Parsing Disciplinary Disproportionality: Contributions of Infraction, Student, and School Characteristics to Out-of-School Suspension and Expulsion

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In the context of a national conversation about exclusionary discipline, we conducted a multilevel examination of the relative contributions of infraction, student, and school characteristics to rates of and racial disparities in out-of-school suspension and expulsion. Type of infraction; race, gender, and to a certain extent socioeconomic status at the individual level; and, at the school level, mean school achievement, percentage Black enrollment, and principal perspectives all contributed to the probability of out-of-school suspension or expulsion. For racial disparities, however, school-level variables, including principal perspectives on discipline, appear to be among the strongest predictors. Such a pattern suggests that schools and districts looking to reduce racial and ethnic disparities in discipline would do well to focus on school- and classroom-based interventions.

Keywords: disciplinary disparities, disproportionality, expulsion, out-of-school suspension, school discipline

School exclusion—out-of-school suspension and expulsion—remains a substantial component of discipline in our nation’s schools. Some studies have suggested that almost a third of all students may experience an out-of-school suspension or expulsion at some point in their school career (Fabelo et al., 2011). The use of exclusionary discipline in schools continues
to increase, especially for African American students (Losen & Skiba, 2010). Particularly for out-of-school suspension, the use of the procedure is not restricted to serious or dangerous behavior, but rather appears to be most commonly used for more interactive day-to-day disruptions, especially defiance and noncompliance (Gregory & Weinstein, 2008; Skiba, Horner, Chung, Rausch, May, & Tobin, 2011).

The use of school exclusion as a disciplinary tool appears to carry with it substantial risk for both short- and long-term negative outcomes. At the school level, rates of out-of-school suspension and expulsion have consistently been found to be associated with perceptions of a more negative school climate (Bickel & Qualls, 1980; Steinberg, Allensworth, & Johnson, 2013; Wallace, Goodkind, Wallace, & Bachman, 2008), especially for students of color (Mattison & Aber, 2007). School exclusion through suspension and expulsion is associated with lower academic achievement at both the school level (Davis & Jordan, 1994; Rausch & Skiba, 2005) and the individual

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level (Arcia, 2006; Raffaele Mendez, Knoff, & Ferron, 2002; Rocque, 2010), as well as increased risk of negative behavior over time (Tobin, Sugai, & Colvin, 1996). In terms of longer term outcomes, suspension is a significant correlate of school dropout or failure to graduate on time at both the individual level (Raffaele Mendez, 2003; Suh & Suh, 2007) and the school level (Christle, Jolivette, & Nelson, 2005). Finally, exclusionary discipline appears to be associated with increased risk of juvenile justice involvement. Controlling for 83 demographic and school-level variables, Fabelo et al. (2011) reported that suspension and expulsion for a discretionary school violation nearly tripled a student’s likelihood of juvenile justice contact within the subsequent year.

Such outcomes have put out-of-school suspension and expulsion in the center of a national dialogue on school discipline. Professional associations such as the American Psychological Association (2008) and the American Academy of Pediatrics (2013) have issued reports on the ineffectiveness of and risks associated with disciplinary exclusion and have recommended the use of such measures only as a last resort. Major urban school districts such as the Los Angeles Unified School District (Jones, 2013) and Broward County, Florida (Alvarez, 2013), have revised their codes of conduct to focus on preventive alternatives to suspension and expulsion. At the federal level, the U.S. Departments of Justice and Education undertook a national initiative to support reform in school discipline practices that has resulted in new federal guidance aimed at reducing the use of suspension and expulsion and racial/ethnic disparities in rates of those measures and have recommended a variety of resources focused on improving school climate (U.S. Department of Education/Department of Justice 2014). Thus, there appears to be considerable momentum in policy discussion for considering disciplinary practices that could serve as alternatives to out-of-school suspension and expulsion and a concomitant need to better understand the factors that contribute to current levels of suspension and expulsion.

