Education not Incarceration: A Conceptual Model for Reducing Racial and Ethnic Disproportionality in School Discipline

Kent McIntosh
University of Oregon, kentm@uoregon.edu

Erik J. Girvan
University of Oregon, girvan@uoregon.edu

Robert H. Horner
University of Oregon, robh@uoregon.edu

Keith Smolkowski
Oregon Research Institute, keiths@ori.org

Education not Incarceration: A Conceptual Model for Reducing Racial and Ethnic Disproportionality in School Discipline

Acknowledgements

Introduction

"Ensuring that our educational system is a doorway to opportunity – and not a point of entry to our criminal justice system – is a critical, and achievable, goal."

-U.S. Attorney General Eric Holder

Among the most significant failings of the legal system for children is the extension of its retribution- and incapacitation-based criminal justice policies and practices to schools. Primary and secondary educational institutions are tasked with preparing children to be constructive, productive, and responsible members of society. Ideally, the schools provide secure places for academic and social learning and growth, including the inevitable juvenile and adolescent mistakes that accompany that process.[1,2] Adoption of punitive "zero tolerance" approaches in the early 1990s and the subsequent increase in the involvement of and reliance on law enforcement for school discipline has dramatically expanded the number of suspensions and expulsions, threatening the ability of schools to serve their primary role of educating children.[3] Such exclusionary discipline has substantial negative effects on schools and students' life outcomes.[4] Removing students through suspension is associated with *decreased* overall student achievement and perceived positive school climate.[5] Further, controlling for school and individual characteristics, students who are suspended or expelled for non-dangerous behaviors are substantially more likely to become involved in the criminal justice system,[6] a well-documented phenomeon now widely known as the "school-to-prison pipeline."[3]

Given these long-term negative consequences, it is particularly concerning that the effects of criminalizing school discipline falls most heavily on minorities.[7] Decades of research consistently shows that students of color, particularly African American males, are at significantly higher risk for exposure to exclusionary school discipline practices, including office discipline referrals (ODRs) and suspensions.[7] Moreover, as indicated in Figure 1, a longitudinal comparison of discipline rates shows that, overall, the magnitude of that racial and ethnic disparity in school discipline (henceforth called disproportionality) is increasing.[8] Indeed, in some districts, over half of all African American males were suspended at least once each year.

Figure 1. Increase in Percentage of White and Black Students Suspended for One or More Days
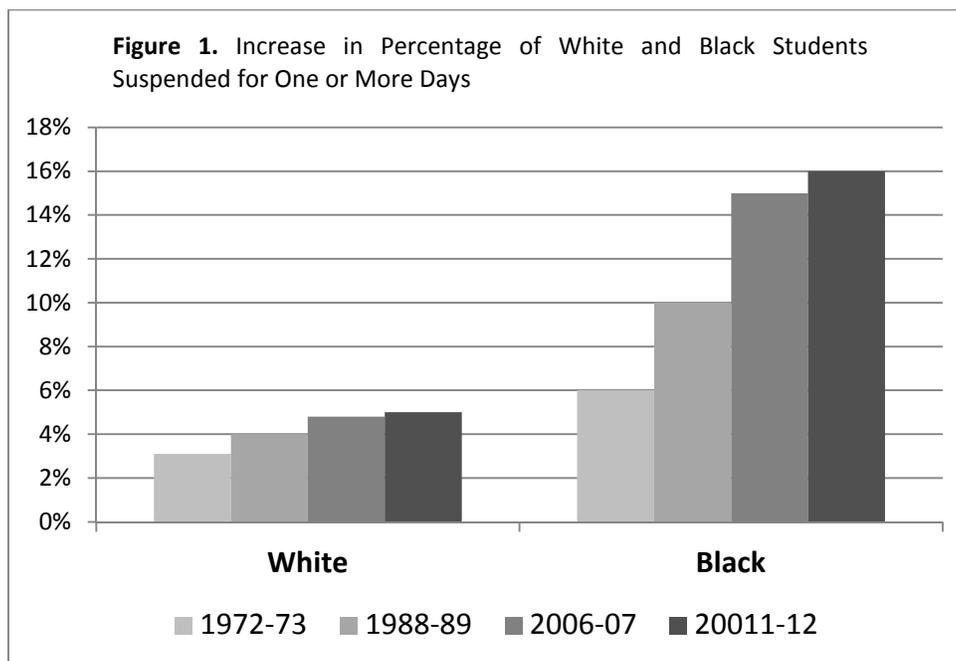
Notes: Suspension data from the U.S. Department of Education-Office for Civil Rights; 1972-73 US DOE-OCR data archived in[9].

To be sure, schools are not alone. Similar racial and ethnic disparities exist in components of the legal system that are designed to serve youth. For example, African American youth are placed in foster care at over twice the rate of white children (see National Council of Juvenile and Family Court Judges). Similarly, the juvenile delinquency case rate for African American adolescents is more than twice that of their white peers (see National Center for Juvenile Justice). But schools are unique in the extent of their early interactions with children, their educational mission, and their potential influence as the primary intervention to prepare youth of today for success tomorrow. As a result, the US Department of Justice and US Department of Education have recognized school discipline disproportionality as one of the more significant challenges they face[9,10] (for more information see eg, Coordinating Council on Juvenile Justice and Delinquency Prevention).

A number of structural explanations for disproportionality have been proposed (e.g. poverty, different base rates of problem behavior), but none have empirical support. African American students are referred and suspended at higher rates than their White peers, even after controlling for individual SES and other demographic variables.[12,13] Similarly, there is no published research demonstrating that students of color—and African

American students in particular—have higher base rates of problem behavior.[8] Research by Bradshaw, et al. found that African American students were significantly more likely to receive ODRs, even when controlling for teacher ratings of their disruptive behavior.[14] The results of other research has shown that White students are more often issued ODRs for relatively objective problem behaviors, which are easily classified (e.g. smoking, vandalism), whereas African American students are more often issued ODRs for more ambiguous or subjective problem behaviors (e.g. disruption)[15] which require a judgment call regarding whether to refer the student. These consistent findings indicate that—although structural factors may explain some of the differences—conscious or unconscious racial bias may also play an important role in the discipline gap.

