Biases and Inequality in School Systems: A Literature Review on Disproportionality in Special Education and School Discipline

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This work was made possible by support from Oak Foundation and the SREE/Grantmakers for Education Summer Fellowship Program

Abstract

This paper comprises a review of the literature on disproportionality in both special education identification and school disciplinary practices in K – 12 public schools in the United States. The paper begins with a review of the literature on disproportionality in special education identification by race/ethnicity, gender, and first language status. Next, the various factors that have contributed to disproportionality in special education (SPED) identification are then discussed. I then shift the focus of the paper to a review of the literature on school discipline disproportionality by race, gender, and socioeconomic status (SES). The next section focuses on long-term life outcomes that have been associated with exclusionary school discipline. Finally, the paper concludes with recommendations for both policy and practice. The ultimate goal of this paper is to provide research-based recommendations for the Oak Foundation, as well as other stakeholders, to strengthen their efforts to close the pervasive gaps in SPED identification and school discipline.

Keywords: special education, IDEA, school discipline, disproportionality

Biases and Inequality in School Systems

In general, the allocation of special education (SPED) services has increased over time. Research has indicated that across all races and ethnicities, the percentage of American children between the ages of 12 and 17 who receive special education services has increased from 6.0% to 6.9% from 1993 to 2007 (Office of Special Education Programs [OSEP], 2007). On closer examination, however, the disproportionate rates of special education identification for certain student subgroups in the United States is a current illustration of the pervasive effects of biases and inequality in the United States' school systems. As a result of systematic and structural inequalities in classrooms and school systems, Black, Latinx, American Indian, and Alaska Native youth continue to be overidentified in special education across several disability categories (OSEP, 2018). Ironically, while intended to provide additional services to support students, placement in special education can instead function as a mechanism for discrimination by preventing access and opportunities to high-quality and rigorous educational experiences.

Similarly, racial, gender, and socioeconomic status (SES) disparities in school discipline have been well-documented for three decades (Children's Defense Fund, 1975, McCarthy and Hoge, 1987; Skiba, Peterson, and Williams, 1997; Thornton and Trent, 1988). However, fewer studies have examined the reasons for the evident disparities in school discipline across the United States (Skiba, Michael, Nardo & Peterson, 2002). More empirical examinations of the underlying reasons for school discipline disproportionality is a necessary step in the right direction towards closing the gaps that have been observed over time. Based on the literature, implicit and explicit biases and inequality at both a classroom and school systems level appear to be the crux of the disproportionality problem. This particular issue will be discussed in more detail in a subsequent section of this paper.

The purpose of this paper was to review the literature on disproportionality in special education identification, as well as disproportionality in school discipline in the United States. In the sections to follow, I first review the literature on disproportionality in special education identification by race/ethnicity, gender, and first language status. This section of the paper also explores potential causes of disproportionality in SPED identification. I then review the literature on school discipline disproportionality by race, gender, and SES. The next section will focus on life outcomes that have been associated with exclusionary school discipline. Finally, the paper will conclude with recommendations for both policy and practice. The ultimate goal of this paper is to provide research-based recommendations for the Oak Foundation, as well as other stakeholders, to strengthen their efforts to close the pervasive gaps in SPED identification and school discipline.

Disproportionality in SPED Identification

In general, a learning disability refers to having difficulty with learning relative to one's intellectual ability. However, there are more specific definitions and criteria for various types of learning disabilities (e.g. dyslexia, dyscalculia, and dysgraphia etc.) that fall under the umbrella of a learning disability. Historically, males have received special education services at higher rates than females (Anderson, 1997). In 1993, Anderson (1997) reported that 73% of the population who were identified with a learning disability identified as male.

When compared to all other racial/ethnic groups combined, American Indian or Alaska Native students were reported to be 1.8 times more likely than their counterparts to receive special education services for specific learning disabilities such as dyslexia (OSEP, 2007). Similarly, according to OSEP (2007) data, Latinx students were 1.1 times more likely than their counterparts to receive special education services for specific learning disabilities such as

dyslexia. Moreover, the gap between Black and White students' rates of special education identification continued to widen with Black students being increasingly overidentified over time when compared to their White counterparts (Ong-Dean, 2006). In contrast, Asian American students have historically been less likely to be identified with a learning disability when compared to their White counterparts (OSEP, 2007).

More recently, in an annual report to Congress, the U.S. Department of Education used risk ratios to compare the proportion of one racial/ethnic group that is served under the Individuals with Disabilities Education Act (IDEA) to the proportion of all of the other racial/ethnic groups combined (see Table 1). They calculated the total risk ratios by dividing the risk index of one racial/ethnic group by the risk index for all the other racial/ethnic groups combined. A risk index refers to the percentage of the population of a particular racial/ethnic group that is served under IDEA. Risk indices were calculated by dividing the number of students between the ages of 6 and 21 who qualify for SPED services under IDEA in one racial/ethnic group by the estimated U.S. resident population between the ages of 6 and 21 within the same racial/ethnic group.

