bridge crucial divides in research and practice. This leads us to an interpretation of data from a critical lens and leads us to an understanding of disability that acknowledges the political, social, and historical legacies of marginalization.

From this collective positionality, we used data on one school district to investigate the following research questions: (a) What is the representation of BIPOC in school disciplinary and special education outcomes? (b) What is the longitudinal relationship between students' identities, such as race, and their involvement in exclusionary discipline practices and special education labeling? (c) Are there school-context components that contribute to disproportionality in exclusionary discipline for multiply marginalized students?

In the sections that follow, we describe the epistemological and theoretical locations that frame our study, and we then describe how this framework enabled us to challenge dominant discourses of discipline and special education in this research. We use a critical quantitative (QuantCrit) methodology (Baez, 2007; Garcia et al., 2018; Gillborn et al., 2018) to examine relationships between students, schools, and disproportionate suspension rates within this particular educational system. Finally, we describe how our theoretical lens can situate past and future studies within a sociohistorical perspective.

Interrogating Special Education and Discipline Disparities Through DisCrit and QuantCrit

A resounding limitation in both discipline disparities research and special education disproportionality research is a lack of theoretical framing (Cruz et al., 2021; Kulkarni, 2017; Sullivan & Artiles, 2011). Thus, we use a theoretical framework that bridges the divide between quantitative studies that seek to explain disproportionality (see Cruz & Rodl, 2018a; Morgan et al., 2017) and qualitative works that center the voices of those who experience racism, ableism, exclusion, and erasure within sociological systems (see Harry & Fenton, 2016). In doing so, we build the empirical base for the field's conceptual understanding of educational systems that perpetuate interlocking inequities (Cavendish et al., 2020).

Dis/Ability Studies Critical Race Theory

Dis/ability critical race theory (DisCrit; Annamma et al., 2013) emphasizes how the interdependence of racism and ableism maintains notions of normalcy in society. Expanding on critical race theory, DisCrit acknowledges how practices of separation and labeling affect multiply marginalized students through seven core tenets. These tenets prioritize the necessity of acknowledging (a) how racism and ableism circulate interdependently to uphold notions of normality; (b) that identity is multidimensional; (c) how the social constructions of race and ability, with a recognition of the material and psychological, affect those who are labeled; (d) the need to center voices of marginalized populations commonly unacknowledged in research; (e) the legal and historical aspects of how dis/ability and race have been constructed and how both have been used to deny rights to people; (f) the ways in which whiteness and ability as property have maintained benefits for White individuals at the

expense of people of color; and (g) that an analysis of racism and ableism must encourage activism and resistance.

Annamma and Morrison (2018) contended that racism and ableism function as interdependent forms of oppression within the structure of the U.S. educational system. Race and ability are reified in schools through special educational labeling, "race-neutral" disciplinary policies that exclude multiply marginalized youth (Annamma & Handy, 2020), and the compounding toll of practices and policies that maintain power hierarchies. BIPOC youth with dis/abilities—who are often the recipients of irrelevant, barrier-laden curriculum—are more likely to be pathologized under subjective special education labels, such as emotional disturbance (Bal et al., 2019) and learning disability (Shifrer, 2018), and are more likely to experience exclusionary forms of discipline (Welsh & Little, 2018) and segregation from peers (Skiba et al., 2006). Rather than reflecting student-level deficits, we contend that these are the consequences of an education system that privileges White, neurotypical learners and underscore the need for a critical examination of disproportionality, especially as it relates to quantitative educational data used to guide equity-oriented policy decisions (e.g., Farkas et al., 2020).

QuantCrit

Critical race theory has emphasized the endemic racism that is unacknowledged in quantitative studies claiming neutrality (Sablan, 2019), and Sablan contended that when quantitative studies use critical frameworks, there is potential to uncover the ways in which policies and practices differentially affect groups. Whereas qualitative works are well suited to narrating counterstories and alternative epistemologies that illuminate the centrality of racism in students' experiences (DeCuir-Gunby & Walker-DeVose, 2013), quantitative work can also document the ways in which racism and ableism position students in schools and thus highlight counternarratives to purported race neutrality. Yet few studies have used a critical approach with quantitative methods, and even fewer have used DisCrit as an underlying theory. Critical approaches in quantitative studies can emphasize the assets of BIPOC—rather than deficits—and they can point to the "overarching structure of racism and racial inequity . . . in framing, interpretation, and approach" (Sablan, 2019, p. 184).

Analysis in a QuantCrit Perspective

Through this research, we aimed to achieve crossdisciplinary insight into discipline disparities, a well-established area of research with scant solutions (see Cruz et al., 2021), and to build on QuantCrit as a methodological strategy. We leveraged five core tenets of QuantCrit (Gilborn et al., 2018), which acknowledge (a) the centrality of racism, (b) that numbers are not neutral, (c) that categories of race are neither natural nor static, (d) that data cannot speak for itself, and (e) the importance of using numbers for social justice endeavors. Subsequently, we discuss how we leveraged these QuantCrit tenets (Gillborn et al., 2018) through our DisCrit lens.

The Centrality of Racism and Ableism. Acknowledging the centrality of racism presumes that quantitative analysis without an antiracist perspective reinforces racism. Integrating this methodological approach within DisCrit theory, we contend that racism and ableism are interdependent, and we acknowledged the role of both in this research through highlighting the experiences of multiply marginalized youth. Both special education labeling and exclusionary school discipline represent *ideology–ontology circuits* in school practices (see Artiles & Jacks, n.d.), in that a student who does not conform to White-centered, neurotypical expectations for learning and behavior is understood to have an academic or behavioral deficit. As a result, the student is (sometimes) given interventions aimed at "fixing" their deficit or supporting conformity to unidimensional expectations for learning. If students do not conform to fixed academic learning and/or behavioral expectations in the general classroom, then they are referred for special education assessment and evaluated for eligibility by an interdisciplinary team. In exclusionary discipline, a student produces behavior that is challenging for practitioners, who either address the behavior or send the student to an administrator who determines a consequence.

In both special education labeling and school discipline practices, there are embedded scripts that actors within the educational system follow (Ahram et al., 2011; Bal et al., 2019; Banks, 2017; Fish, 2017; Kozleski et al., 2008; Lambert, 2018). There are multiple points at which bias can be introduced (Ahram et al., 2021; Okonofua & Eberhardt, 2015; Smolkowski et al., 2016), and policies (Kramarczuk Voulgarides, 2018) and structures (Elder et al., 2019; Fish, 2019; Ray, 2019) also affect practitioners' decisions and perpetuate inequities. For example, Fish (2019) found that school racial composition was linked to the likelihood that African American students would be sorted into more subjective and stigmatizing disability categories. Relatedly, Cruz and Firestone (2021) found that African American and Latinx students were more likely to be diagnosed with subjective disabilities later in their school careers and suggested that teachers pathologized students differently based on perceived preparedness for school—a perception that was often linked to students' race. This aligned with Okonofua and Eberhardt (2015) finding that students' race affected how teachers perceived and interpreted behavior, ultimately recommending harsher punishments for African American children even when the behavioral violation was similar and especially after multiple offenses. Further underscoring this

phenomenon, Fish (2017) found that teachers were likely to refer African American boys for special education assessment for behavioral challenges, whereas White students were more likely to be referred for academic challenges. Finally, Cooc's (2018) work suggested that teachers were more likely to disagree on the need for special education assessment when students were African American boys and from lower socioeconomic backgrounds, further indicating that teachers' understanding of behavior and ability are grounded in subtle race and gender relations (Vavrus & Cole, 2002).

Thus, scholars have highlighted multiple ways in which racism is enacted along the agency–structure divide. For this study, in keeping with DisCrit's and QuantCrit's first tenet regarding the centrality of racism and ableism, we included a series of individual identity markers provided by students and their families (i.e., race/ethnicity, socioeconomic characteristics, gender, and special education label) to examine exclusionary discipline outcomes (i.e., out-of-school suspension). We included school characteristics (i.e., teacher years of experience, racial composition of the school, percentage of students who qualified for free or reduced-price lunch [FRPL]) and school programs offered (i.e., School-Wide Positive Behavior Interventions and Supports [SWPBIS]; Horner et al., 2014) to understand schools as structural systems, and acknowledge the context in which exclusionary discipline disparities occur for multiply marginalized youth.