Thus, at present, there is a solid research base documenting the extent of disproportionality and many of its effects. By comparison, empirical work identifying specific malleable variables that could be acted upon to reduce disparities and testing the validity of interventions targeting them in educational settings is in its infancy. As a result, educators trying to address the issue are left with few empirically validated options to reduce disproportionality at the school level. Although some schools and districts have shown improved outcomes,[16] these results are not the norm, and without clear options, many school and district teams sometimes enact policies that have been shown to increase—rather than decrease—disproportionality, including zero tolerance policies themselves.[5] However, there is a considerable base of research from other disciplines and domains, including social psychology and research on racial and gender bias in the workplace and legal settings, that could provide valuable guidance in schools. A careful examination of theories in the broader literature that may explain disproportionality could enhance our ability to address this critical threat to equitable education and the opportunities for children that go along with it.

The purpose of this article is constructive, to move past identification of failures of educational and legal systems in efforts to inform and improve efforts to resolve it. To do so, we offer a conceptual model of bias and discipline disproportionality based on research from educational, cognitive, and social psychology. The intent of the model is to help identify malleable variables for intervention that have not been used, as well as indicate which variables may be more effective targets for efforts to reduce disproportionality in schools. We then describe a multicomponent school-wide intervention for reducing disproportionality and enhancing outcomes for students who are culturally and linguistically

diverse. Each component is designed to be implemented within—rather than supplant—current school-wide approaches. Finally, we briefly propose a line of future research to validate the model and the interventions it recommends.

Hypothesized Factors Leading to Disproportionality in School Discipline

A common understanding of disproportionality relies on a unidimensional conceptualization of bias in decision-making based on personal biases (e.g. racism). The left side of Figure 2 illustrates this unidimensional conceptualization, with racial bias as the sole predictor of disproportionate discipline. In this view, to reduce disproportionality, personal racial biases must be changed (e.g. through cultural sensitivity training). This approach has at least two serious disadvantages. First, it focuses solely on one variable that has been shown in many studies to be highly resistant to change. Interventions intended to reduce personal racial biases are frequently ineffective and have even strengthened existing levels of racial bias.[17-20] Second, this view fails to consider contextual variables that may be as critical to biased decision making but are much more malleable.

Figure 2: Unidimensional and Multidimensional Conceptualizations of Bias

Unidimensional Conceptualization of Bias.   *Multidimensional Conceptualization of Bias.*
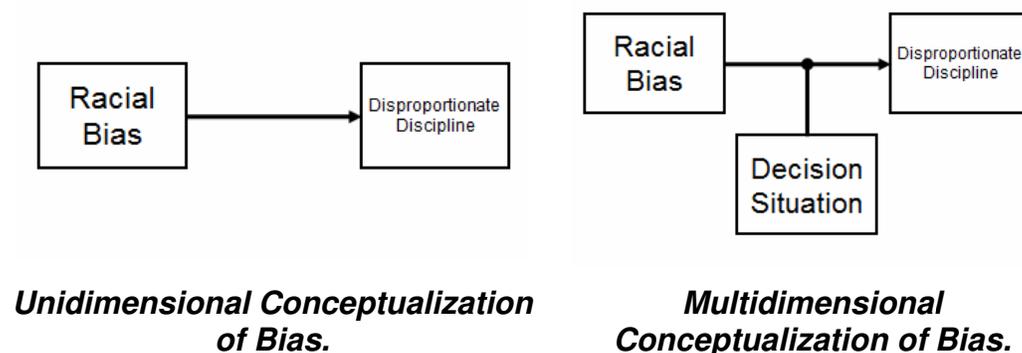
Presenting a constructive alternative, decades of social-psychological research suggest that racial bias is best considered multidimensionally.[21] The right side of Figure 2 illustrates the conceptualization under which, with no change to one's attitudes or beliefs, an individual may selectively show racial bias in different decision situations. For example, a teacher may make more equitable discipline decisions at the start of the day but be more likely to send students of color to the office at the end of the day, when fatigue affects decision

making.[22] The core insight of this view is that the interaction between individuals' biases *and* the situation leads to biased decision making.[23,24] This multidimensional theory has two advantages over the unidimensional view. First, it is more accurate in predicting biased decision making.[25] Second, it facilitates identification of solutions to seemingly intractable problems.[26, 20] However, the multidimensional view also requires a more precise understanding of bias and decision-making.

Different Processes, Different Racial Biases, Different Solutions
In the unidimensional view, bias is often considered to be a single personality trait. A substantial body of research from social cognition psychology, however, suggests that there are two distinct types of bias (explicit and implicit), each associated, in what are called dual-process models, with one of two different types of cognitive processing.[27,28] The first type of processing (generally known as System 1) is efficient, operates extremely quickly, and is automatic, working mostly outside of our conscious awareness. It monitors, decodes, evaluates, interprets, and otherwise tries to make some sense out of the nearly continuous input our brains receive from the environment without us having to pay attention or make any conscious decisions. The second type of cognitive processing (System 2) is what we experience as conscious attention[29]. It is relatively slow and effortful, allowing us to make controlled and deliberate decisions.