The U.S. Department of Education's (USDOE) Office of Special Education Programs (OSEP; 2018) reported that in 2016, American Indian or Alaska Native, Black, and Native Hawaiian or other Pacific Islander students ranging between the ages of 6 and 21 all had total risk ratios above one (e.g. 1.7, 1.4, and 1.5, respectively), indicating that in general, students of each of the three individual race/ethnic groups previously mentioned were more likely to be served under IDEA than all other students in other groups combined (see Table 1). On the other hand, Asian American and White students between the same age range (6 and 21) had risk ratios that were less than one (e.g. 0.5 and 0.9, respectively), indicating that students of these two

groups were less likely to be served under IDEA than all of their peers combined. Latinx students and students who identified with two or more races had risk ratios of one.

Moreover, the USDOE also examined risk ratios for racial/ethnic groups by disability category (see Table 2). According to the OSEP's most recent annual report to Congress, Black students ranging in age between 6 and 21 had risk ratios that were all larger than one for developmental delays (1.6), emotional disturbance (2.0), intellectual disability (2.2), multiple disabilities (1.3), other health impairment (1.4), specific learning disability (1.5), traumatic brain injury (1.1), and visual impairment (1.1). Next, Latinx students who fell within the same age range had risk ratios larger than one for hearing impairment (1.4), orthopedic impairment (1.3), specific learning disability (1.4), and speech or language impairment (1.1). American Indian or Alaska Native students had the highest risk ratio (4.2) in the report for developmental delays, indicating a significant overrepresentation of these two racial/ethnic groups who are served under IDEA under this particular disability category. The risk ratio for autism was equal to one for these two groups and larger than one for all other disability categories. When compared to all other groups combined, Native Hawaiian or Other Pacific Islander students between the ages of 6 and 21 were reported to be at least twice as likely to be served under IDEA for the following disability categories: developmental delay (2.1), hearing impairment (2.7), and multiple disabilities (2.1). Asian American students were 1.1 times more likely than all of their peers combined to qualify for SPED services for autism and hearing impairment. The risk ratio for Asian American students was one for orthopedic impairment. The risk ratios for this group were less than one for all other disability categories. Lastly, White students had risk ratios greater than one for the following disability categories: autism (1.1), multiple disabilities (1.1), other health impairment (1.2), and traumatic brain injury (1.2). For White students between the ages

of 6 and 21, the group had risk ratios that were equal to one for deaf-blindness, emotional disturbance, speech or language impairment, and visual impairment, along with risk ratios that were less than one for all other disability categories.

Limited English proficient (LEP) students are also disproportionately placed in special education programs in schools (Shifrer, Muller, & Callahan, 2011). Together, these data provide further evidence that students identified with learning differences are selected based on characteristics other than their cognitive processes and abilities. For example, some students -- such as those with LEP -- might be prematurely identified as having learning delays, based on their English proficiency instead of their intellectual ability. Black boys diagnosed with "emotional disturbance" might reflect a racial bias and sensitivity to behaviors that are not as triggering in other racial groups. Moreover, the data suggest that the processes in which students are identified may not be as objective and consistent as they should be.

Disproportionality in special education identification is not only harmful when students are incorrectly identified. Students who are disproportionately under-identified may not receive the appropriate services that they need in order to access school curriculums. The reality of the disproportionate identification of students from marginalized backgrounds—racial/ethnic minorities, language minorities, and low socioeconomic status students—is particularly concerning; special education placement may function as a systematic mechanism of discrimination and further marginalization for an already vulnerable population of students by limiting access to an education program that meets their needs based on their abilities.

What Causes Disproportionality in SPED?

Clearly, there are serious consequences to biases and inequality in special education identification. The data also suggests that there are underlying systemic mechanisms that are

contributing to the disproportionate rates of special education identification between racial/ethnic minority and majority groups and also between limited English proficient (LEP) learners and their non-LEP peers (Shifrer et al., 2011). Disproportionality may be attributed to inconsistent referral processes, assessments, and diagnoses. Prior to the widespread implementation of Response to Intervention (RTI)—a multi-tiered approach intended to support all students and identify students with learning and behavioral needs—in schools in 2004, three models were often used to identify students with learning disabilities: the ability-achievement discrepancy model, low-achievement, and the intraindividual discrepancy model. According to the classic ability-achievement discrepancy model, a student must demonstrate a gap between their intellectual ability and academic performance in order to receive a learning disability diagnosis. Next, the low-achievement model allowed psychologists and schools to classify a student as learning disabled simply by performing below an expected threshold of achievement as measured by standardized achievement tests and academic performance. This particular method has been widely criticized for two primary reasons: a) low achievement may be commensurate with one's low intellectual ability and b) it fails to identify twice-exceptional learners (students with high cognitive ability and average achievement due to a learning disability: Shifrer et al., 2011). The intraindividual discrepancy model focused on identifying significant strengths and weaknesses within an individual (an uneven profile). According to this model, an uneven profile of cognitive abilities is indicative of a learning disability, whereas a consistently low or flat profile across areas of cognitive abilities is indicative of "expected underachievement." Thus, depending on the model used to identify students and the person(s) making the diagnosis, one can land on different conclusions and diagnostic impressions based on the various methods of identification.