Numbers Are Not Neutral. Acknowledging that numbers are not neutral means recognizing how quantitative analyses have reinforced the power and perceptions of whiteness and "typical" development (Zuberi, 2001). In particular, the principle of moving beyond static categories is an important consideration, as identity markers, including dis/ability and race, continue to be imposed and normalized through labeling practices (Cruz & Firestone, 2021; Fish, 2019; Link & Phelan, 2001; Shifrer, 2013). Disproportionality studies have used different mathematical formulas (e.g., risk and relative risk, multivariate regression; see Girvan et al., 2019) to compare outcomes of a given minority group either with White students (e.g., Cruz & Rodl, 2018b) or with all students collectively (e.g., Gregory et al., 2016). Although studies rarely include a justification for which group is selected as the reference category with which all other groups are compared, some have provided explicit justification. For example, Sullivan and Artiles (2011) compared all student groups with White students, as their theoretical framing indicated White students as the dominant majority. Given that we sought to decenter whiteness, rather than include a series of dichotomous indicators for race categories into one model, we examined outcomes for each racial group (i.e., African American, Latinx, and Asian American and Pacific Islander [AAPI]) individually, compared with all other students. Comparing each group with the whole allowed us to center the narrative within each group rather than compare racial groups against one another.

Categories Are Not Natural or Static. The QuantCrit paradigm recognizes that racial categories are socially constructed and subject to dynamic political, historical, and economic influences. In integrating QuantCrit with DisCrit theory in this research, we accordingly posit that educational disability categories are also not objective or static (Artiles et al., 2016). This means that in a quantitative study of disproportionality, we must acknowledge that disability labels have a social etiology and pathologizing function and that exclusionary discipline for pathologized BIPOC serves a criminalizing purpose. Some have suggested that identifying students with disabilities serves to remove perceived behavior problems from regular classrooms and as such serves as a form of social control (see Annamma, 2017; Anyon, 2009; Connor, 2008). Sleeter (2010) described the historical process by which disability categories have shifted across decades in response to racially hegemonizing practices. These findings have indicated agency–structure dualism (Mehan, 1992), in that the practices are subject to both larger systems and individual practitioners, which interact and contribute to differential placement into special education and suspension (Ahram et al., 2021).

Furthermore, we acknowledge that racial categories in quantitative studies are limited to the forms in which data are collected, and single race indicators often represent highly heterogeneous groups. For example, considering AAPI students, the terms *Asian American* and *Asian* typically encompass more than 30 ethnic groups, each comprising its own language, culture, customs, and unique experiences and outcomes in the American education system (Okamoto & Mora, 2014). The Latinx category also represents a wide range of students with unique immigration histories, nations of origin, language backgrounds, and differing contexts of reception, all of which may be considered to be forms of cultural capital that go unacknowledged in traditional U.S. schools (see Rumbaut, 2005; Yosso, 2014).

Furthermore, aggregate data may mask subpopulation variations and may cause researchers to perpetuate erasure of cultural wealth. It may also maintain racist stereotypes, such as the model minority myth for Asian American categories (Lee, 1994). Nieto (2008) stated that culture and race are not static entities but are "dependent on particular geographical, temporal, and sociopolitical contexts and therefore vulnerable to issues of power and control" (p. 127). By adopting this view of culture and race, we note the importance of disaggregated data on racial categories and, in cases where not available, caution the overgeneralization of results across racial categories rather than within groups (Kulkarni, 2017).

Data Cannot Speak for Itself. We sought to interpret data in light of the lived experiences of the students who existed within those data. To do so, we highlighted critical qualitative

works that spoke directly to the results in our discussion, and we provided context from important stakeholders (e.g., teachers, students, and families), as described through qualitative/ethnographic research (e.g., Banks, 2017; Harry et al., 2005).

The Use of Numbers for Social Justice. Finally, we provide next steps for future research, practice, and policy, situated in DisCrit and QuantCrit frameworks, with an explicit goal of decentering whiteness, smartness, and goodness as objects of ideological property (see Broderick & Leonardo, 2016) within schools and centering the need for culturally sustaining pedagogies and practices (Paris, 2012; Waitoller & King Thorius, 2016). We also aim to highlight ways in which quantitative analyses can reject deficit discourses so that school and district teams that use disaggregated data, as discipline research has called for, may understand that numbers are not neutral and can be used for understanding and remedying differential treatment of overdisciplined groups (Gregory et al., 2017).

Method

Sample

We merged two sources of existing data to conduct this analysis. First, in alignment with our institutional review board approval, we obtained student-level administrative data from a midsized school district in California. The use of a single district as a case-based analysis was an intentional decision; rather than using a nationally representative data set, analyzing data from a single district provides a more holistic and multidimensional understanding of phenomena from a contextual standpoint. This approach differs from variable-based research traditionally found in disproportionality studies, which consider numbers as neutral and generalizable to larger populations, as results do not result in understanding of local contexts.

Second, we compiled school-level data from the California Longitudinal Pupil Achievement Data System (California Department of Education, 2019), which provides annual data on school characteristics, such as average years of teaching experience, percentage of students within the school receiving FRPL, and average years of teacher experience within the school. We combined these two data sets using unique school identifiers. Program data regarding whether the school offered SWPBIS were generated through a search of each school's publicly available student handbook and school websites.

The analytic sample included school-year panel data for all students enrolled in the district[1] from Fall 2010 to Spring 2016. Latinx students made up the largest group of students within the sample (52.67%); 26.13% of students were White, 15.70% were AAPI, 3.44% were African American, and less than 1% were American Indian or Alaska Native. Students who declined to state an ethnicity comprised 1% of the sample. Almost half (47.37%) of the sample's students qualified for FRPL. The analytic sample included data for 39 traditional K–12 elementary and secondary schools, 27 of which offered SWPBIS. Gage et al. (2018) described SWPBIS as a process meant to build capacity for effective behavior practices in schools. SWPBIS is supported through many high-quality studies indicating reduced exclusionary discipline (e.g., Bradshaw et al., 2010; Bradshaw et al., 2012). Researchers are currently developing models for incorporating culturally responsive practices into SWPBIS (Fallon et al., 2012), but evidence regarding the efficacy of combining culturally sustaining pedagogies and SWPBIS in reducing discipline gaps is emerging (Cruz et al., 2021). Table 1 provides detailed sample information related to suspensions.

TABLE 1
Descriptive Characteristics of the Sample Related to Suspensions

Characteristic	Enrolled, %	Suspended, %
Gender		
Male	51.7	73.6
Female	48.3	26.4
Special education		
Has IEP	6.2	13.1
Does not have IEP	93.8	86.9
Race		
African American	3.4	6.1
Latinx	52.6	69.4
AAPI	15.8	5.4
White	26.2	17.0
Other	2.0	2.1
FRPL		
Qualifies	42.6	58.2
Does not qualify	57.4	41.8

Note. IEP = Individualized Education Plan; AAPI = Asian American/Pacific Islander; FRPL = free or reduced-price lunch.

Variables

Student Characteristics. The primary characteristic of interest was special education designation by racial category, represented by a dummy-coded variable indicating whether a student had an Individualized Education Plan (IEP) multiplied by a dummy-coded variable indicating a student's racial category (i.e., African American, Latinx, or AAPI[2]). As aforementioned, we did not situate these categories in comparison with other racial groups; rather, the referent for each model was all other students combined, in comparison with that group. Other student-level predictors that served as control variables included student gender, eligibility for FRPL, and a series of dummy-coded variables

for the highest parental education level (i.e., not high school graduate, high school graduate, some college, college, or master's degree or higher). We considered time as a panel variable by school year; grade level and school of attendance were both dummy coded and used as fixed effects where specified in the analytic plan.

School Characteristics. The analysis included three continuous school-level predictors: percent of White students within the school, percent of students who qualified for FRPL, and average years of faculty teaching experience. The average percent of students eligible for FRPL was 6.69 (SD = 16.33), with a wide range of difference across schools (0.68%–63.69%). Average percent of White students within schools also encompassed a wide range, with an average of 25.94% (SD = 17.38%) and a range of 0.03% to 74.70%, indicating broad variation in diversity within and between schools. Variables for both school FRPL and percent of White students were transformed to z scores ($\mu = 0$, $\sigma = 1$) for ease of interpretation. SWPBIS was represented as a dummy-coded variable and was offered in 27 schools, including elementary, middle, and high schools, across the district.

Analytic Plan

We predicted three related outcomes: (a) representation of students from each racial category (i.e., African American, Latinx, and AAPI) in special education (represented as a student having an IEP) and suspension, (b) temporal representation of multiply marginalized students (i.e., IEP * race category) in suspension by grade level, and (c) cross-nested school context variables associated with suspensions for multiply marginalized students. The data set features a three-level structure (i.e., time point nested within students and students nested within schools); thus, we used a series of mixed multilevel logistic regression models and discrete-time hazard models to hold constant control variables for each research question.

Representation of BIPOC in Suspension and Special Education. We first conducted a series of multilevel regression analyses to characterize disproportionate representation of BIPOC in special education and out-of-school suspensions within our data set. We specify our model as follows:

$$logit\{Pr(y_{ij} = 1|x_{ij}) = \beta_0 + \beta_1 x_{ij} + \beta_2 x_j + \delta_j + \varphi_j,$$

where y is a binary indicator of whether a student (i) had an IEP, in school j. $\beta_1 x_{ij}$ represents a vector of all aforementioned student-level variables, and $\beta_2 x_j$ represents a vector of all school-level variables. In this model, δ_j represents a random effect for schools in this two-level random intercept model (i.e., to account for clustering of students within schools, standard errors are clustered by school of attendance), and φ_j represents a fixed effect for year. Including a fixed effect for year and a random effect for school allowed for the largest sample of unique student observations possible while controlling for potential inflation due to repeated measures within the longitudinal data set.