Explicit bias. *Explicit biases* operate as part of System 2. These biases are what we typically think of as racism (the consciously held belief that members of certain racial or ethnic groups are inherently inferior) and other consciously endorsed biases. Over the past 50 years, levels of overt racism have declined dramatically in the US[30]. Nevertheless, some subtle (i.e. non-overt) forms of explicit racial biases persist. For example, rather than believing in an inherent inferiority of members of a racial or ethnic group, an individual may profess an adherence to "traditional American values such as self-reliance, the work ethic, and respect for authority"[31, p. 438] and the belief that members of some ethnic or racial groups tend to reject these values.[32] Even after controlling for alternative predictors such as political ideology, age, sex, and income, individuals reporting these beliefs tend to object to social policies that more commonly support African Americans[33] and instead favor punitive criminal policies (e.g. three-strikes laws) that disproportionally harm them.[31] Evidence of explicit bias in the school discipline context may be seen in the relation between school rates of disproportionality and the principal's endorsement of exclusionary discipline and zero tolerance policies.[34]

Because explicit biases operate as part of System 2 and therefore rely on consciously held values, their effects on judgment and decision-making are resistant to change.[35] Consistent with this theory, a range of studies show that interventions commonly used in schools (e.g. cultural sensitivity training, explaining the value of diversity), have little to no effect on levels of disproportionate treatment.[18,19,20] By comparison, structured, top-down policy interventions that are implemented with the overt support of and accountability to administrators are more likely to reduce the effects of explicit bias. For example, a meta-analysis of intergroup contact (e.g. school integration) found that interventions implemented with strong intra-institutional support, which limits the ability of individuals to avoid the intervention, were substantially more effective in reducing racial and ethnic discrimination.[36]

Implicit Bias. Implicit biases are associated with System 1 (i.e. efficient, automatic) cognitive processing. Rather than conscious endorsement, they have their roots in generalized associations formed from systematically limited experience or exposure (e.g. regular experience with male but not female surgeons or female but not male kindergarten teachers may lead an individual to assume as a default that surgeons are male and teachers of young children are female, even though that individual may know some exceptions and support gender equity). Consistent with the functioning of System 2, given the various limitations on our ability to process information and the inferences that are used to function in a fast-paced world, these associations (e.g. stereotypes) act as shortcuts that help us to navigate the complexity of the world.[22] In doing so, they can bias perception, judgment, and decision-making without our conscious knowledge or intent.[37, 38] This phenomenon is particularly true when people do not or cannot act deliberately, such as, "when a perceiver lacks the motivation, time, or cognitive capacity to think deeply (and accurately) about others."[39, p. 105, 21] Thus, however egalitarian their values, individuals' implicit biases are more likely to affect their decisions when the structural demands of a situation exceed the available information (e.g. judgments that are inherently difficult, subjective, or ambiguous[40]), or when cognitive resources are limited (e.g. when decisions must be made quickly or individuals are physically or mentally fatigued[22, 41]).

Implicit biases, such as those favoring Whites over African Americans, are typically measured in a way that does not allow for conscious deliberation (e.g. reaction times in a highly speeded task or associations with ambiguous stimuli). Performance on such measures

predict a wide variety of behaviors,[38] including the tendency for pediatricians to recommend pain medication at lower rates for African American children than White children with identical symptoms,[42] discrimination against Arab-Muslim[43] and obese[44] job applicants, the extent to which labor arbitrators decide disputes in favor of women,[45] and how much force police officers use when arresting children of color.[46]

In the educational context, van den Bergh and colleagues[47] measured the explicit and implicit ethnic biases of a sample of elementary school teachers, along with their academic expectations for their students. In addition, the researchers obtained the students' ethnicity, gender, socio-economic status, and standardized test scores. Controlling for student gender and socio-economic status, their analysis showed that teachers' implicit, but not explicit, biases predicted the extent of the achievement gap between the teachers' non-minority and minority ethnic students on the standardized tests. This effect was mediated by the lower expectations the teachers had for their ethnic minority students. Similarly, evidence that disproportionality is greater for discipline decisions related to more ambiguous or subjective student problem behaviors,[48] which require teachers to make an inference or judgment call rather than rely on objective criterion, suggests that implicit bias also affects school discipline decisions.

Because implicit bias can affect decision-making outside of conscious awareness, it can be difficult for individuals to know when and how to correct for it, even when they want to do so. Thus, in ambiguous or snap judgments, which facilitate the operation of implicit bias, simply making people accountable for making unbiased decisions, without more support, has been shown to be ineffective in reducing implicit bias in gender discrimination.[45] Providing specific guidance as to how to make unbiased decisions in these situations, however, allows people who are motivated by equity to be unbiased.[20,49,50] In addition, implicit biases also tend to be widely shared within society, even among members of minority groups.[51] Consistent with this research, interventions that rely upon ethnic matching, such as hiring more non-White teachers and administrators, although laudable for many reasons, have not always been shown to remedy the problem.[14] Even so, there are indications in other fields that focusing on counter-stereotypical examples (e.g. positive African American role models) can moderate implicit biases.[20]

A Conceptual Model of Factors Leading to Disproportionality and Potential Moderators

The dual-process perspective has direct implications for addressing explicit and implicit bias through multicomponent interventions. Figure 3 presents a conceptual model of variables related to disproportionality. Across the center, structural variables (e.g. school demographic characteristics, poverty, level of parental education) predict disproportionate discipline, leading to reduced levels of student achievement and increased rates of dropout (and eventually, increased contacts with the justice system). Drawing on the multidimensional conceptualization of bias, disproportionality is also predicted by explicit and implicit bias. The effects of these less malleable predictors may be moderated (i.e. strengthened or weakened) by school policies and practices, with top-down policies moderating the effects of explicit bias, effective school and classroom practices moderating the effects of implicit bias, and both partially moderating the effects of structural variables. Thus, although certain structural conditions and biases may themselves be difficult to change, the model shows that understanding how they work is fundamentally necessary for identifying interventions that are most likely to reduce or eliminate disproportionate discipline, thereby improving student engagement, achievement, and opportunity.