SPED disproportionality and race/ethnicity. In addition to the three models of identification that may have contributed to the disproportionate identification of students with learning disabilities, some researchers have argued that racism and stratification in the education system are at the crux of the problem of disproportionate identification (Patton, 1998; Skiba et al., 2008). When researchers have examined special education identification from an institutional lens, some have portrayed it as the "rejection of minority cultures by the dominant culture" (p. 248; Patton, 1998) and labeling as a mechanism to further disadvantage certain groups (Reid & Knight, 2006). Reid and Knight (2006) described disproportionality as a result of "historical legacies of racism, classism, sexism, and ableism" (p. 21).

Current methods of diagnostic assessment have also been attributed to disproportionate rates of identification. Lower average achievement levels of certain racial/ethnic minority groups -- the compounding result of several variables that impact achievement, e.g. teacher quality, fiscal resources, available student support, mitigating health and basic need challenges -- may leave them more susceptible to being labeled with a learning disability, especially when the low-achievement model of identification is used (Meyen, 1989). Moreover, different types of IQ and achievement assessments are used across schools and districts. Thus, the inconsistent and varying methods of identification and types of IQ and achievement assessments may be an underlying reason for the disproportionate identification of ethnic minority students.

While racism and unconscious biases may certainly explain some of the variance in the disproportionate rates of SPED identification, one must also consider the possibility that the diagnoses are accurate and are instead a reflection of socioeconomic status (SES). As a result of structural and systemic barriers, ethnic minority group members are more likely to have a lower SES when compared to their White counterparts in the United States (Blair & Scott, 2002;

Daniels, 1998, MacMillan & Reschly, 1998; Skiba et al., 2008). Based on where schools are located and the ways in which schools are funded and resourced, ethnic minority youth are also more likely to attend under-resourced schools. Thus, a lack of resources and opportunities can contribute to the disparate learning outcomes for students, as well as the disproportionate rates of SPED identification. Moreover, Black and Latinx youth across most states in the U.S. tend to experience more adverse childhood experiences when compared to their White and Asian American counterparts (Sacks & Murphey, 2018). Neuroscience has indicated that stress and poverty have real neuro-physical and neuro-chemical effects on the brain (Ayoub, Fischer, & O'Connor, 2003; Fischer, Bullock, Rotenberg, & Raya, 1993; Marshall, 2015), indicating another factor that contributes to under-performance in schools, which is a reflection of the environment that youth live and develop in.

SPED disproportionality and first language status. For some practitioners with less experience, the differences between a student with limited English proficiency and a learning disability are often conflated, which places language minorities at risk of being disproportionately and inaccurately misdiagnosed and overidentified for SPED services. Unfortunately, a lack of English proficiency is sometimes misinterpreted by practitioners as a disability or a lack of intelligence (Klinger, Artiles, & Barletta, 2006). There is also a need for more valid and reliable assessments in language minorities' native languages since assessing them using assessments in English may provide an underestimate of their intellectual abilities and potential.

Disproportionality in School Discipline Practices

Similar to the disproportionate rates of SPED identification, the longstanding, disproportionate rates of school discipline among ethnic minority youth—African American

youth in particular—in schools has been well-documented in the literature over the past three decades (Children's Defense Fund, 1975; McCarthy & Hoge, 1987; Skiba, Peterson, & Williams, 1997; Skiba, Michael, Nardo, & Peterson, 2002). Despite the preponderance of evidence of disciplinary disproportionality by race, SES, and gender, less is known about the underlying reasons for this disproportionality. In one study conducted over the course of one year in an urban middle school, researchers examined the relationship between school discipline, gender, race, and SES (Skiba et al., 2002). The nuances of the relationship between school discipline and the three aforementioned demographic variables are discussed in the sections below.

Discipline disproportionality and race/ethnicity. Several studies have resulted in findings that support the fact that Black students are disciplined more often and more severely than their White counterparts, especially after desegregation was implemented (Costenbader & Markson, 1994,1998; Glackman, Martin, Hyman, McDowell, Berv, & Spino, 1978; Gregory, 1997; Kaeser, 1979; Massachusetts Advocacy Center, 1986; McCarthy & Hoge, 1987; McFadden, Marsh, Price & Hwang, 1992; Nichols, Ludwin, & Iadicola, 1999; Skiba et al., 1997; Thornton & Trent, 1988; Wu et al., 1982). Moreover, African Americans were found to be overrepresented in schools where exclusionary discipline practices were used more frequently. Larking (1979), as well as Thornton and Trent (1988) found that racial disciplinary disproportionality was exacerbated following desegregation. This particular finding was even more pronounced in high SES schools, indicating an interaction between race (more specifically race relations in the U.S. during the time period following desegregation), SES, and discipline practices.