We then repeated this method using suspension as the outcome variable. Though suspension is a count variable, for consistency and ease of interpretation, we coded this variable as a dichotomous indicator, with 1 = *being a student having one or more suspensions* and 0 = *being a student never having been suspended within that school year*. We specified our model as a mixed logistic regression, again, including a random effect for school of attendance and a fixed effect for school year. These results are reported as odds ratios and indicate the level of disproportionality for BIPOC in both special education and in suspensions for this particular district. These analyses were performed using Stata 17's mixed commands.

Intersectional Identities and Compounding Forms of Marginalization. To examine time points at which multiply marginalized students (i.e., BIPOC labeled with disabilities) were more likely to experience exclusionary discipline, we first analyzed descriptive data for grade level and mean suspension. We then used discrete-time hazard analysis, with the characteristic of interest as race * IEP. We constructed a person-by-period data set with observations for each student i, in each grade j, situated in school s, until either the event occurred or the student no longer appeared in the data, either because additional years of data were not available or because the student left the district or graduated (Singer & Willett, 2003). The following logistic regression equation represents the full model:

$$logit\left(h_{ij}\right) = \alpha_0 + \left[a_1 D_{1ij} + a_2 D_{2ij} + \ldots a_J D_{Jij}\right] + \beta_{1ij} + \beta_{2ij} + \gamma_{js} + \varphi_s,$$

where h_{ij} is an indicator for the event (suspension) occurring for the first time in grade level j for student i. The discrete-time hazard model expresses the logit of h_{ij} as a function of grade level; the student's race * IEP label, represented by β_{1ij} as the coefficient of interest; β_{2ij} as a variable vector containing student-level control variables (i.e., gender, FRPL, and parent education level); γ_{js} as a set of school characteristics; and φ_s as a fixed effect controlling for initial school of attendance. These analyses were performed using Stata 17's streg commands, and results are reported as hazard ratios.

School Contexts and Exclusionary Discipline. Finally, we examined the extent to which school characteristics (i.e., percent of White students within the school and SWPBIS) were associated with disparities between multiply marginalized students and other students. We included cross-level

effects to the model described in our first analysis. These additions comprised interactions between individual-level multiply marginalized identity markers (e.g., African American * IEP) and school-level variables (transformed to *z* scores) to indicate how suspensions for multiply marginalized students varied by school context. We repeated this method for Latinx students with IEPs, and then for AAPI students with IEPs, although because AAPI students in our data rarely experienced both special education placement and suspension, small sample sizes prevented us from interpreting these coefficients.

Results

Baseline Representation

Analysis related to our first research question established the presence of disproportionate representation of BIPOC in both special education and out-of-school suspensions. Prior to covariate adjustment, African American students were overrepresented in special education ($OR = 1.33$, $SE = 0.05$, $p < .001$), as were Latinx students ($OR = 1.45$, $SE = 0.02$, $p < .001$), and AAPI students were underrepresented ($OR = 0.42$, $SE = 0.01$, $p < .001$). We ran three separate models for each outcome and found that holding gender, FRPL, parent education, and school characteristic variables constant, African American students were still associated with roughly a 22% higher likelihood of having an IEP. Latinx students were associated with roughly a 25% higher likelihood, and Asian students were less than half as likely to have an IEP. These findings are consistent with previous research on disproportionality, which has indicated that BIPOC face disproportionate representation in special education programs (Waitoller et al., 2010). Table 2 reports the full results of each model.

We found similar patterns related to out-of-school suspensions. Prior to covariate adjustment, African American students were almost twice as likely ($OR = 1.85$, $SE = 0.08$, $p < .001$), Latinx students were more than twice as likely ($OR = 2.06$, $SE = 0.05$, $p < .001$), and AAPI students were less than half as likely ($OR = 0.31$, $SE = 0.01$, $p < .001$) to be suspended compared with the overall student body. All else held constant, African American ($OR = 1.74$, $SE = 0.08$, $p < .001$) and Latinx ($OR = 1.40$, $SE = 0.04$, $p < .001$) students were overrepresented in suspension data, whereas AAPI ($OR = 0.40$, $SE = 0.02$, $p < .001$) students were underrepresented. Again, this is consistent with prior research (Welsh & Little, 2018).

We found that as the percentage of White students in schools increased, odds of suspension decreased, and all else held constant, being in a school that offered SWPBIS was associated with a slightly higher odds of suspension for all students. This is likely due to SWPBIS not being applied at random (i.e., schools likely offered this program because they were actively aiming to reduce high suspension numbers, compared with schools with lower suspension numbers). Average years of teacher experience within a school was nonsignificant in association with special education identification, but as average years of teacher experience increased, odds of suspension decreased, indicating that teachers with more experience were clustered within some schools. School context effects were larger and more significant in analyses of suspension than for analyses of special education, indicating that school structure likely matters more for the ways in which stakeholders discipline students than place them into special education. See Table 3 for the full results of these models.

Representation Trajectories

Our first set of analyses provide a baseline association between special education, suspension, and race category. We next examined grade level and suspension to understand the interrelated nature of race, disability, and suspension, and overall student trajectory, across these areas. Figure 1 depicts mean suspension count for each race category for students with and without an IEP across the years of available data. Similar to past research (e.g., Gopalan & Nelson, 2019), we found that for African American students, particularly those with IEPs, discipline disparities were robust to our covariate adjustments.

Given the wide variation of suspension by grade level, we used discrete-time survival analysis (Singer & Willett, 2003). In these analyses, hazard referred to the likelihood that a suspension would occur for a student in a particular grade, given that the event had not already occurred in previous years for that student. This allowed us to understand the suspension trajectory for multiply marginalized groups. Discrepancies for African American students with IEPs emerged early (grades pre-K–3), and widened with grade progression. Latinx-by-IEP disciplinary gaps were statistically insignificant in the early years but emerged in the later years and were more likely to be accounted for through student-level covariate adjustments (i.e., FRPL and parent education). AAPI students with IEPs were suspended infrequently and less often than peers across grade levels.

For the African American * IEP category, hazard estimates indicated that the likelihood and timing of suspension was triple that of students without these characteristics (hazard ratio [*HR*] = 3.15, $SE = 0.26$, $p < .001$). For the Latinx * IEP category, the estimate indicated almost double that of students without these characteristics ($HR = 1.95$, $SE = 0.06$, $p < .001$). For the AAPI * IEP category, the hazard estimate was nonsignificant ($HR = 1.07$, $SE = 0.13$, $p = .578$), indicating timing and suspension risk similar to the rest of the student population in the sample. These functions identify particular time points during which suspension was likely to occur and determine the likelihood that a multiply marginalized student could remain in the district through the

TABLE 2
Disproportionality in Special Education

Category	Control	Odds ratio (*SE*)
African American	African American	1.21 (0.05)***
	Male	2.34 (0.04)***
	FRPL	1.30 (0.02)***
	Parent education	1.08 (0.01)***
	Percent White	1.01 (0.04)
	Percent FRPL	1.02 (0.00)
	SWPBIS	1.01 (0.08)
	Average teacher experience	1.01 (0.01)
	Sigma_u	0.22 (0.02)
	Rho	0.02 (0.00)
Latinx	Latinx	1.25 (0.02)***
	Male	2.35 (0.04)***
	FRPL	1.24 (0.02)***
	Parent education	1.06 (0.01)***
	Percent White	1.05 (0.04)
	Percent FRPL	1.01 (0.03)
	SWPBIS	1.01 (0.08)
	Average teacher experience	1.00 (0.01)
	Sigma_u	0.23 (0.03)
	Rho	0.02 (0.00)
AAPI	AAPI	0.46 (0.01)***
	Male	2.34 (0.04)***
	FRPL	1.27 (0.02)***
	Parent education	1.06 (0.01)***
	Percent White	1.03 (0.04)
	Percent FRPL	1.00 (0.03)
	SWPBIS	1.00 (0.08)
	Average teacher experience	1.00 (0.01)
	Sigma_u	0.23 (0.03)
	Rho	0.02 (0.00)

Note. Year fixed effects included in all models, but not reported; cluster-robust *SE*s in parentheses next to estimates, clustered by school. AAPI = Asian American/Pacific Islander; FRPL = free or reduced-price lunch; SWPBIS = School-Wide Positive Behavior Interventions and Supports.
*$p < .05$. **$p < .01$. ***$p < .001$.