Figure 3: A Conceptual Model of Disproportionality
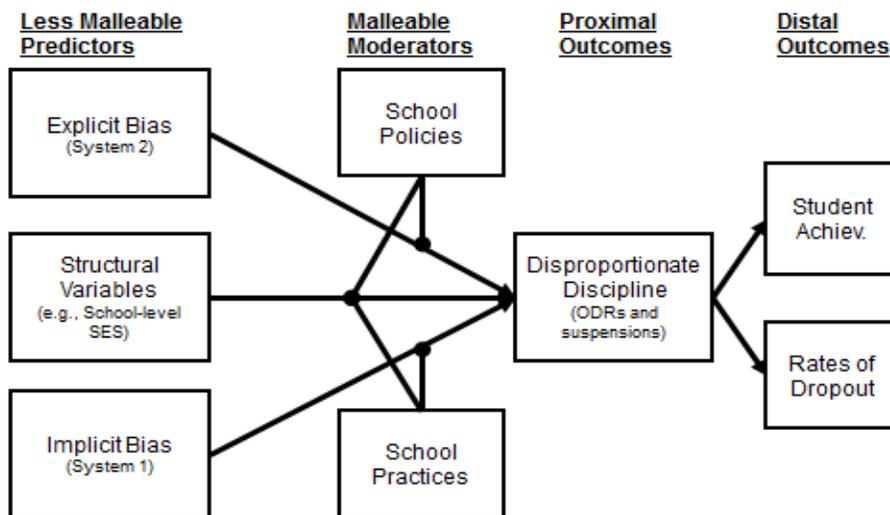
The conceptual model stresses how particular interventions may be effective or ineffective in reducing disproportionality. From the literature, effective top-down policies (e.g. evaluating administrators and teachers based on levels of disproportionality) are more likely to mitigate the effects of explicit bias. By comparison, policies without direction and accountability (e.g. inclusion of an equity goal into a school's mission statement but without any strategies for enactment) are unlikely to make any difference. Moreover, policies that are effective for explicit bias will not necessarily reduce the effects of implicit bias.

For implicit bias, the model describes that school practices are the best targets for intervention. For example, practices that involve creating clear guidelines for what incidents should be handled in the classroom versus issuing an ODR should reduce ambiguity in decision situations, and as a result, the influence of implicit bias. However, some policies that take decision making out of the hands of school personnel (e.g. zero tolerance policies) may also exacerbate the effects of explicit bias, making the problem worse. Finally, practices that involve defining and teaching students what is expected of them, including how to relate to adults and each other, may moderate the effects of both implicit bias (by adding clarity to interactions) and some structural variables, such as poverty (by educating students who may not have the knowledge or skills necessary to discern and navigate the behavioral norms in a school setting).

Vulnerable Decision Points in School Discipline

A potential intervention for reducing the effects of implicit bias on disproportionality is to provide guidance in making unbiased discipline decisions in ambiguous or snap-decision situations. General guidance (e.g. telling school personnel to be less biased) is not effective, but specific guidance may aid in such situations.[20] Efficient and effective development of specific guidance requires a set of empirically-derived vulnerable decision points on which to focus training and implementation. For this article, we use the term *vulnerable decision points* to mean contextual events or elements of the immediate situation (e.g. teacher decision to refer to the office, administrator decision to suspend) that increase the likelihood of bias affecting discipline decision making. These vulnerable decision points *momentarily* increase the likelihood that an adult will make a biased discipline decision. Many decisions to refer a student to the office involve snap judgments (invoking System 1), but some decision points may be more vulnerable to bias than others.

The literature identifies some decision points that are most vulnerable to implicit bias and may be consistent across a range of

schools. In general, implicit biases tend to affect decisions that involve more uncertainty, ambiguity, or discretion. Consistent with the results of prior research,[15,52] there is more likely to be disproportionality (particularly for African American students) in ODRs and suspensions for more subjective problem behaviors. In addition, time of day, representing onset of hunger or mental fatigue, has been shown in other fields (but not yet tested in education) to increase bias in decisions.[22,41] Extrapolating to educational contexts, there may be more disproportionality in ODRs before lunch or at the end of the school day. Similarly, disproportionality may be more likely at the end of the week and end of the school year, when fatigue and stress tend to increase. Further, disproportionality could be greater for ODRs outside of the classroom because they are more often issued by adults who are not familiar with students (i.e. no personal connection) and thus more likely to rely on potentially negative racial or ethnic stereotypes than individualized knowledge about the specific student.[53] At the school level, structural variables (e.g. grade levels served) may also influence implicit bias. For example, physically mature high school students may be perceived as more threatening to teachers, evoking more use of ODRs.[54]

A Proposed Multicomponent Intervention to Prevent and Reduce Disproportionality

The existing research and our conceptual model make it clear that that no single strategy may be sufficient to produce substantive and sustainable change. As such, we propose here a model with the assumption that multiple components may be needed, but not all components may be necessary in all schools. Our goal is to propose a set of intervention components that fit with the conceptual model proposed above, may spur the design of additional interventions addressing disproportionality and stimulate new research efforts on this issue.

Discipline disproportionality results from an interaction between the behavior of students and the behavior of adults within schools. An "opportunity" for disproportionality exists when an adult acts on the assessment that a student's behavior is unacceptable. Adults both identify a student's behavior as unacceptable and assign a disciplinary response. Both of these adult behaviors expose opportunities for disproportionality. We propose a comprehensive, multicomponent approach to reducing disproportionality in schools with three major goals: (a) to prevent situations that can lead to disproportionate discipline, and, when such situations occur, reduce the likelihood that (b) explicit bias or (c) implicit bias will influence the outcome of the situation.

Prevent Situations that Can Lead to Disproportionate Discipline

An obvious, but under-valued, component of any effort to reduce disproportionality is developing school-wide systems of academic and behavior support that reduce the likelihood of behavior judged unacceptable by adults. This approach includes both reducing student behavior that is genuinely unacceptable and developing shared expectations that help both students and adults differentiate between behaviors that are appropriate and inappropriate for school. If we can reduce the opportunities in which students may be sent to the office, we can reduce risk for disproportionality. Two major approaches in this regard are (a) effective academic instruction and (b) school-wide positive behavioral interventions and supports.