Discipline disproportionality, race, and behavior. One may consider the possibility that the higher rates of disciplinary sanctions for African American students could be due to higher rates of disruptive behavior. If this were the case, the rates of disciplinary sanctions would be proportionate to the observed misbehaviors. However, this is not the case. No evidence was found in this literature review to corroborate the claim that African American students misbehave at a statistically higher rate when compared to their peers in other racial/ethnic groups (Skiba et al., 2002). In a sample of 6,244 discipline files from 16 K – 12 schools in a central Florida school district, Shaw and Braden (1990) found that although Black children received more disciplinary referrals than their White peers, their White peers were actually referred for more severe rule violations. This data further supports the argument that Black children are more likely to be disciplined more frequently and more severely than their White counterparts in schools. In another study, McCarthy and Hoge (1987) found that Black students reported being sanctioned more than their White counterparts reported. When examining the only two behaviors that were statistically different from one another when compared between both Black and White students, higher rates of misbehavior were actually reported for White students. Based on the research, the amount of disciplinary sanctions is not proportionate to the behaviors of Black students. Moreover, the consequences of the behaviors of Black children often do not fit the level of misbehavior. There is consistent evidence that the higher rates of discipline that Black students are subjected to are not due to more frequent or more severe behavior when compared to their White counterparts, indicating how biases, systematic racism, and structural inequality manifest in school systems.

Fewer studies have examined school discipline disproportionality among other ethnic minority groups. The patterns of disproportionality are not as clear when examined among other

ethnic minority groups. For example, some scholars report inconsistent findings on school discipline disproportionality among Latinx youth (Gordon et al., 2000; Skiba et al., 2002).

Discipline disproportionality, intersectionality, and institutional racism. It is important to note that discipline disproportionality does not occur in a vacuum. The interaction between race and discipline practices in schools is a part of a much more complex and pervasive discourse on institutional racism (Hannssen, 1998), as well as structural inequality (Nieto, 2000) in the United States. Based on the findings from previous studies highlighted in the current literature review, discipline disproportionality does appear to be a byproduct or symptom of both institutional racism and multiple facets of structural inequalities. Black students are more likely to attend under-resourced schools with teachers who are less experienced and less supported to work with students from diverse backgrounds leaving students at a disadvantage (Greenwood, Hart, walker, & Risley, 1994; Kozol, 1991; Rebell, 1999). Moreover, students of color—Black students in particular—are also subjected to the negative stereotype of being more dangerous than their White peers, which also has implications on how they are perceived and treated in classrooms (Okonofua, Walton, & Eberhardt, 2016) and school communities.

Disproportionality and gender. Results from research that has examined the relationship between school discipline and gender is also quite consistent. Boys, when compared to girls, are consistently overrepresented in disciplinary sanctions (Skiba et al., 2002). In fact, four different studies found that boys are four times as likely to receive disciplinary sanctions. These sanctions included being referred to the office, suspended, and being subjected to corporal punishment (Bain & McPherson, 1990; Cooley, 1995; Gregory, 1996; Imich, 1994). In 1996, another researcher found that Black males were 16 times as likely than White females to be subjected to corporal punishment (Gregory, 1996). In another study, researchers, Taylor and

Foster (1986), provided a ranking of four demographic groups ranging from most likely to be suspended to least likely to be suspended. Based on their research, their ranking included Black males at the top of the list with the highest likelihood, then white males followed by Black females and lastly, White females. Thus, there appears to be an interaction between gender and race when determining how likely one may be disciplined, with Black males being the most vulnerable demographic group.

Disproportionality and socioeconomic status. Within the school discipline research, SES also appears significant. Low SES students (as measured by having free or reduced lunch) have been found to be positively associated with an increased risk of being suspended (Skiba et al., 1997; Wu, Pink, Crain, & Moles, 1982). Moreover, students with fathers who work part-time or less were also more likely to be suspended when compared to students with fathers who worked full-time (Wu et al., 1982). Thus, family income also appears to be associated with being disciplined in schools. In keeping with these findings, the National Association of Secondary School Principals argued that racial disproportionality in the rates of zero tolerance disciplinary sanctions by race is not an issue of racial discrimination or bias. Instead, they made the argument that it is largely an issue of socioeconomic status as race and SES are correlated in the United States (Duncan, Brooks-Funn, & Klebanov, 1994; Skiba et al., 2002). In contrast, in one study (Wu et al., 1982), researchers controlled for SES and found that race made a significant contribution to disciplinary outcomes regardless of SES. More specifically, the researchers found that in every location sampled in the study except for rural senior high schools, non-White students were suspended more than their White peers.

One qualitative study highlighted the differences between disciplinary sanctions for high and low SES students (Brantlinger, 1991). The researcher examined the disciplinary experiences

of high and low SES adolescents. Brantlinger (1991) found that high SES students received less severe disciplinary sanctions and punishments such as reprimands and seat reassignments, whereas their low SES peers received more severe punishments such as being yelled at in class, being removed from the classroom to stand in the hall during the school day, and having one's belongings searched by an adult at the school.

Life Outcomes

Currently, the United States has the highest rate of incarceration when compared to all other countries in the world (Carson, 2014). It has been well established that one's participation in the criminal justice system inevitably results in structural and systemic barriers to opportunity and less access to resources throughout the course of one's life. As a person experiences these barriers, they become more at risk of prolonged criminal conduct, which may then result in a perpetual cycle of involvement with the criminal justice system. The evidence suggests that this socialization of criminalization often begins in school systems.