The path in any particular school disciplinary incident from student misbehavior to administrative consequences such as school exclusion represents a complex and multi-determined process (Morrison & Skiba, 2001). One would expect disproportionality in discipline to be likewise complex, the result of interactions between the type or frequency of behavior exhibited, characteristics of students, and characteristics of the school. Although multilevel studies have begun to examine the contribution of student and teacher characteristics (Bradshaw, Mitchell, O’Brennan, & Leaf, 2010; Gregory & Weinstein, 2008) or student and school characteristics (Peguero & Shekarkhar, 2011) to disciplinary outcomes, there has not yet been a study that has simultaneously considered the contributions by infraction type, student characteristics, and school characteristics to out-of-school suspension and expulsion. Such a study would be extremely important in the current national dialogue seeking alternatives to exclusionary discipline.
If the primary determinants of rates of suspension and expulsion, and disproportionality in those outcomes, are found in the severity of infraction or individual student characteristics, reducing rates of out-of-school discipline might well be predicated upon interventions addressing the behavioral characteristics of individual students. On the other hand, findings that alterable variables at the school level represent a significant contributor to rates of out-of-school suspension and expulsion would support recommendations and resources directed at changing the policies, practices, and procedures of schools with respect to discipline.

A reasonable assumption, and our operating hypothesis in this investigation, is that the use of the more severe disciplinary consequences of out-of-school suspension and expulsion would be a complex function of variables at all three levels. The purpose of this article, then, is to apply multilevel modeling in order to specify the contributions of infraction type, student demographic characteristics, and school-level variables to the probability of receiving an out-of-school suspension or expulsion at the administrative level. Our assumption is that the results of such an analysis will have significant implications for resource distribution decisions in the context of school discipline reform.

The Multiply Determined Nature of School Discipline

Previous literature indicates that characteristics of behavior, students, and schools all contribute to school discipline outcomes. The following review examines the literature regarding the contributions of each of these dimensions in turn.

Type of Disciplinary Infraction

At first glance, the use of out-of-school suspension appears to be scaled to the severity of student behavior. Both surveys of administrators (Costenbader & Markson, 1994, 1998; Imich, 1994) and analysis of actual office disciplinary referrals (Skiba, Peterson, & Williams, 1997) indicate that the offense most likely to result in out-of-school suspension is fighting or aggression. Recent research clearly indicates that the probability that suspension and expulsion will be applied appears to increase in proportion to the perceived seriousness of the offense. In a national sample of office disciplinary referrals and consequences, Skiba et al. (2011) reported that the odds of being suspended or expelled for safety threatening or criminal infractions such as use and possession of drugs or weapons or assault were much higher than for infractions such as disruption or noncompliance.

Yet since suspension is among the most widely used disciplinary techniques, and is used in response to a wide range of student behaviors (Skiba et al., 1997), the use of out-of-school suspension is not restricted to serious, safety-threatening behaviors, but is rather distributed across a wide range of
infractions. The majority of offenses for which students are suspended appear to be nonviolent, less disruptive offenses (Children’s Defense Fund, 1975; Raffaele Mendez & Knoff, 2003). The data consistently show that students are suspended most frequently for minor to moderate infractions such as disobedience and disrespect (Bain & MacPherson, 1990; Cooley, 1995; Raffaele Mendez & Knoff, 2003; Skiba et al., 1997), defiance (Gregory & Weinstein, 2008), attendance problems (Morgan-D’Atrio, Northrup, LaFleur, & Spera, 1996; Richart, Brooks, & Soler, 2003), failing to report to detention (Rosen, 1997), and general classroom disruption (Brooks, Schiraldi, & Ziedenberg, 1999; Dupper & Bosch, 1996; Skiba et al., 1997).