Use effective instruction to address the achievement gap. Academic skill deficits are associated with increased risks of problem behavior and exclusionary discipline, but providing quality instruction can mitigate the behavioral risks for students who enter school with academic challenges.[55] Because of the well-documented academic achievement gap between students of color and White students,[56] ameliorating it may reduce disproportionality. As such, focusing on delivering high quality academic support to all students with academic deficits may simultaneously increase academic success and reduce their risk for ODRs and suspensions, reducing the additional risk for disproportionality based on academic failure.

School-wide Positive Behavioral Interventions and Supports (SWPBIS). SWPBIS also holds promise as a prevention strategy for limiting the likelihood of opportunities for disproportionality. SWPBIS focuses on improving behavior by teaching students pro-social skills and redesigning school environments to discourage problem behavior.[57] Core features of SWPBIS include (a) teaching a small set of positive, school-wide behavioral expectations to all students, (b) establishing a regular pattern in which all adults acknowledge and reward appropriate student behavior, (c) minimizing the likelihood that problem behaviors will be inadvertently rewarded, and (d) collecting and using behavioral data to guide whole-school support efforts. SWPBIS also incorporates a multi-tiered system of support so students needing more intensive support gain access to increasingly individualized support options. We recommend adopting a flexible, systems-level approach such as SWPBIS because it (a) is effective in reducing the use of exclusionary discipline (e.g. ODRs

and suspensions), (b) can be adapted to improve its fit with specific school and community cultures, and (c) provides the systems-level capacity for schools and districts to implement and monitor additional interventions to reduce disproportionality.[58]

SWPBIS is particularly relevant to the challenge of disproportionality because of its focus on establishing a clear, consistent, and positive social culture. Identifying and teaching clear expectations can reduce ambiguity for both students (e.g. it is not assumed that all students know how to be respectful at school) and adults (e.g. expectations and violations are clearer, reducing ambiguity). The whole-school emphasis within SWPBIS also increases opportunities for both students and adults to see appropriate behavior modeled for them. In addition, systems for identifying and acknowledging positive behaviors by students, particularly students of color, may be particularly effective for countering the default formation and operation of negative stereotypes.[20,59]

Effects on disproportionality. Although the effects of SWPBIS on academic achievement and behavior have been well documented,[60] research to date on the effects of SWPBIS on disproportionality have been promising but inconclusive. In descriptive case studies, SWPBIS is associated with reduced overall rates of ODRs and suspensions in schools in which the vast majority of students were non-White.[61,62] Other descriptive studies have shown larger proportional reductions in suspensions for African American than White students.[63] And a longitudinal, national evaluation of 69 elementary schools showed that through implementing SWPBIS, ODRs decreased over time for each racial/ethnic category.[64] There is also quasi-experimental evidence that SWPBIS may reduce the extent of disproportionality. Vincent and colleagues[65] found that disproportionality was statistically significantly smaller in schools implementing SWPBIS than those not implementing SWPBIS. Notably, however, disproportionality was not eliminated. The results of other studies have been mixed, with implementation of SWPBIS, or certain components of it, being shown to reduce disproportionality in some settings, grade levels, or both, but ineffective elsewhere.[59,65]

Consistent with the conceptual model and multi-dimensional perspective, our view of the evidence is that typical implementation of SWPBIS has promise for reducing discipline disproportionality, but, to the extent it is not specifically targeted towards the different sources of disproportionality operating in a particular school (e.g. structural factors, explicit bias, implicit bias) it is unlikely to be as effective as it can be or to eliminate disproportionality completely. As such, typical implementations

of SWPBIS may function as an efficient first step toward reducing disproportionality, but may require additional strategies in some settings.

Additional strategies. Two additional strategies are of special relevance for SWPBIS and disproportionality. First, it is important to develop school-wide expectations with active involvement of families, students, and the community. SWPBIS involves defining what behavior is and is not appropriate in educational settings and establishing consequences for adherence to or deviation from such behavior. When a school's systems (e.g. expectations, matrix examples, acknowledgment systems) differ from those experienced by students outside of school, they are particularly vulnerable to exclusionary discipline. Students with challenging home lives, for example, may not know what behavior is expected or have the skills needed to do it. Similarly, those who are not from the dominant culture may be more likely to exhibit behavior that is perceived as respectful (or neutral) by them and their families but is viewed as problem behavior by other students and adults in the school.[66] The resulting discontinuity, in which behaviors of students who are economically and socially disadvantaged or culturally diverse are systematically labeled as norm-violating, can lead to disproportionality that institutionalizes explicit bias as well as the stereotypic associations that support implicit bias. Such mismatches may be reduced by examining and exploring school expectations with community representatives to ensure that they are congruent with those of local families and the greater community. Second, because focusing on counter-stereotypical examples tends to reduce bias,[20] a strategy that may be helpful is *counter-stereotypical acknowledgment*. This strategy includes actively encouraging the use of the school's SWPBIS formal acknowledgement system for students from groups with disproportionate ODRs.[59] This small change could (a) make school more reinforcing for these students and (b) help school personnel recognize more appropriate than problem behavior from students, changing their underlying assumptions, biases, and ultimately perceptions of ambiguous student behavior.

Reduce Effects of Explicit Bias

Although it is reasonable to provide professional development to address explicit bias (e.g. cultural responsiveness training), such strategies have not been shown to reduce biased behavior.[19,20] Instead, formal policies and procedures may be more effective.[67,49] Promising policies include: (a) regular collection and reporting of discipline data disaggregated by race and (b) district policies that support equity and have accountability.