The increased use of punitive practices in schools and exclusionary school discipline have been posited as one key contributor to the high rates of incarceration in the U.S. Research consistently indicates that students who are subjected to exclusionary discipline are more likely to participate in the criminal justice system later in life (Fabelo et al., 2010; Na & Gottfredson, 2013). This link between exclusionary school discipline and subsequent involvement in the criminal justice system is often referred to as the school-to-prison-pipeline. This pipeline disproportionately affects students of color. More specifically, Black and Latinx students are two to three times more likely to be subjected to exclusionary disciplinary punishment when compared to their White counterparts (Department of Education, 2014). Thus, the school-to-prison-pipeline functions as a systematic mechanism that disproportionately denies access to

education, especially for students of color. Moreover, researchers have found associations between punitive discipline and lower academic achievement, increased drop-out rates, decreased school attendance, decreased engagement in school, and generally less success in school (Department of Education, 2014; Gregory, Skiba, & Noguera, 2010; Mowen & Manierre, 2015). On a school systems level, one study indicated that the practice of punitive punishment also had a negative impact on the climate of the school (Ayers, Dohrn, & Ayers, 2001). As such, targeting the reduction of exclusionary school discipline presents one promising approach to ultimately reduce incarceration rates in the U.S, as well as other negative academic and life outcomes, particularly for Black and Latinx students.

Policy and Practice Implications

SPED identification. The evidence is clear. Disproportionate rates of SPED identification are tied to race, gender, first language status, and SES. Researchers now have a better grasp on the factors that increase the likelihood of being misdiagnosed and misplaced in SPED. With this data and more in-depth understanding comes great responsibility. As stakeholders, we have the opportunity to implement policies and practices that help schools, districts, psychologists, administrators, and educators to use evidence-based best practices in the field.

Effective evidence-based policy and practice reforms will require researchers to identify the student characteristics that are far too often associated with disproportionate identification, and to study and share the underlying mechanisms that are involved in the biased and inequitable practices and processes used to identify students. Additionally, when using the discrepancy model, the type of methodology used for determining a discrepancy between IQ and achievement also has an effect on identification. For example, according to one study, when compared to a

standard-score procedure, using a regression-based procedure has been shown to result in proportionate identification between Black and White students (McLeskey, Waldron, & Womhoff, 1990). Moreover, schools and districts must be more consistent in their assessment tools, methodology, and data analysis, given that the inconsistency across schools and districts in is another underlying reason for the disproportionate rates of SPED identification, particularly for ethnic minority youth. Without more consistent practices, SPED identification will continue to be susceptible to the individual differences in resources and personal preferences of teachers, school psychologists, and school districts.

School discipline practices. Researchers have also developed a better understanding of the factors that increase the likelihood of being subjected to exclusionary discipline practices in schools. Similar to the literature on SPED identification, disproportionate discipline rates have been consistently reported across several studies and national reports (Children's Defense Fund, 1975; McCarthy & Hoge, 1987; Skiba, Peterson, & Williams, 1997; Thornton &Trent, 1988; Wu, Pink, Crain, & Moles, 1982). The disproportionality in exclusionary discipline that has been observed across many studies over the past three decades appears to emerge primarily from the classroom level. This particular disproportionality appears to be associated with teachers' overreliance on punitive punishment and negative discipline opposed to more restorative practices. Additionally, classroom management styles in many schools often rely heavily on negative consequences opposed to a system that focuses on rewarding students for their positive behaviors demonstrated in class. Although classroom management is frequently rated as one of the most important skillsets that a teacher should master, classroom teachers often report feeling unprepared in this skillset (Calhoun, 1987; Leyser, 1986). Consequently, the negative and punitive environment within some classrooms and schools may be associated with higher rates of

students feeling disengaged, undervalued, and eventually dropping out of school. Bullara (1993) described this phenomenon in this way: "The choice of either staying in school or dropping out may be less of a choice and more of a natural response to a negative environment in which he or she is trying to escape" (p. 362). Thus, in an effort to encourage ethnic minority students to remain in school, educators must shift their focus away from focusing on punishing negative behaviors and mistakes to creating classrooms and school cultures that encourage positive behaviors. Positive Behavior Intervention and Supports (PBIS) is one alternative to classroom management as it emphasizes a schoolwide behavior management system that focuses on acknowledging, supporting, and rewarding positive behaviors in schools.

PBIS should also be combined with cultural competency training for educators and administrators in an effort to mitigate the negative effects of cultural discontinuity and misunderstanding between some teachers and their ethnic minority students. One researcher (Townsend, 2000) suggested that many teachers may feel uncomfortable when working with adolescent students who evoke a more active and physical communication style. Cultural competency training in teacher education programs could help educators become more comfortable working with students with this type and style of communication. Moreover, more cultural competency training could help to educate and raise the consciousness and awareness of current and future educators in relation to their own implicit biases. For example, teachers who have internalized negative stereotypes of African American men as threatening and dangerous can begin the process of unlearning that negative stereotype during cultural competency training. Unlearning negative stereotypes may also help to reduce office referrals for behavior that may feel threatening due to fear caused by the internalization of the negative stereotype. This fear may then lead a teacher to overreact to minor perceived threats to authority.