TABLE 3
Disproportionality in Suspension

Category	Control	Odds ratio (*SE*)
African American	African American	1.75 (0.08)***
	Male	2.83 (0.07)***
	FRPL	1.49 (0.04)***
	Parent education	1.13 (0.01)***
	Percent White	0.67 (0.07)***
	Percent FRPL	0.78 (0.04)***
	SWPBIS	1.07 (0.29)
	Average teacher experience	0.97 (0.01)**
	Sigma_u	0.77 (0.09)
	Rho	0.15 (0.03)
Latinx	Latinx	1.40 (0.04)***
	Male	2.83 (0.07)***
	FRPL	1.40 (0.04)***
	Parent education	1.10 (0.01)***
	Percent White	0.70 (0.07)**
	Percent FRPL	0.78 (0.04)***
	SWPBIS	1.07 (0.29)
	Average teacher experience	0.97 (0.01)**
	Sigma_u	0.77 (0.09)
	Rho	0.15 (0.03)
AAPI	AAPI	0.40 (0.02)***
	Male	2.83 (0.07)***
	FRPL	1.47 (0.04)***
	Parent education	1.11 (0.01)***
	Percent White	0.68 (0.07)***
	Percent FRPL	0.78 (0.04)***
	SWPBIS	1.06 (0.28)
	Average teacher experience	0.97 (0.01)**
	Sigma_u	0.77 (0.09)
	Rho	0.15 (0.03)

Note. Year fixed effects included in all models, but not reported; cluster-robust *SE*s in parentheses next to estimates, clustered by school. AAPI = Asian American/Pacific Islander; FRPL = free or reduced-price lunch; SWPBIS = School-Wide Positive Behavior Interventions and Supports.
*$p < .05$. **$p < .01$. ***$p < .001$.

6 years of data without being suspended. As such, these results indicate differences between early, entrenched inequities for some multiply marginalized groups. These hazard ratio results are presented in Table 4 and graphically depicted in Figure 2.

Representation and School Context

Our analyses suggest systematic differences across schools in average suspension rates, given student identity. Gopalan and Nelson (2019) indicated that some structural features of schools might "systematically contribute to higher suspensions/expulsions on average" (p. 12). We examined the racial composition of schools and the provision of SWPBIS, as past research has implicated racial composition as related to disproportionality in special education (Elder et al., 2019; Fish, 2019) and in suspensions (Eitle & Eitle, 2004). The inclusion of SWPBIS as a school-level variable represents an active effort by schools to rewrite the scripts that teachers and principals draw on as they enact discipline, though it should be noted that this district did not implement SWPBIS with a specific culturally responsive lens.

FIGURE 1. *Mean number of suspensions by race category, over IEP status.*
Note. IEP = Individualized Education Plan; AAPI = Asian American/Pacific Islander.

When considering the percentage of White students in schools, we found that African American students with IEPs were almost four times as likely to be suspended compared with the rest of the student population. With each standard deviation increase in percentage of whiteness, odds of suspension for all students reduced by almost half ($OR = 0.67$, $SE = 0.06$, $p < .001$). The interaction between school percent White and African American with IEP was nonsignificant, indicating that students with this characteristic face the same odds of suspension regardless of school diversity, all controls held constant. However, for Latinx students with IEPs, we found that this group was associated with double the odds of those without these characteristics, and that with each standard deviation increase in percent of White students within the school, students faced elevated levels of suspension ($OR = 1.15$, $SE = 0.04$, $p = .001$). Because few students who were AAPI experienced both suspension and special education placement, sample sizes prevented us from including this group in our final analysis.

Examining SWPBIS interaction terms, we found that being an African American student with an IEP in a SWPBIS school was associated with a slightly higher but statistically insignificant odds of suspension ($OR = 1.15$, $SE = 0.24$, $p = .49$). Being a Latinx student with an IEP in a SWPBIS school was associated with a significantly lower odds of suspension ($OR = 0.87$, $SE = 0.05$, $p = .04$). Results for AAPI students with IEPs were, again, difficult to determine, due to low sample sizes.

Discussion

Using DisCrit as a theoretical lens and QuantCrit as a methodological strategy, we interpret these findings through a sociohistorical perspective, considering the legal and historical mechanisms through which dis/ability and race are constructed. Sleeter (1986, 2010) described societal shifts in the purpose of schooling as influencing the evolution of special education and disproportionality, highlighting the relationship special education programs have with social competition for power, wealth, and prestige. The ways in which BIPOC are pathologized, labeled, and suspended all serve as sources of discrimination that maintain White,

ableist power hierarchies. Past research has suggested that although stakeholders have agency in these educational systems, teachers' perceptions of students also depend on structural factors (Cruz & Firestone, 2021; Fish, 2019; Hibel et al., 2010). Though these factors may be enacted differently in exclusionary discipline than in special education placement, our results provide evidence that students are affected by how practitioners view them within their school contexts.

For example, we found that AAPI students were underrepresented in both special education and exclusionary discipline, and few students in the AAPI category experienced both special education placement and suspension. Past research and policy have considered this category to have "honorary whiteness" (Young, 2009, p. 179) and have stereotyped Asians as the model minority (Lee, 1994). We see this model minority myth as a hegemonic device used to desensitize the public about the fraught history of race relations in the United States, and it contributes to the erasure of AAPI histories in schools (see Hsu, 2016). Theories around high achievement for this group often include cultural explanations centered on a higher value of education and career attainment and a higher likelihood of a two-parent family (Jo, 2004; Lee, 2006). These theories come at the expense of both African American and Latinx communities who are then seen from a deficit perspective (Ng et al., 2007), and at the expense of AAPI students who are in need of support, but are overlooked (Cooc, 2019). In fact, Kim (1999) states that "Asian Americans have not been racialized in a vacuum, isolated from other groups; to the contrary, Asian Americans have been racialized to and through interaction with Whites and Blacks" (p. 106). Recent education literature shows the ways in which AAPI students have been examined in a position relative to White, African American, and Latinx counterparts that have, over time, shaped the category of "Asian" and has reproduced a social hierarchy (Omi & Winant, 1994) that upholds the primacy of whiteness. Our results also suggested an upholding of smartness and goodness.

A core tenet of DisCrit highlights the interdependent relationship between racism and ableism. Our results indicated that disproportionality is complex, and highlight the fact that students were disciplined differentially, depending on intersecting identity characteristics. Special education, as a service in PK–12 schools and as an intellectual community, has a history of actively pathologizing African American students (Adjei, 2018; Annamma, 2017; Erevelles, 2014), yet some studies have assumed either neutral or positive associations with students being placed in special education (e.g., Morgan & Farkas, 2016). We reject the assumption that special education—a system that often excludes students from grade-level learning alongside peers—is beneficial (Collins et al., 2016); that disproportionality is, for multiply marginalized youth, tied to poverty (Artiles et al., 2010); and that proportionality is equated with identification rather than representation (Collins et al., 2016).

Understanding race and disability as social constructions means that we interpret disability identification not as an internal process but "always in relation to other people" (Anyon, 2009, p. 46). Qualitative research indicates that teachers are less likely to see students labeled with disabilities as constructors of knowledge (Lambert, 2019; Shifrer, 2016) but rather as in need of stripped-down explicit instruction and control-focused behaviorist approaches (as opposed to sociocultural and constructivist approaches found within other disciplinary fields; Bannister, 2016). Explicit direct instruction has been described as "ideologically opposed to goals for equitable classrooms" (Bannister, 2016, p. 335) given that overreliance on this form of instruction can limit students' meaningful participation in creative educational experiences that develop problem solving and complex reasoning (Noguera et al., 2015). Furthermore, research on suspension-disparity reduction has indicated that teachers' enactment of instruction with higher order thinking strategies can significantly reduce office referrals for African American students. In fact, Gregory et al. (2016) hypothesized that "given the opportunity to engage in cognitively demanding problem-solving tasks, Black students may detect their teachers' high expectations and confidence in them as scholars" (p. 186).

Results of our second analysis indicate that African American students with IEPs are suspended early and often, and few studies have examined connections between this outcome and reduced opportunities for engaging in complex learning tasks. Studies that have examined the efficacy of special education in reducing suspensions (e.g., Hurwitz et al., 2021) provide valuable first steps toward keeping students in their learning environments, but they warrant further study, as pathologizing—and often excluding—students to reduce suspensions may further indicate that special education is used as a mechanism for behavior conformity rather than sustainment of individual differences as valuable assets for learning. Furthermore, there is a need to learn directly from multiply marginalized youth who have experienced the trauma of exclusionary discipline practices and their families (Kulkarni et al., 2021). Qualitative perspectives provide important insights into lived experiences that complement existing quantitative disciplinary data (e.g., Harry et al., 2005; Lambert, 2019; Lewis-McCoy, 2016).