Collect and use disaggregated student data. The single most efficient process for achieving a valued outcome within a complex system is to define measure and report progress toward achieving that outcome on a regular cycle.[68] Any school or district committed to reducing disproportionality should consider establishing data systems that allow disaggregation of student data by race. Some discipline data systems for entering and analyzing office discipline referrals and suspensions, such as the School-wide Information System (SWIS), can automatically produce disproportionality data for identifying and monitoring the extent of disproportionality. Risk indices or risk ratios (which are easily calculated from risk indices) are common metrics for assessing disproportionality.[69] Like the "diversity dashboards" recommended for traditionally male-dominated businesses to motivate and track the effectiveness of programs to ensure gender equality,[70,71] these data can easily be added to monthly school team meeting agendas, as well as built into district and state accountability systems. The National Technical Assistance Center on PBIS has developed a guide for using school discipline data to assess and address disproportionality.[72]

Develop district policies with accountability for disciplinary equity. Many schools and districts include a commitment to educational equity in their mission statements. However, research shows that this strategy alone is ineffective.[19,20] Instead, policies that state this commitment but have clear steps to achieve equity and accountability for taking these steps are needed.[67,49] Although there is little research testing these insights in schools, we believe that policies that are more likely to be effective include three key components. First, the mission statement can include a prominently stated commitment to equity. This institutional commitment to equity nullifies any ambiguity and provides the authority for both personal and organizational self-assessment. Second, the policies include clear, actionable procedures for enhancing equity (e.g. remove harmful practices, data collection, hiring preferences, professional development). Hiring procedures should include a preference for individuals with a commitment to educational equity. Professional development investment should include opportunities for personnel to assess the cultural responsiveness of their overall school culture and their own instructional practices. Third, the procedures should have true accountability, such as inclusion of training attendance and equity outcomes into administrator and teacher evaluation processes in order to reduce opportunities for individuals with high explicit bias to act on them.[36]

Reduce Effects of Implicit Bias

As the model describes, different strategies may be needed for addressing implicit, or unconscious, bias. Because implicit bias is more likely in some situations rather than others,[15] a necessary precursor of effective implicit bias intervention is to identify the situations (i.e. the vulnerable decision points) that are most likely to be affected by implicit bias. Once identified (either through national or school-specific analyses[72]), a few strategies can be used to address bias in these specific situations.

Identify school-specific vulnerable decision points. School teams can assess their vulnerable decision points if their discipline data system allows drill downs of situational information regarding each incident of problem behavior (e.g. student, grade, problem behavior, date, time of day, referring staff) and the administrative consequences (e.g. suspensions). Teams can use these data with their risk indices and ratios to identify specific situations where disproportionality is more likely to occur.[72]

Reduce ambiguity in discipline procedures. Once these decision points are identified, school or district staff can examine their ODR definitions and processes (e.g. definitions of defiance, distinctions between classroom and office managed behavior) to reduce ambiguity in these specific decision points. Decision points with more ambiguity (e.g. vague procedures) are more likely to result in biased decisions.[20] As a result, this strategy can be useful when relying on national research (e.g. responding to subjective behaviors) but is more likely to be effective if decision points are derived from the school's own data regarding where disproportionality is most likely to occur.

Teach neutralizing routines for vulnerable decision points. In addition to clarifying procedures, research indicates that it may be effective to use the school's data to teach school personnel to identify when they are in a vulnerable decision point (e.g. fatigued, unfamiliar student, subjective behavior) and use a self-review routine just prior to a making a discipline decision. Such if-then routines, frequently called "implementation intentions,"[73] may neutralize the likelihood of disproportionate discipline from implicit bias, especially in situations that are chaotic, ambiguous, or seem to demand snap judgments.[20] Establishing neutralizing routines requires that the school staff identify a specific set of vulnerable decision points and develop a brief set of self-

instructed questions and alternatives for all staff to use in discipline decisions. Although there is no research in education regarding specific language to use, research in law enforcement suggest that short if-then statements are most effective. One example may be the following: "Is this a vulnerable decision point? If so, use [predetermined alternative strategy] to keep this student in class." Much more research is needed to validate and understand these procedures, but preliminary studies employing neutralizing routines are encouraging.[73]

Conclusion

Disproportionality in school discipline remains a pressing problem, with devastating consequences in terms of school completion and incarceration. Rather than focusing solely on less malleable factors, our multidimensional approach provides significant guidance by identifying more malleable intervention targets, such as decision situations that are more prone to bias, and shows how certain policies and practices may reduce the effects of bias on decision making. Further work will be necessary to validate this conceptual model and test the proposed intervention components it suggests, including those outlined here, with a formal and substantial program of research. Doing so will establish an evidence-based framework for more precise—and thereby, more efficient and effective—interventions to reduce disproportionality in school discipline.

References

1. Casey BJ, Jones RM, Hare TA. The Adolescent Brain. *Annals of the New York Academy of Sciences.* 2014; 1124(1):111-126.

2. Drobac J. *Worldly But Not Yet Wise: The Sexual Harassment Of Teenagers, Their "Developing Capacity," And The Law's Response.* University of Chicago Press; 2015.

3. Wald J, Losen DJ. Defining and redirecting a school-to-prison pipeline. *New Directions for Youth Development.* 20003;2003(99):9-15.

4. American Academy of Pediatrics Council on School Health. Policy statement: Out-of-school suspension and expulsion. *Pediatrics.* 2013;131:e1000-e1007.

5. Reynolds C, Skiba R, Graham S, Sheras P, Conoley J, Garcia-Vazquez E. Are zero tolerance policies effective in the schools?: an evidentiary review and recommendations. *American Psychologist.* 2008;63(9):852-862.

6. Fabelo T, Thompson MD, Plotkin M, Carmichael D, Marchbanks MPI, Booth EA. *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;2011.

7. Losen DJ, Gillespie J. *Opportunities suspended: The disparate impact of disciplinary exclusion from school.* Los Angeles, CA: Center for Civil Rights Remedies at The Civil Rights Project at UCLA; 2012.

8. Losen DJ, Skiba RJ. *Suspended education: Urban middle schools in crisis.* Montgomery, AL: Southern Poverty Law Center;2010.

9. U.S. Government Accountability Office. *Standards needed to improve identification of racial and ethnic overrepresentation in special education. Report to the chairman, committee on health, education, labor, and pensions, U.S. Senate (Report GAO-13-137).* Washington, DC: Author;2013.

10. U.S. Departments of Education and Justice. *Dear Colleague Letter: Nondiscriminatory Administration of School Discipline.* Retrieved from http://www2.ed.gov/about/offices/list/ocr/letters/colleague-201401-title-vi.html. 2014.