Moreover, understanding student behaviors from a trauma-informed lens may also help to reduce the number of office referrals that teachers make for negative behaviors. Being trauma informed is essentially a recognition of the unique needs of students who come from challenging and difficult environments and situations in their lives. Trauma informed professionals recognize the neurological and physiological responses that result from adverse experiences like trauma. It also requires educators to make proactive accommodations for trauma-affected students in response to their unique needs. For example, replacing exclusionary discipline practices such as referrals to the office with referrals to a school counselor when appropriate is one way to reduce punitive punishment and exclusionary discipline for behaviors that are a result of experiencing trauma. Improving teacher training by implementing cultural competency training into teacher education programs and preparing teachers to respond to the trauma that many students bring into the classroom with them can better prepare teachers to address the needs of students in increasingly diverse classrooms.

In addition to interventions on the school and classroom levels, more systemic and macrolevel interventions and reforms are also necessary. A broader emphasis on improving educational opportunity for all students regardless of one's race, gender, or SES has been suggested by some stakeholders (Carter & Welner, 2013; Hilliard, 1999; Nieto, 2000). To this end, Brown and Peterkin (1999) proposed a strategy that included a call for a systematic and integrated approach to urban public school reform. Their strategy advocated for administrative restructuring, more equitable funding based on the needs of the students, and more accountability for the fidelity of implementation and evaluation of policies and practices. In addition, litigation may also prove to be an effective mechanism to reform public school systems to better serve students and ultimately help to close disciplinary gaps. In the past, attempts to dismantle

inequitable practices (e.g. tracking, resource availability, segregation) in court were met with some success (Brown vs Board of Education, 1954; Dunn, 1999; Welner & Oakes, 1996).

Conclusion

Decades of previous research have consistently found evidence to support the existence of racial, gender, and SES gaps in both SPED identification and school discipline. In Skiba et al.'s (2002) empirical study on school discipline disproportionality, the researchers came to the conclusion that discipline disproportionality can primarily be explained by systematic and pervasive biases in the practice of school discipline. Similarly, gaps in SPED identification also appear to be related to characteristics of students that are not related to their cognitive processing and learning abilities. Thus, in order to eradicate the pervasive gaps that have been observed over the years, we will need to implement systematic and pervasive policies and practices in the education system. Training and supporting teachers and school leaders to be more culturally competent, conscious, and skillful in their approach with students and their classroom management is one opportunity for improvement. In addition, making systematic and integrative changes to the macro level systems in which schools are embedded also offers a promising solution to the ubiquitous and problematic gaps that have persisted for far too long.

References

Anderson, K. G. (1997). Gender bias and special education referrals. *Annals of Dyslexia*, *47*, 151–162. doi:10.1007/s11881-997-0024-8

Ayoub, C. C., Fischer, K. W., & O'Connor, E. E. (2003). Analyzing development of working models for disrupted attachments: The case of hidden family violence. Attachment & Human Development, *5*, 97–119. doi: 10.1080/1461673031000108478

Bain, A., & MacPherson, A. (1990). An examination of the system-wide use of exclusion with disruptive students. *Australia and New Zealand Journal of Developmental Disabilities 16*, 109– 123. doi:10.1080/07263869000033931

Blair, C., & Scott, K. G. (2002). Proportion of LD placements associated with low socioeconomic status: Evidence for a gradient? *Journal of Special Education*, *36*, 14–22. doi: 10.1177/00224669020360010201

Brantlinger, E. (1991). Social class distinctions in adolescents' reports of problems and punishment in school. *Behavioral Disorders 17,* 36–46. doi: 10.1177/019874299101700102

Brown v. Board of Education, 347 U.S. 483 (1954).

Brown, O. S., & Peterkin, R. S. (1999). Transforming public schools: An integrated strategy for improving student academic performance through district wide resource equity, leadership accountability, and program efficiency. *Equity and Excellence in Education 32,* 37–52. doi: 10.1080/1066568990320305

Bullara, D. T. (1993). Classroom management strategies to reduce racially-biased treatment of students. *Journal of Education and Psychological Consultation 4*, 357–368. doi: 10.1207/s1532768xjepc0404_5

Calhoun, S. E. (1987). Are our future teachers prepared for the stress that lies ahead? *Clearing House* 6: 178–179.

Carson, Ann. 2014. Prisoners in 2013. Washington DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

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. doi: 10.1093/acprof:oso/9780199982981.001.0001

Cooley, S. (1995). *Suspension/Expulsion of Regular and Special Education Students in Kansas: A Report to the Kansas State Board of Education*. Topeka, Kansas State Board of Education.

Costenbader, V. K., & Markson, S. (1994). School suspension: A survey of current policies and practices. *NASSP Bulletin 78*, 103–107. doi: 10.1177/019263659407856420

Costenbader, V., & Markson, S. (1998). School suspension: A study with secondary school students. *Journal of School Psychology 36*, 59–82.

Daniels, V. I. (1998). Minority students in gifted and special education programs: The case for educational equity. *Journal of Special Education*, *32*, 41–44. doi: 10.1177/002246699803200107

Department of Education. 2014a. Dear Colleague Letter. Washington DC: U.S. Department of Education.

Duncan, G. J., Brooks-Gunn, J., and Klebanov, P. K. (1994). Economic deprivation and early childhood development. *Child Development 65*, 296–318.