Moreover, studies that limit examination of disproportionality based on inclusion of normative behavior and academic metrics as covariates (e.g., Morgan & Farkas, 2016) provide valuable insight into the mechanisms behind special education and discriminatory practices. However, when we consider whiteness and smartness as ideological property (Annamma et al., 2013), these studies fail to contend with critical issues related to the racism and ableism embedded in special education and exclusionary discipline—that they are interactional forms of oppression. Studies that rely on teacher-reported behavior ratings to "evaluate whether schools are discriminating against [students labeled with

disabilities] when using suspension" (Morgan et al., 2019, p. 3) fail to understand the interlocking narratives of race, dis/ability, and stereotypes that lead to suspension and notions of "at risk" that can be better interrogated through qualitative works. These studies have relied on problematic assumptions, including that students identified in first grade "should have had more severe impairments due to their earlier identification and so displayed greater academic or behavioral difficulties than students identified as having disabilities in the later grades" (Morgan, p. 5).

Banks (2017), for example, conducted a study in which she asked African American men about their experiences of having been placed into special education in their PK–12 school careers and found that participants described nuanced ways in which some teachers misperceived them based on stereotyped beliefs about race, gender, disability, and behavior. Respondents described teachers who perceived acts of self-advocacy as classroom disturbances and who issued harsh consequences for minor infractions. Our results suggest that these lived experiences can also be seen and understood in larger, quantitative data sets and, again, that there is a critical need for including the voices of multiply marginalized students in research.

Interpreting our analysis from an agency–structure paradigm, we found that school context variables were associated with suspension of multiply marginalized students. Latinx students in schools with larger proportions of White students were associated with higher suspension rates. This harkens back to Bell's (1980) description of the interest convergence dilemma of *Brown v. Board of Education*, noting that, despite integration, schools remain segregated spaces for BIPOC. Our results showing that Latinx students experienced higher suspension rates among majority White peers continues this legacy of separation and segregation.

African American students with IEPs in schools using SWPBIS were associated with slightly higher suspension rates, whereas Latinx students with IEPs in SWPBIS schools were associated with slightly lower suspension rates. It is likely that SWPBIS was offered in schools with higher need and lower performance, furthering the structural conditions that exacerbate teachers' and principals' perspectives of students. Failure to implement SWPBIS through centering equity can exacerbate already inequitable school systems. The cultural work of labeling occurs in tandem with the cultural work of determining acceptable behaviors. As McDermott et al. (2006) noted, "It takes constant interpretive work for people to create the ground where certain behaviors stand out in ways that are consistently and institutionally consequential" (p. 13). We contend that SWPBIS and racial composition are both factors that affect the agency–structure divide, and our results indicate variability in these impacts, given multiply marginalized student identity. Harry et al.'s (2005) ethnographic research specifically challenged deficit perspectives of African American families living in poverty as the root cause of their children's learning and behavior difficulties. Connor's (2008) in-depth urban narratives similarly challenged deficit perspectives of multiply marginalized youth. Both of these studies exemplify the importance of qualitative, first-person narratives that reduce deficit conceptualizations of multiply marginalized youth and their families, which may produce improved equity outcomes for schools implementing school-wide programming.

Lewis-McCoy (2016) described how special education has been used to segregate African American students, particularly males, from their peers through limited access to general education. Similarly, suspension has been conceptualized as a criminalization and marginalization process for BIPOC. Rather than considering these as intractable issues within our education system, we argue that decentering whiteness, smartness, and goodness as objects of ideological property (see Broderick & Leonardo, 2016) within schools and centering the need for culturally sustaining pedagogies and practices (Paris, 2012; Waitoller & King Thorius, 2016) might allow future quantitative analyses to reject deficit discourses and sustain the learning assets of multiply marginalized students.

Limitations and Areas for Future Research

Though prior research indicates academic achievement as being related to special education placement, we did not include academic achievement measures because achievement is not a fixed characteristic; it is influenced by students' experiences in schools. As we emphasized in our introduction, achievement-gap narratives have dominated educational equity conversations (Reardon et al., 2019) and have been critiqued for failure to mention the influencing systemic factors, such as the opportunity gap (Ladson-Billings, 2006). This variable did not fit within our theoretical framework but could be critically explored in future work. We also did not specifically analyze the impacts of gender or language as marginalized identities, although we included gender in our model specification. Research indicates nuanced ways in which gender and language are implicated in the pathologizing of students (Blake et al., 2017; Cruz & Rodl, 2018b; Hibel & Jasper, 2012), and this remains an important area for future research.

This study was also limited in that there were small numbers of observations in AAPI and American Indian/Alaska Native categories, which made obtaining valid estimates difficult. Furthermore, small numbers of students within individual disability categories prevented us from examining pathologizing of specific disability categories. Future research should critically examine subjective disability categories related to suspension. As with all quantitative research, this study was also limited in that we were restricted to the operationalized variables made available to us from

TABLE 4
Hazard Logistic Regression Models Predicting Suspension

Category	Control	Odds ratio (*SE*)
African American * IEP	African American * IEP	3.15 (0.26)***
	Male	2.56 (0.06)***
	FRPL	1.42 (0.04)***
	Parent education	1.15 (0.01)***
	Percent White	0.83 (0.03)***
	Percent FRPL	0.91 (0.03)**
	SWPBIS	0.81 (0.02)***
	Average teacher experience	0.97 (0.01)**
Latinx * IEP	Latinx * IEP	1.95 (0.06)***
	Male	2.46 (0.06)***
	FRPL	1.37 (0.04)***
	Parent education	1.13 (0.01)***
	Percent White	0.83 (0.02)***
	Percent FRPL	0.90 (0.03)***
	SWPBIS	0.81 (0.02)***
	Average teacher experience	0.97 (0.01)**
AAPI * IEP	AAPI * IEP	1.07 (0.13)
	Male	2.57 (0.06)***
	FRPL	1.43 (0.04)***
	Parent education	1.15 (0.01)***
	Percent White	0.83 (0.02)***
	Percent FRPL	0.90 (0.03)**
	SWPBIS	0.81 (0.02)***
	Average teacher experience	0.97 (0.01)**

Note. Cluster-robust *SE*s in parentheses next to estimates, clustered by school. IEP = Individualized Education Plan; AAPI = Asian American/Pacific Islander; FRPL = free or reduced-price lunch; SWPBIS = School-Wide Positive Behavior Interventions and Supports
*$p < .05$. **$p < .01$. ***$p < .001$.

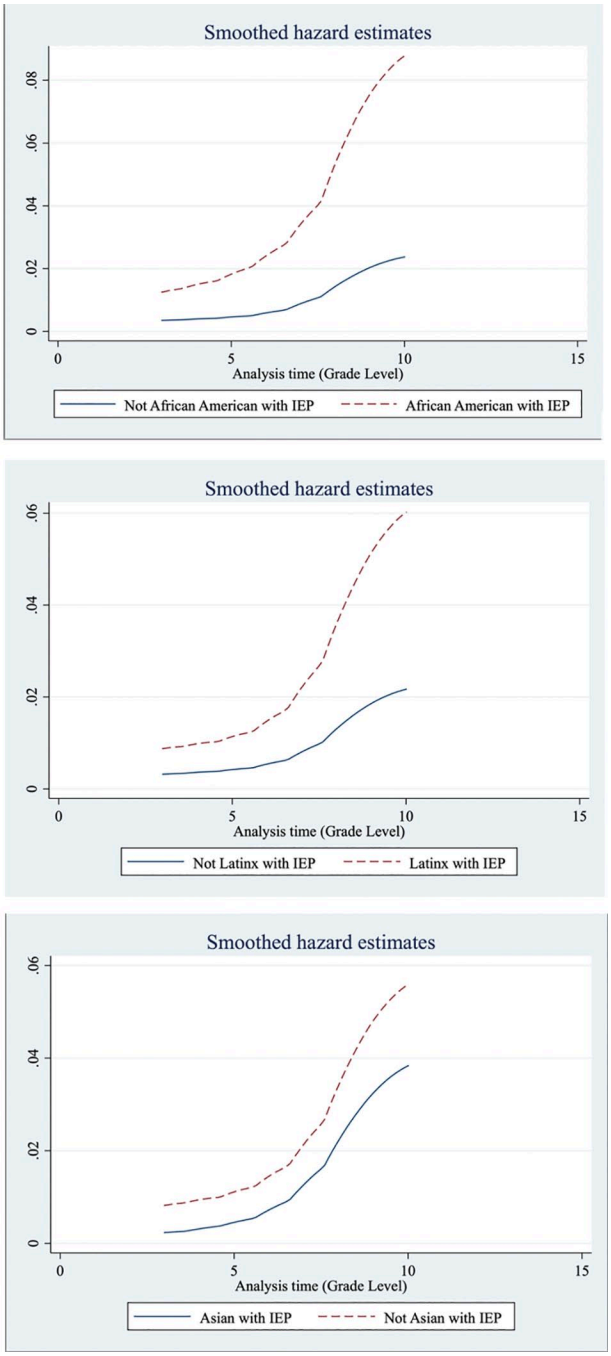

FIGURE 2. *Smoothed hazard estimates* $\hat{h}(t)$ *of time to suspension.*
Note. IEP = Individualized Education Plan.

the district's data collection systems. For example, we did not have information on fidelity of implementation for SWPBIS, as the district did not collect fidelity data, and as aforementioned, categorical data on student identity are socially constructed and can mask variation.