11. Edelman MW, Beck R, Smith PV. School Suspensions: Are They Helping Children? Cambridge, MA: *Children's Defense Fund Washington Research Project*; 1975.

12. Skiba RJ, Poloni-Staudinger L, Simmons AB, Feggins LR, Chung CG. Unproven links: Can poverty explain ethnic disproportionality in special education? *Journal of Special Education.* 2005;39:130-144.
13. Wallace JMJ, Goodkind S, Wallace CM, Bachman JG. Racial, ethnic, and gender differences in school discipline among U.S. high school students: 1991–2005. *Negro Educational Review.* 2008;59:47-62.
14. Bradshaw CP, Mitchell MM, O'Brennan LM, Leaf PJ. Multilevel exploration of factors contributing to the overrepresentation of black students in office disciplinary referrals. *Journal of Educational Psychology.* 2010;102:508-520.
15. Skiba RJ, Michael RS, Nardo AC, Peterson RL. The color of discipline: Sources of racial and gender disproportionality in school punishment. *The Urban Review.* 2002;34:317-342.
16. Losen D. Discipline Policies, Successful Schools, and Racial Justice. Los Angeles, CA: The Civil Rights Project at UCLA; 2011.
17. Paluck EL, Green DP. Prejudice reduction: What works? A review and assessment of research and practice. *Annual Review of Psychology.* 2009;60:339-367.
18. Kulik CT, Roberson L. Common goals and golden opportunities: Evaluations of diversity education in academic and organizational settings. *Academy of Management Learning & Education.* 2008;7:309-331.
19. Anand R, Winters M. A retrospective view of corporate diversity training from 1964 to the present. *Academy of Management Learning & Education.* 2008;7:356-372.
20. Lai CK, Hoffman KM, Nosek BA, Greenwald AG. Reducing implicit prejudice. *Social and Personality Psychology Compass.* 2013;7:315-330.
21. Fiske ST, Taylor SE. *Social cognition: From brains to culture.* New York: McGraw-Hill; 2008.
22. Kouchaki M, Smith IH. The morning morality effect: The influence of time of day on unethical behavior. *Psychological Science.* 2014;25(95-102).
23. Snyder M, Ickes W. *Personality and social behavior.* New York: Random House; 1985. Lindsey G, Aronson E editors. Handbook of Social Psychology (pp.883-948).
24. Kenrick DT, Funder DC. Profiting from controversy: Lessons from the person-situation debate. *American Psychologist.* 1988;43(1):23.

25. Pronin E, Gilovich T, Ross L. Objectivity in the Eye of the Beholder: Divergent Perceptions of Bias in Self Versus Others. *Psychological Review.* 2004;111(3):781.

26. Caplan N, Nelson SD. On being useful: The nature and consequences of psychological research on social problems. *American Psychologist.* 1973;28(3):199.

27. Evans JSBT, Stanovich KE. Dual-Process Theories of Higher Cognition. *Perspectives on Psychological Science.* 2013;8(3):223-241.

28. Smith ER, DeCoster J. Dual-Process Models in Social and Cognitive Psychology: Conceptual Integration and Links to Underlying Memory Systems. *Personality and Social Psychology Review.* 2000;4(2):108--131.

29. Kahneman D. *Thinking, fast and slow.* New York: Macmillan; 2011.

30. Bobo L, Charles C, Krysan M, Simmons A. The real record on racial attitudes. In: Marsden PV, ed. *Social Trends in American Life: Evidence from the General Social Survey since 1972*. Princeton, NJ: Princeton University Press; 2012:38-83.

31. Green EG, Staerklé C, Sears DO. Symbolic racism and Whites' attitudes towards punitive and preventive crime policies. *Law and Human Behavior.* 2006;30:435-454.

32. Sears DO, Henry PJ. Over thirty years later: A contemporary look at symbolic racism. *Advances in Experimental Social Psychology.* 2005;37:95-150.

33. Rabinowitz JL, Sears DO, Sidanius J, Krosnick JA. Why Do White Americans oppose race-targeted policies? Clarifying the impact of symbolic racism. *Political Psychology.* 2009;30:805-828.

34. Skiba RJ, Chung C-G, Trachok M, Baker TL, Sheya A, Hughes RL. Parsing Disciplinary Disproportionality. *American Educational Research Journal.* 2014.

35. Eagly A, Chaiken, S. *The Psychology of Attitudes.* Vol 20: Harcourt Brace Jovanovich; 1993.

36. Pettigrew TF, Tropp LR. A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology.* 2006;90:751-783.

37. Amodio DM. The social neuroscience of intergroup relations. *European Review of Social Psychology.* 2008;19(1):1-54.

38. Greenwald AG, Poehlman TA, Uhlmann EL, Banaji MR. Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology.* 2009;97(1):17.

39. Macrae CN, Bodenhausen GV. Social cognition: thinking categorically about others. *Annual Review of Psychology.* 2000;51(1):93--120.

40. Dovidio JF, Gaertner, SL. Aversive racism and selection decisions: 1989 and 1999. Psychological Science. 2000;11(4):315-319.

41. Gailliot MT, Peruche BM, Plant EA, Baumeister RF. Stereotypes and prejudice in the blood: Sucrose drinks reduce prejudice and stereotyping. *Journal of Experimental Social Psychology.* 2009;45:288-290.

42. Sabin JA, Greenwald AG. The Influence of Implicit Bias on Treatment Recommendations for 4 Common Pediatric Conditions: Pain, Urinary Tract Infection, Attention Deficit Hyperactivity Disorder, and Asthma. *American Journal of Public Health.* 2012;102(5):988.

43. Rooth D. Automatic associations and discrimination in hiring: Real world evidence. *Labour Economics.* 2010;17:523-534.

44. Agerström J, Rooth DO. The role of automatic obesity stereotypes in real hiring discrimination. *Journal of Applied Psychology.* 2011;96:790-805.