While the scaling of suspension in proportion to severity of behavior seems at odds with findings that out-of-school suspension also appears to be used somewhat indiscriminately, these findings are probably less paradoxical than they appear. It is clearly the case that safety-threatening or criminal behaviors lead more reliably to school exclusion. Yet it is also true that these most severe behaviors represent a small proportion of actual school behavior (Raffaele Mendez et al., 2002; Robers, Zhang, & Truman, 2012). The National Center for Education Statistics (NCES) surveyed a nationally representative sample of 1,234 school principals or disciplinarians to discover what they considered to be the most pervasive disciplinary problems in their schools. The most frequently cited problems at all school levels were less violent behaviors such as tardiness (40%) and absenteeism (25%). The most severe behaviors such as drug use and possession of a weapon were reported to occur only 9% and 2% of the time, respectively (Heaviside, Rowand, Williams, & Farris, 1998). Thus, although the odds for any single incident of minor or moderate misbehavior leading to a school suspension are lower, the sheer volume of more minor infractions, in concert with the more indiscriminate use of out-of-school suspension, ensures that a greater proportion of out-of-school suspension will occur in response to those more common infractions.

This analysis is supported by patterns in the use of school expulsion. Expulsion is applied in schools on a much less regular basis. While some studies have found suspension to be applied to one-third or more of office referrals, the use of expulsion is much more rare, perhaps occurring in as few as 1 in 1,000 incidents (Skiba & Rausch, 2006). As a result, expulsion appears to be used primarily in response to more seriously disruptive, violent, or criminal behavior (Heaviside et al., 1998).

Student Characteristics

The literature also suggests that particular student characteristics make students more likely to be disciplined. Some of these factors are behavioral or associated with personal characteristics that one might expect would
Contribution to Suspension and Expulsion

increase inappropriate behavior. Morgan-D’Atrio et al. (1996) reported that of students who were suspended, 43% at the high school level and 38% at the middle school level had clinically elevated scores on one or more student and teacher subscales of the Child Behavior Checklist (Quay, 1983). Eckenrode, Laird, and Doris (1993) reported that students with substantiated reports of abuse or neglect were significantly more likely to be referred for school discipline and somewhat more likely to be suspended, especially at the middle and high school level.

Yet there are a number of nonbehavioral, demographic characteristics that have also been found to be associated with increased likelihood of exclusionary discipline. Males have consistently been found to be suspended and expelled at higher rates than females (Costenbader & Markson, 1998; McFadden, Marsh, Price, & Hwang, 1992; Raffaele Mendez & Knoff, 2003; Skiba et al., 1997; Skiba, Michael, Nardo, & Peterson, 2002; Thornton & Trent, 1998; Wu, Pink, Crain, & Moles, 1982), representing 51% of the public school student population nationally but constituting 70% of out-of-school suspensions. In contrast, females comprise 49% of the student population but represent only 30% of suspensions (Petras, Masyn, Buckley, Ialongo, & Kellam, 2011). Males have been estimated as being disciplined at a rate between two (Raffaele Mendez & Knoff, 2003) and up to four times (Imich, 1994) higher than female students. It has been suggested that gender disproportionality could be accounted for by the fact that teachers may view boys as more defiant and disruptive than girls (Newcomb et al., 2002; Wentzel, 2002).

Poverty has also been found to be a consistent predictor of school discipline, with low socioeconomic status (SES) students receiving suspension and expulsion at a higher rate (Brantlinger, 1991; Nichols, 2004; Petras et al., 2011; Skiba et al., 1997; Wu et al., 1982). A wide range of sociodemographic variables, including absence of father or mother and quality of home resources, have been found to be predictors of the likelihood of suspension (Hinojosa, 2008). Even controlling for levels of student aggression, Petras et al. (2011) discovered that students who live in poverty were still more likely to be removed from school.

Finally, research has been highly consistent in documenting disproportionate rates of out-of-school suspension and expulsion for African American students (e.g., Costenbader & Markson, 1998; Gordon, Piana, & Kelecher, 2000; McFadden et al., 1992; Morrison & D’Incau, 1997; Petras et al., 2011; Raffaele Mendez et al., 2002; Skiba et al., 2002). African American students are overrepresented in a range of school disciplinary outcomes, including classroom referrals (Bradshaw et al., 2010; Rocque, 2010), out-of-school suspension (Eitle & Eitle, 2004; Gregory & Weinstein, 2008; Hinojosa, 2008), and zero tolerance–related expulsions (Tailor & Detch, 1998). Emerging research has also documented some evidence of disproportionality for other groups, including Latino students (Peguero & Shekarkhar, 2011), students.
with disabilities (Losen & Gillespie, 2012), and LGBT students (Himmelstein & Bruckner, 2011). There is emerging data that Latino students may be underrepresented in exclusionary discipline at the elementary school level but overrepresented at the secondary level (Losen & Gillespie, 2012; Skiba et al., 2011).