Finally, this study used data from one school district, which limits the external validity of findings. Though our purpose was to examine a local context, we are uncertain whether we would find similar outcomes across school districts. We do, however, assert that the findings be used for comparative purposes, with future studies examining other local configurations to better understand the nature of variability within disproportionality research. Future research should also continue to examine contextual factors that contribute to and maintain disparities. As evidenced by our findings, the demographic makeup of schools can vary widely from one school to the next, even within the same district, and the program offerings may also vary. We argue for future studies to continue examining disproportionality within local contexts; studies of this type assist educational leaders in better understanding the nuances of potential inequities within their special education processes and discipline systems, the allocation of resources among and within schools, and programs that may ameliorate systemic inequity.

Notes

1. To protect the anonymity of the district, we do not report actual sample size numbers.

2. We do not include models for the American Indian/Alaska Native or the Other category due to small sample sizes.

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References

Adjei, P. B. (2018). The (em)bodiment of blackness in a visceral anti-Black racism and ableism context. *Race, Ethnicity, and Education*, *21*(3), 275–287. https://doi.org/10.1080/13613324.2016.1248821

Ahram, R., Fergus, E., & Noguera, P. (2011). Addressing racial/ethnic disproportionality in special education: Case studies of suburban school districts. *Teachers College Record*, *113*(10), 2233–2266.

Ahram, R., Kramarczuk Voulgarides, C., & Cruz, R. A. (2021). Understanding disability: High-quality evidence in research on special education disproportionality. *Review of Research in Education*, *45*(1), 311–345. https://doi.org/10.3102/0091732X20985069

Annamma, S. A. (2017). *The pedagogy of pathologization: Dis/abled girls of color in the school-prison nexus*. Routledge. https://doi.org/10.4324/9781315523057

Annamma, S. A., Anyon, Y., Joseph, N. M., Farrar, J., Greer, E., Downing, B., & Simmons, J. (2019). Black girls and school discipline: The complexities of being overrepresented and understudied. *Urban Education*, *54*(2), 211–242. https://doi.org/10.1177/0042085916646610

Annamma, S. A., Connor, D., & Ferri, B. (2013). Dis/ability critical race studies (DisCrit): Theorizing at the intersections of race and dis/ability. *Race, Ethnicity, and Education*, *16*(1), 1–31. https://doi.org/10.1080/13613324.2012.730511

Annamma, S. A., Ferri, B. A., & Connor, D. J. (2018). Disability critical race theory: Exploring the intersectional lineage, emergence, and potential futures of DisCrit in education. *Review of Research in Education*, *42*(1), 46–71. https://doi.org/10.3102/0091732X18759041

Annamma, S. A., & Handy, T. (2020). Sharpening justice through DisCrit: A contrapuntal analysis of education. *Educational Researcher*, *50*(1), 41–50. https://doi.org/10.3102/0013189X20953838

Annamma, S., & Morrison, D. (2018). Identifying dysfunctional education ecologies: A DisCrit analysis of bias in the classroom. *Equity & Excellence in Education*, *51*(2), 114–131. https://doi.org/10.1080/10665684.2018.1496047

Annamma, S., Morrison, D., & Jackson, D. (2014). Disproportionality fills in the gaps: Connections between achievement, discipline and special education in the school-to-prison pipeline. *Berkeley Review of Education*, *5*(1), 53–87. https://doi.org/10.5070/B85110003

Anyon, Y. (2009). Sociological theories of learning disabilities: Understanding racial disproportionality in special education. *Journal of Human Behavior in the Social Environment*, *19*(1), 44–57. https://doi.org/10.1080/10911350802631495

Artiles, A. J. (2019). Fourteenth annual Brown lecture in education research: Reenvisioning equity research: Disability identification disparities as a case in point. *Educational Researcher*, *48*(6), 325–335. https://doi.org/10.3102/0013189X19871949

Artiles, A. J., Dorn, S., & Bal, A. (2016). Objects of protection, enduring nodes of difference: Disability intersections with "other" differences, 1916 to 2016. *Review of Research in Education*, *40*(1), 777–820. https://doi.org/10.3102/0091732X16680606

Artiles, A. J., & Jacks, L. L. (n.d.). *Beyond the essential other: Engaging disability intersections in teacher education*. Equity Alliance, Equity Matters: In Learning, for Life. Stanford Graduate School of Education. https://equityalliance.stanford.edu/node/203

Artiles, A. J., Kozleski, E. B., Trent, S. C., Osher, D., & Ortiz, A. (2010). Justifying and explaining disproportionality, 1968–2008: A critique of underlying views of culture. *Exceptional Children*, *76*(2), 279–299. https://doi.org/10.1177/001440291007600303

Baez, B. (2007). Thinking critical about the "critical": Quantitative research as social critique. *New Directions for Institutional Research*, *133*, 17–23. https://doi.org/10.1002/ir.201

Bal, A., Betters-Bubon, J., & Fish, R. E. (2019). A multilevel analysis of statewide disproportionality in exclusionary discipline and the identification of emotional disturbance. *Education and Urban Society*, *51*(2), 247–268. https://doi.org/10.1177/0013124517716260

Bal, A., Kozleski, E. B., Schrader, E. M., Rodriguez, E. M., & Pelton, S. (2014). Systemic transformation from the ground-up: Using learning lab to design culturally responsive schoolwide positive behavioral supports. *Remedial and Special Education*, *35*(6), 327–339. https://doi.org/10.1177/0741932514536995

Banks, J. (2017). "These people are never going to stop labeling me": Educational experiences of African American male students labeled with learning disabilities. *Equity & Excellence in Education*, *50*(1), 96–107. https://doi.org/10.1080/10665684.2016.1250235

Bannister, N. A. (2016). Breaking the spell of differentiated instruction through equity pedagogy and teacher community. *Cultural Studies of Science Education*, *11*, 335–347. https://doi.org/10.1007/s11422-016-9766-0

Bell, D. A., Jr. (1980). Brown v. Board of Education and the interest-convergence dilemma. *Harvard Law Review*, *93*(3), 518–533. https://doi.org/10.2307/1340546

Blake, J. J., Keith, V. M., Luo, W., Le, H., & Salter, P. (2017). The role of colorism in explaining African American females' suspension risk. *School Psychology Quarterly*, *32*(1), 118–130. https://doi.org/10.1037/spq0000173

Bradshaw, C. P., Mitchell, M. M., & Leaf, P. J. (2010). Examining the effects of schoolwide positive behavioral interventions and supports on student outcomes: Results from a randomized controlled effectiveness trial in elementary schools. *Journal of Positive Behavior Interventions*, *12*(3), 133–148. https://doi.org/10.1177/1098300709334798

Bradshaw, C. P., Waasdorp, T. E., & Leaf, P. J. (2012). Effects of school-wide positive behavioral interventions and supports on child behavior problems. *Pediatrics*, *130*(5), e1136–e1145. https://doi.org/10.1542/peds.2012-0243

Broderick, A. A., & Leonardo, Z. (2016). What a good boy. In D. J. Connor, B. A. Ferri, & S. A. Annamma (Eds.), *DisCrit-disability studies and critical race theory in education* (pp. 55–67). Teachers College Press.

California Department of Education. (2019). *The California longitudinal pupil achievement data system (CALPADS)* [Public data file]. https://www.cde.ca.gov/ds/sd/df/

Carter, P. L., & Welner, K. G. (Eds.). (2013). *Closing the opportunity gap: What America must do to give every child an even chance*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199982981.001.0001

Cavendish, W., Connor, D., Gonzalez, T., Jean-Pierre, P., & Card, K. (2020). Troubling "the problem" of racial overrepresentation in special education: A commentary and call to rethink research. *Educational Review*, *72*(5), 567–582. https://doi.org/10.1080/00131911.2018.1550055

Collins, K. M., Connor, D., Ferri, B., Gallagher, D., & Samson, J. F. (2016). Dangerous assumptions and unspoken limitations: A disability studies in education response to Morgan, Farkas, Hillemeier, Mattison, Maczuga, Li, and Cook (2015). *Multiple Voices for Ethnically Diverse Exceptional Learners*, *16*(1), 4–16. https://doi.org/10.5555/2158396X.16.1.4

Connor, D. J. (2008). *Urban narratives: Portraits in progress, life at the intersections of learning disability, race, & social class* (*Vol. 5*). Peter Lang.