45. Girvan EJ, Deason G, Borgida E. The Generalizability of Gender Bias: Testing the Effects of Contextual, Explicit, and Implicit Theories of Sexism on Labor Arbitration Decisions. 2014. (manuscript under review).

46. Goff PA, Jackson MC, Di Leone BAL, Culotta CM, DiTomasso NA. The essence of innocence: Consequences of dehumanizing Black children. *Journal of Personality and Social Psychology.* 2014;106(4):526.

47. Van den Bergh L, Denessen E, Hornstra L, Voeten M, Holland RW. The Implicit Prejudiced Attitudes of Teachers. *American Educational Research Journal.* 2010;47(2):497-527.

48. Skiba RJ, Horner RH, Chung C, Rausch MK, May SL, Tobin T. Race is not neutral: A national investigation of African American and Latino disproportionality in school discipline. *School Psychology Review.* 2011;40:85-107.

49. Devine PG, Forscher PS, Austin AJ, Cox WTL. Long-term reduction in implicit race bias: A prejudice habit-breaking intervention. *Journal of Experimental Social Psychology.* 2012;48:1267-1278.

50. Girvan EJ. Wise Restraints?: How Learning the Law Affects Bias from Stereotypes in Legal Decision-Making. 2014. *Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2274314.*

51. Nosek BA, Banaji M, Greenwald AG. Harvesting implicit group attitudes and beliefs from a demonstration web site. *Group Dynamics: Theory, Research, and Practice.* 2002;6(1):101.

52. Raffaele Mendez LM, Knoff HM. Who gets suspended from school and why: A demographic analysis of schools and disciplinary infractions in a large school district. *Education & Treatment of Children.* 2003;26:30-51.

53. Fiske ST, Lin M, Neuberg SL. The continuum model: Ten years later. In: Chaiken S, Trope Y, eds. *Dual-process theories in social psychology.* New York: Guilford; 1999:231-254.

54. Fenning P, Rose J. Overrepresentation of African American students in exclusionary discipline: The role of school policy. *Urban Education.* 2007;42:536-559.

55. McIntosh K, Sadler C, Brown JA. Kindergarten reading skill level and change as risk factors for chronic problem behavior. *Journal of Positive Behavior Interventions.* 2012;14:17-28.

56. Gregory A, Skiba RJ, Noguera PA. The achievement gap and the discipline gap: Two sides of the same coin? *Educational Researcher.* 2010;39:59-68.

57. Sugai G, Horner RH. Defining and describing schoolwide positive behavior support. In: Sailor W, Dunlap G, Sugai G, Horner RH, eds. *Handbook of Positive Behavior Support.* New York: Springer; 2009:307-326.

58. Greflund S, McIntosh K, Mercer SH, May SL. Examining disproportionality in school discipline for Aboriginal students in schools implementing PBIS. *Canadian Journal of School Psychology.* 2014.

59. Tobin TJ, Vincent CG. Strategies for Preventing Disproportionate Exclusions of African American Students. *Preventing School Failure: Alternative Education for Children and Youth.* 2011;55(4):192–201.

60. Horner RH, Sugai G, Anderson CM. Examining the evidence base for School-wide Positive Behavior Support. *Focus on Exceptional Children.* 2010;42(8):1-14.

61. McIntosh K, Moniz CA, Craft CB, Golby R, Steinwand-Deschambeault T. Implementing School-wide Positive Behavioural Interventions and Supports to better meet the needs of Indigenous students. *Canadian Journal of School Psychology.* 2014;29.

62. Bohanon H, Fenning P, Carney KL, et al. Schoolwide application of positive behavior support in an urban high school: A case study. *Journal of Positive Behavior Interventions.* 2006;8:131-145.

63. Scott TM. A schoolwide example of positive behavioral support. *Journal of Positive Behavior Interventions.* 2001;3:88-94.

64. Vincent CG, Cartledge G, May SL, Tobin TJ. Do elementary schools that document reductions in overall office discipline referrals document reductions across all student races and ethnicities? *PBIS evaluation brief. Available at http://www.pbis.org/evaluation/evaluation_briefs/oct_09.aspx.* 2009, October.

65. Vincent CG, Tobin TJ. The relationship between implementation of School-Wide Positive Behavior Support (SWPBS) and disciplinary exclusion of students from various ethnic backgrounds with and without disabilities. *Journal of Emotional and Behavioral Disorders.* 2011;19:217-232.

66. Vincent CG, Randall C, Cartledge G, Tobin TJ, Swain-Bradway J. Toward a conceptual integration of cultural responsiveness and schoolwide positive behavior support. *Journal of Positive Behavior Interventions.* 2011;13:219-229.

67. Petersen T, Togstad T. Getting the offer: Sex discrimination in hiring. *Research in Social Stratification and Mobility.* 2006;24(3):239--257.

68. Gilbert TF. *Human competence: Engineering worthy performance.* New York: McGraw-Hill (Tribute Edition published by HRD Press and ISPI Publications, Washington, D.C., 1996); 1978.

69. Boneshefski MJ, Runge TJ. Addressing disproportionate discipline practices within a School-Wide Positive Behavioral Interventions and Supports framework: A practical guide for calculating and using disproportionality rates. *Journal of Positive Behavior Interventions.* 2014;16:149-158.

70. Babcock P. Detecting Hidden Bias. *HR Magazine.* Vol 51: Society for Human Resource Management; 2006.

71. Sturm S. Second Generation Employment Discrimination: A Structural Approach. *Columbia Law Review.* 2001;101(3):458-568.

72. McIntosh K, Barnes A, Eliason BM, Morris K. *Using discipline data within SWPBIS to identify and address disproportionality: A guide for school teams.* Eugene, OR: OSEP TA Center on Positive Behavioral Interventions and Supports;2014.

73. Mendoza SA, Gollwitzer PM, Amodio DM. Reducing the expression of implicit stereotypes: Reflexive control through implementation intentions. *Personality and Social Psychology Bulletin.* 2010;36:512-523.