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. *New York: Council of State Governments Justice Center*.

Fischer, K. W., Bullock, D., Rotenberg, E. J., & Raya, P. (1993). The dynamics of competence: How context contributes directly to skill. In R. H. Wozniak & K. W. Fischer (Eds.), Development in context: Acting and thinking in specific environments (pp. 93–120). Hillsdale, NJ: Erlbaum.

Glackman, T., Martin, R., Hyman, I., McDowell, E., Berv, V., and Spino, P. (1978). Corporal punishment, school suspension, and the civil rights of students: An analysis of Office for Civil Rights school surveys. *Inequality in Education 23,* 61–65.

Gordon, R., Della Piana, L., and Keleher, T. (2000). *Facing the Consequences: An Examination of Racial Discrimination in U.S. Public Schools*. Oakland, CA: Applied Research Center.

Greenwood, C. R., Hart, B., Walker, D., & Risley, T. (1994). The opportunity to respond and academic performance revisited: A behavioral theory of developmental retardation and its prevention.

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*, 59-68. doi: 10.3102/0013189X09357621

Gregory, J. F. (1996). The crime of punishment: Racial and gender disparities in the use of corporal punishment in the U.S. Public Schools. *Journal of Negro Education 64*, 454–462. doi: 10.2307/2967267

Gregory, J. F. (1997). Three strikes and they're out: African American boys and American

schools' responses to misbehavior. *International Journal of Adolescence and Youth 7*, 25–34. doi: 10.1080/02673843.1997.9747808

Hanssen, E. (1998). A white teacher reflects on institutional racism. *Phi Delta Kappan* 79, 694–698.

Imich, A. J. (1994). Exclusions from school: Current trends and issues. *Educational Research 36,* 3–11. doi: 10.1080/0013188940360101

Kaeser, S. C. (1979). Suspensions in school discipline. *Education and Urban Society 11*, 465–484. doi: 10.1177/001312457901100405

Kozol, J. (1991). Savage Inequalities. New York: Crown.

Larkin, J. (1979). School desegregation and student suspension: A look at one school system. *Education and Urban Society 11*, 485–495. doi:10.1177/001312457901100406

Leyser, Y. (1986). Competencies needed for teaching individuals with special needs: The perspective of student teachers. *Clearing House 59*, 179–181.

MacMillan, D. L., & Reschly, D. J. (1998). Overrepresentation of minority students: The case for greater specificity or reconsideration of the variables examined. *Journal of Special Education*, *32*, 15–24. doi: 10.1177/002246699803200103

Marshall, P. J. (2015). Neuroscience, embodiment, and development. In R. M. Lerner (Ed.), Handbook of child psychology and developmental science: Vol. 1. Theory and method (7th ed., pp. 244–283). Hoboken, NJ: Wiley.

Massachusetts Advocacy Center. (1986). *The Way Out: Student Exclusion Practices in Boston Middle Schools*. Boston: Author.

McCarthy, J. D., and Hoge, D. R. (1987). The social construction of school punishment: Racial disadvantage out of universalistic process. *Social Forces 65,* 1101–1120.

McFadden, A. C., Marsh, G. E., Price, B. J., and Hwang, Y. (1992). A study of race and gender bias in the punishment of handicapped school children. *Urban Review 24*, 239–251. doi: 10.1007/BF01108358

McLeskey, J., Waldron, N. L., & Wornhoff, S. A. (1990). Factors influencing the identification of Black and White students with a learning disability. *Journal of Learning Disabilities*, *23*, 362–366.

Meyen, E. (1989). Let's not confuse test scores with the substance of the discrepancy model. *Journal of Learning Disabilities*, *22*, 482–483. doi: 10.1177/002221948902200805

Na, C. & Gottfredson, D. (2013). Police Officers in Schools: Effects on School Crime and the Processing of Offending Behaviors. Justice Quarterly, *304,* 619–50. doi: 10.1007/978-1-4614-5690-2_139

Nichols, J. D., Ludwin, W. G., and Iadicola, P. (1999). A darker shade of gray: A year-end analysis of discipline and suspension data. *Equity and Excellence in Education 32*, 43–55.

Nieto, S. (2000). *Affirming Diversity: The Sociopolitical Context of Multicultural Education* (3rd ed.). New York: Longman.

Office of Special Education Programs. (2007). *27th Annual (2005) Report to Congress on the Implementation of the Individuals with Disabilities Education Act* (Vol. 1). Washington, DC: U.S. Department of Education, Office of Special Education Programs, Office of Special Education and Rehabilitative Services.

Office of Special Education Programs. (2018). *40th Annual Report to Congress on the*

Implementation of the Individuals with Disabilities Education Act (Vol. 1). Washington, DC: U.S. Department of Education, Office of Special Education Programs, Office of Special Education and Rehabilitative Services.