Connor, D. J., Cavendish, W., Gonzalez, T., & Jean-Pierre, P. (2019). Is a bridge even possible over troubled waters? The field of special education negates the overrepresentation of minority students: A DisCrit analysis. *Race, Ethnicity, and Education*, *22*, 723–745. https://doi.org/10.1080/13613324.2019.1599343

Cooc, N. (2018). Understanding when teachers disagree about student disability. *Exceptionality*, *26*(2), 63–80. https://doi.org/10.1080/09362835.2016.1216849

Cooc, N. (2019). Disparities in the enrollment and timing of special education for Asian American and Pacific Islander students. *Journal of Special Education*, *53*(3), 177–190. https://doi.org/10.1177/0022466919839029

Cruz, R. A., & Firestone, A. R. (2021). Understanding the empty backpack: The role of timing in disproportionate special education identification. *Sociology of Race and Ethnicity*. Advance online publication. https://doi.org/10.1177/23326492211034890

Cruz, R. A., Firestone, A. R., & Rodl, J. E. (2021). Disproportionality reduction in exclusionary school discipline: A best-evidence synthesis. *Review of Education Research*, *91*(3), 397–431. https://doi.org/10.3102/0034654321995255

Cruz, R. A., & Rodl, J. E. (2018a). An integrative synthesis of literature on disproportionality in special education. *Journal of Special Education*, *52*(1), 50–63. https://doi.org/10.1177/0022466918758707

Cruz, R. A., & Rodl, J. E. (2018b). Crime and punishment: Examining school context and student characteristics that predict out-of-school suspension. *Children and Youth Services Review*, *95*, 226–234. https://doi.org/10.1016/j.childyouth.2018.11.007

DeCuir-Gunby, J. T., & Walker-DeVose, D. C. (2013). Expanding the counterstory: The potential for critical race mixed methods studies in education. In M. Lynn, & A. Dixson (Eds.), *Handbook of critical race theory in education* (pp. 268–279). Routledge. https://doi.org/10.4324/9780203155721-28

Eitle, T. M., & Eitle, D. J. (2004). Inequality, segregation, and the overrepresentation of African Americans in school suspensions. *Sociological Perspectives*, *47*(3), 269–287. https://doi.org/10.1525/sop.2004.47.3.269

Elder, T. E., Figlio, D. N., Imberman, S. A., & Persico, C. I. (2019). *School segregation and racial gaps in special education identification* (No. w25829). National Bureau of Economic Research. https://doi.org/10.3386/w25829

Erevelles, N. (2014). Crippin' Jim Crow: Disability, dis-location, and the school-to-prison pipeline. In L. Ben-Moshe, C. Chapman, & A. C. Carey (Eds.), *Disability incarcerated* (pp. 81–99). Palgrave Macmillan. https://doi.org/10.1057/9781137388476_5

Fallon, L. M., O'Keeffe, B. V., & Sugai, G. (2012). Consideration of culture and context in school-wide positive behavior support: A review of current literature. *Journal of Positive Behavior Interventions*, *14*(4), 209–219. https://doi.org/10.1177/1098300712442242

Farkas, G., Morgan, P. L., Hillemeier, M. M., Mitchell, C., & Woods, A. D. (2020). District-level achievement gaps explain Black and Hispanic overrepresentation in special education. *Exceptional Children*, *86*(4), 374–392. https://doi.org/10.1177/0014402919893695

Fish, R. E. (2017). The racialized construction of exceptionality: Experimental evidence of race/ethnicity effects on teachers' interventions. *Social Science Research*, *62*, 317–334. https://doi.org/10.1016/j.ssresearch.2016.08.007

Fish, R. E. (2019). Standing out and sorting in: Exploring the role of racial composition in racial disparities in special education. *American Educational Research Journal*, *56*(6), 2573–2608. https://doi.org/10.3102/0002831219847966

Gage, N. A., Whitford, D. K., & Katsiyannis, A. (2018). A review of schoolwide positive behavior interventions and supports as a framework for reducing disciplinary exclusions. *The Journal of Special Education*, *52*(3), 142–151. https://doi.org/10.1177/0022466918767847

Garcia, N. M., Lopez, N., & Velez, V. N. (2018). QuantCrit: Rectifying quantitative methods through critical race theory. *Race, Ethnicity, and Education*, *21*(2), 149–157. https://doi.org/10.1080/13613324.2017.1377675

Gillborn, D., Warmington, P., & Demack, S. (2018). QuantCrit: Education, policy, "Big Data" and principles for a critical race theory of statistics. *Race, Ethnicity, and Education*, *21*(2), 158–179. https://doi.org/10.1080/13613324.2017.1377417

Girvan, E. J., McIntosh, K., & Smolkowski, K. (2019). Tail, tusk, and trunk: What different metrics reveal about racial disproportionality in school discipline. *Educational Psychologist*, *54*(1), 40–59. https://doi.org/10.1080/00461520.2018.1537125

Gopalan, M., & Nelson, A. A. (2019). Understanding the racial discipline gap in schools. *AERA Open*, *5*(2), 1–26. https://doi.org/10.1177/2332858419844613

Gregory, A., Hafen, C. A., Ruzek, E., Mikami, A. Y., Allen, J. P., & Pianta, R. C. (2016). Closing the racial discipline gap in classrooms by changing teacher practice. *School Psychology Review*, *45*(2), 171–191.

Gregory, A., Skiba, R. J., & Mediratta, K. (2017). Eliminating disparities in school discipline: A framework for intervention. *Review of Research in Education*, *41*(1), 253–278. https://doi.org/10.3102/0091732X17690499

Harry, B., & Fenton, P. (2016). Risk in schooling: The contribution of qualitative research to our understanding of the overrepresentation of minorities in special education. *Multiple Voices for Ethnically Diverse Exceptional Learners*, *16*(1), 17–28.

Harry, B., Klingner, J. K., & Hart, J. (2005). African American families under fire: Ethnographic views of family strengths. *Remedial and Special Education*, *26*(2), 101–112. https://doi.org/10.1177/07419325050260020501

Hibel, J., Farkas, G., & Morgan, P. L. (2010). Who is placed into special education? *Sociology of Education*, *83*(4), 312–332. https://doi.org/10.1177/0038040710383518

Hibel, J., & Jasper, A. D. (2012). Delayed special education placement for learning disabilities among children of immigrants. *Social Forces*, *91*(2), 503–530. https://doi.org/10.1093/sf/sos092

Horner, R. H., Kincaid, D., Sugai, G., Lewis, T., Eber, L., Barrett, S., Dickey, C. R., Richter, M., Sullivan, E., Boezio, C., Algozzine, B., Reynolds, H., & Johnson, N. (2014). Scaling up school-wide positive behavioral interventions and supports: Experiences of seven states with documented success. *Journal of Positive Behavior Interventions*, *16*(4), 197–208. https://doi.org/10.1177/1098300713503685

Hsu, F. (2016). What is the sound of one invisible hand clapping? Neoliberalism, the invisibility of Asian and Asian American Buddhists, and secular mindfulness in education. In R. E. Purser, D. Forbes, & A. Burke (Eds.), *Handbook of mindfulness: Culture, context, and social engagement* (pp. 369–381). Springer. https://doi.org/10.1007/978-3-319-44019-4_24

Hurwitz, S., Cohen, E. D., & Perry, B. L. (2021). Special education is associated with reduced odds of school discipline among students with disabilities. *Educational Researcher*, *50*(2), 86–96. https://doi.org/10.3102/0013189X20982589

Jo, J. (2004). Neglected voices in the multicultural America: Asian American racial politics and its implications for multicultural education. *Multicultural Perspectives*, *6*(1), 19–25. https://doi.org/10.1207/S15327892mcp0601_4

Kim, C. J. (1999). The racial triangulation of Asian Americans. *Politics & Society*, *27*(1), 105–138. https://doi.org/10.1177/0032329299027001005

Kozleski, E. B., Engelbrecht, P., Hess, R., Swart, E., Eloff, I., Oswald, M., Molina, A., & Jain, S. (2008). Where differences matter: A cross-cultural analysis of family voice in special education. *The Journal of Special Education*, *42*(1), 26–35. https://doi.org/10.1177/0022466907313606

Kramarczuk Voulgarides, C. (2018). *Does compliance matter in special education? IDEA and the hidden inequities of practice*. Teachers College Press.

Kulkarni, S. S. (2017). Disproportionate representation of Asian students in special education: A systematic review of the literature. *Multiple Voices for Ethnically Diverse Exceptional Learners*, *17*(2), 19–33. https://doi.org/10.5555/2158-396X.17.2.19

Kulkarni, S. S., Kim, S., & Powell, T. (2021). Playing together: A call for multiple stakeholders to reduce exclusionary and harsh discipline for young BICOC with disabilities. *Perspectives in Early Childhood Psychology and Education*, *6*(1), 252–278.