Ong-Dean, C. (2006). High roads and low roads: Learning dis- abilities in California, 1976–1998. *Sociological Perspectives*, *49*, 91–113. doi: 10.1525/sop.2006.49.1.91

Patton, J. M. (1998). The disproportionate representation of African Americans in special education: Looking behind the curtain for understanding and solutions. *Journal of Special Education*, *32*, 25–31. doi: 10.1177/002246699803200104

Rebell, M. A. (1999). Fiscal equity litigation and the democratic imperative. Equity and Excellence in Education 32, 5–18. doi: 10.1080/1066568990320302

Reid, D. K., & Knight, M. G. (2006). Disability justifies exclusion of minority students: A critical history grounded in disability studies. *Educational Researcher*, *35*, 18–23.

Sacks, V., & Murphey, D. (2018). The prevalence of adverse childhood experiences, nationally, by state, and by race or ethnicity.

Shaw, S. R., and Braden, J. P. (1990). Race and gender bias in the administration of corporal punishment. *School Psychology Review 19*, 378–383. doi:10.1016/S0272-7358(98)00050-6

Shifrer, D., Muller, C., & Callahan, R. (2011). Disproportionality and Learning Disabilities: Parsing Apart Race, Socioeconomic Status, and Language. *Journal of Learning Disabilities*, *44*, 246–257. https://doi.org/10.1177/0022219410374236

Skiba, R. J., Michael, R. S., Nardo, A. C., & Peterson, R. (2002). The color of discipline: Sources of racial and gender disproportionality in school punishment. Urban Review, *34*, 317–342.

Skiba, R. J., Peterson, R. L., and Williams, T. (1997). Office referrals and suspension: Disciplinary intervention in middle schools. *Education and Treatment of Children 20*, 295–315.

Skiba, R. J., Simmons, A. B., Ritter, S., Gibb, A. C., Rausch, M. K., Cuadrado, J., & Chung, C. G. (2008). Achieving equity in special education: History, status, and current challenges. Exceptional Children, *74*, 264–288. doi: 10.1177/001440290807400301

Taylor, M. C., and Foster, G. A. (1986). Bad boys and school suspensions: Public policy implications for black males. *Sociological Inquiry 56*, 498–506.

Thornton, C. H., and Trent, W. (1988). School desegregation and suspension in East Baton Rouge Parish: A preliminary report. *Journal of Negro Education, 57*, 482–501.

Townsend, B. (2000). Disproportionate discipline of African American children and youth: Culturally-responsive strategies for reducing school suspensions and expulsions. *Exceptional Children 66*, 381–391.

Wu, S. C., Pink, W. T., Crain, R. L., and Moles, O. (1982). Student suspension: A critical reappraisal. *The Urban Review 14*, 245–303. doi: 10.1007/BF02171974

Table 1

Exhibit 26. Number of students ages 6 through 21 served under IDEA, Part B, and percentage of the population served (risk index), comparison risk index, and risk ratio for students ages 6 through 21 served under IDEA, Part B, by race/ethnicity: Fall 2016

Race/ethnicity	Child count[a] in the 50 states and DC	Resident population ages 6 through 21 in the 50 states, DC, and BIE[b]	Risk index[c] (%)	Risk index for all other racial/ethnic groups combined[d] (%)	Risk ratio[e]
Total	5,937,838	65,620,036	9.0	†	†
American Indian or Alaska Native	83,474	559,086	14.9	9.0	1.7
Asian	142,416	3,311,911	4.3	9.3	0.5
Black or African American	1,100,897	9,178,432	12.0	8.6	1.4
Hispanic/Latino	1,481,868	15,791,939	9.4	8.9	1.0
Native Hawaiian or Other Pacific Islander	18,097	130,907	13.8	9.0	1.5
White	2,899,113	34,195,904	8.5	9.7	0.9
Two or more races	211,969	2,451,857	8.6	9.1	1.0

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Table 2

Exhibit 27. Risk ratio for students ages 6 through 21 served under IDEA, Part B, within racial/ethnic groups, by disability category: Fall 2016

Disability	American Indian or Alaska Native	Asian	Black or African American	Hispanic/ Latino	Native Hawaiian or Other Pacific Islander	White	Two or more races
All disabilities	1.7	0.5	1.4	1.0	1.5	0.9	1.0
Autism	1.0	1.1	1.0	0.9	1.3	1.1	1.1
Deaf-blindness!	1.9	0.8	0.9	1.0	1.2	1.0	0.9
Developmental delay[a]	4.2	0.4	1.6	0.7	2.1	0.9	1.4
Emotional disturbance	1.6	0.2	2.0	0.6	1.2	1.0	1.3
Hearing impairment	1.4	1.1	1.0	1.4	2.7	0.7	0.8
Intellectual disability	1.6	0.5	2.2	1.0	1.8	0.7	0.8
Multiple disabilities	1.9	0.6	1.3	0.7	2.1	1.1	0.8
Orthopedic impairment	1.1	1.0	0.9	1.3	1.7	0.9	0.8
Other health impairment	1.3	0.3	1.4	0.7	1.3	1.2	1.1
Specific learning disability	1.9	0.3	1.5	1.4	1.8	0.7	0.8
Speech or language impairment	1.4	0.7	1.0	1.1	1.1	1.0	1.0
Traumatic brain injury	1.6	0.5	1.1	0.7	1.5	1.2	1.0
Visual impairment	1.6	0.9	1.1	1.0	1.7	1.0	0.8

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