Ladson-Billings, G. (2006). From the achievement gap to the education debt: Understanding achievement in U.S. schools. *Educational Researcher*, *35*(7), 3–12. https://doi.org/10.3102/0013189X035007003

Lambert, R. (2018). "Indefensible, illogical, and unsupported": Countering deficit mythologies about the potential of students with learning disabilities in mathematics. *Education Sciences*, *8*(2), 1–12. https://doi.org/10.3390/educsci8020072

Lambert, R. (2019). Political, relational, and complexly embodied: Experiencing disability in the mathematics classroom. *ZDM Mathematics Education*, *51*(2), 279–289. https://doi.org/10.1007/s11858-019-01031-1

Lee, S. J. (1994). Behind the model-minority stereotype: Voices of high-and low-achieving Asian American students. *Anthropology & Education Quarterly*, *25*(4), 413–429. https://doi.org/10.1525/aeq.1994.25.4.04x0530j

Lee, S. J. (2006). Additional complexities: Social class, ethnicity, generation, and gender in Asian American student experiences. *Race, Ethnicity, and Education*, *9*(1), 17–28. https://doi.org/10.1080/13613320500490630

Leonardo, Z., & Broderick, A. (2011). Smartness as property: A critical exploration of intersections between whiteness and disability studies. *Teachers College Record*, *113*(10), 2206–2232.

Lewis-McCoy, R. L. H. (2016). Boyz in the 'burbs: Parental negotiation of race and class in raising Black males in suburbia. *Peabody Journal of Education*, *91*(3), 309–325. https://doi.org/10.1080/0161956X.2016.1182839

Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology*, *27*(1), 363–385. https://doi.org/10.1146/annurev.soc.27.1.363

McDermott, R., Goldman, S., & Varenne, H. (2006). The cultural work of learning disabilities. *Educational Researcher*, *35*(6), 12–17. https://doi.org/10.3102/0013189X035006012

Mehan, H. (1992). Understanding inequality in schools: The contribution of interpretive studies. *Sociology of Education*, *65*(1), 1–20. https://doi.org/10.2307/2112689

Morgan, P. L., & Farkas, G. (2016). Are we helping all the children that we are supposed to be helping? *Educational Researcher*, *45*(3), 226–228. https://doi.org/10.3102/0013189X16644607

Morgan, P. L., Farkas, G., Cook, M., Strassfeld, N. M., Hillemeier, M. M., Pun, W. H., & Schussler, D. L. (2017). Are Black children disproportionately overrepresented in special education? A best-evidence synthesis. *Exceptional Children*, *83*(2), 181–198. https://doi.org/10.1177/0014402916664042

Morgan, P. L., Farkas, G., Hillemeier, M. M., Wang, Y., Mandel, Z., DeJarnett, C., & Maczuga, S. (2019). Are students with disabilities suspended more frequently than otherwise similar students without disabilities? *Journal of School Psychology*, *72*, 1–13. https://doi.org/10.1016/j.jsp.2018.11.001

Ng, J. C., Lee, S. S., & Pak, Y. K. (2007). Contesting the model minority and perpetual foreigner stereotypes: A critical review of literature on Asian Americans in education. *Review of Research in Education*, *31*(1), 95–130. https://doi.org/10.3102/0091732X07300046095

Nieto, S. (2008). Culture and education. *Yearbook of the National Society for the Study of Education*, *107*(1), 127–142. https://doi.org/10.1111/j.1744-7984.2008.00137.x

Noguera, P., Darling-Hammond, L., & Friedlaender, D. (2015). *Equal opportunity for deeper learning*. Students at the Center: Deeper Learning Research Series. Jobs for the Future.

Okamoto, D., & Mora, G. C. (2014). Panethnicity. *Annual Review of Sociology*, *40*, 219–239. https://doi.org/10.1146/annurev-soc-071913-043201

Okonofua, J. A., & Eberhardt, J. L. (2015). Two strikes: Race and the disciplining of young students. *Psychological Science*, *26*(5), 617–624. https://doi.org/10.1177/0956797615570365

Omi, M., & Winant, H. (1994). *Racial formation in the United States: From the 1960s to the 1990s* (2nd ed.). Routledge.

Paris, D. (2012). Culturally sustaining pedagogy: A needed change in stance, terminology, and practice. *Educational Researcher*, *41*(3), 93–97. https://doi.org/10.3102/0013189X12441244

Ray, V. (2019). A theory of racialized organizations. *American Sociological Review*, *84*(1), 26–53. https://doi.org/10.1177/0003122418822335

Reardon, S. F., Kalogrides, D., & Shores, K. (2019). The geography of racial/ethnic test score gaps. *American Journal of Sociology*, *124*(4), 1164–1221. https://doi.org/10.1086/700678

Rumbaut, R. G. (2005). Turning points in the transition to adulthood: Determinants of educational attainment, incarceration, and early childbearing among children of immigrants. *Ethnic and Racial Studies*, *28*(6), 1041–1086. https://doi.org/10.1080/01419870500224349

Sablan, J. R. (2019). Can you really measure that? Combining critical race theory and quantitative methods. *American Educational Research Journal*, *56*(1), 178–203. https://doi.org/10.3102/0002831218798325

Shifrer, D. (2013). Stigma of a label: Educational expectations for high school students labeled with learning disabilities. *Journal of Health and Social Behavior*, *54*(4), 462–480. https://doi.org/10.1177/0022146513503346

Shifrer, D. (2016). Stigma and stratification limiting the math course progression of adolescents labeled with a learning disability. *Learning and Instruction*, *42*, 47–57. https://doi.org/10.1016/j.learninstruc.2015.12.001

Shifrer, D. (2018). Clarifying the social roots of the disproportionate classification of racial minorities and males with learning disabilities. *The Sociological Quarterly*, *59*(3), 384–406. https://doi.org/10.1080/00380253.2018.1479198

Singer, J. D., & Willett, J. B. (2003). *Applied longitudinal data analysis: Modeling change and event occurrence*. Oxford University Press.

Skiba, R. J., Artiles, A. J., Kozleski, E. B., Losen, D. J., & Harry, E. G. (2016). Risks and consequences of oversimplifying educational inequities: A response to Morgan et al. (2015). *Educational Researcher*, *45*(3), 221–225. https://doi.org/10.3102/0013189X16644606

Skiba, R. J., Poloni-Staudinger, L., Gallini, S., Simmons, A. B., & Feggins-Azziz, R. (2006). Disparate access: The disproportionality of African American students with disabilities across educational environments. *Exceptional Children*, *72*(4), 411–424. https://doi.org/10.1177/001440290607200402

Sleeter, C. E. (1986). Learning disabilities: The social construction of a special education category. *Exceptional Children*, *53*(1), 46–54. https://doi.org/10.1177/001440298605300105

Sleeter, C. E. (2010). Why is there learning disabilities? A critical analysis of the birth of the field in its social context. *Disabilities Studies Quarterly*, *30*(2), 210–235. https://doi.org/10.18061/dsq.v30i2.1261

Smolkowski, K., Girvan, E. J., McIntosh, K., Nese, R. N., & Horner, R. H. (2016). Vulnerable decision points for disproportionate office discipline referrals: Comparisons of discipline for African American and White elementary school students. *Behavioral Disorders*, *41*(4), 178–195. https://doi.org/10.17988/bedi-41-04-178-195.1

Sullivan, A. L., & Artiles, A. J. (2011). Theorizing racial inequity in special education: Applying structural inequity theory to disproportionality. *Urban Education*, *46*(6), 1526–1552. https://doi.org/10.1177/0042085911416014

Tate, W. F., IV. (2008). "Geography of opportunity": Poverty, place, and educational outcomes. *Educational Researcher*, *37*(7), 397–411. https://doi.org/10.3102/0013189X08326409

Tyack, D. B. (1974). *The one best system: A history of American urban education*. Harvard University Press. https://doi.org/10.2307/j.ctv136c61j

Vavrus, F., & Cole, K. (2002). "I didn't do nothin": The discursive construction of school suspension. *The Urban Review*, *34*(2), 87–111. https://doi.org/10.1023/A:1015375215801

Waitoller, F. R., Artiles, A. J., & Cheney, D. (2010). The miner's canary: A review of overrepresentation research and explanations. *Journal of Special Education*, *44*(1), 29–49. https://doi.org/10.1177/0022466908329226

Waitoller, F. R., & King Thorius, K. A. (2016). Cross-pollinating culturally sustaining pedagogy and universal design for learning: Toward an inclusive pedagogy that accounts for dis/ability. *Harvard Educational Review*, *86*(3), 366–389. https://doi.org/10.17763/19435045-86.3.366

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. https://doi.org/10.3102/0034654318791582

Yosso, T. J. (2014). Whose culture has capital? A critical race theory discussion of community cultural wealth. In A. D. Dixson, C. K. Anderson, & J. K. Donner (Eds.), *Critical race theory in education* (pp. 181–204). Routledge. https://doi.org/10.4324/9781315870557

Young, A. V. (2009). Honorary whiteness. *Asian Ethnicity*, *10*(2), 177–185. https://doi.org/10.1080/14631360902906862

Zuberi, T. (2001). *Thicker than blood: How racial statistics lie*. University of Minnesota Press.

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