While the association in American society between race/ethnicity and socioeconomic status (Duncan, Brooks-Gunn, & Klebanov, 1994; McLoyd, 1998) might bring one to infer that findings of racial disproportionality are primarily a by-product of disproportionality associated with SES (e.g., higher rates of disruptive behavior among poor students of color), the actual relationship between race/ethnicity, socioeconomic status, and school discipline appears to be more complex. Multivariate analyses have consistently demonstrated that race remains a significant predictor of suspension and expulsion even after controlling for poverty (see e.g., Wallace et al., 2008; Wu et al., 1982). Nor has research supported the notion that higher rates of suspension and expulsion are due to higher rates of African American misbehavior. Analyzing one year of disciplinary data for urban middle schools, Skiba et al. (2002) found that White students were more often referred to the office for offenses that appear to be more objective—smoking, vandalism, leaving without permission, and obscene language—while African American students were referred more often for disrespect, excessive noise, threat, and loitering, which are behaviors with more subjective connotations. Bradshaw et al. (2010) reported that African American students had significantly greater odds of receiving teacher-reported office disciplinary referrals even after controlling for those same teachers’ ratings of classroom behavior.

School Contributions

School disciplinary events are often viewed as a linear function of student behavior in both research and practice. Kinsler (2013) postulated that the school disciplinary process can be described as a choice model in which principals create a set of disciplinary regulations at the beginning of each school year, and students make choices about whether to engage in disruptions that determine whether they are referred to the office for a disciplinary infraction. Likewise, Sheets (1996) found that school personnel appear to assume that inappropriate student behavior sets in motion a predictable and relatively invariant sequence of disciplinary reaction meant to address the problems that misbehavior causes. In a process that is seen as driven by student behavior, disciplinary outcomes such as suspension and expulsion are thus perceived as direct indicators of the extent of student disruption.

In reality, however, the data suggest that school suspension or expulsion is the end point of a complex process that cannot be described as a straight line leading from student misbehavior to an invariant consequence delivered by the disciplinary system (Morrison & Skiba, 2001). Teacher judgments that a behavior is too severe to be handled at the classroom level are influenced
by a host of factors: a student’s disciplinary history, the immediate context of the behavior, the teacher’s general tolerance level and skill in behavior management, and the resources available to the teacher for managing disruptive behavior (Gregory, Skiba, & Noguera, 2010; Vavrus & Cole, 2002). Such complexity led Morrison and her colleagues to describe school exclusion as a process rather than an event (Morrison et al., 2001). Both school and principal characteristics appear to play a significant role in that process and its outcomes.

There appears to be a high rate of variability in the use of disciplinary consequences by schools (Massachusetts Advocacy Center, 1986), and some portion of that variability appears to be due to contextual variables that go beyond student characteristics. In an extensive multivariate analysis of a national data set, Wu et al. (1982) found that student attitude and behavior make a significant contribution to a student’s probability of being suspended from school. Yet contextual variables such as school governance, teacher attitudes, and degree of administrative centralization were also highly significant in predicting one’s chances of being suspended from school. Indeed, in the overall regression equation, classroom and school characteristics were more predictive of an individual’s probability of being suspended than were student attitudes and behavior.

Attitudinal variations on the part of principals also appear to have an impact on the rate of suspension and expulsion in schools. As part of a larger report on out-of-school suspension practices, the Advancement Project/Civil Rights Project (2000) found wide variation in the disciplinary philosophies of school principals within the same district, and rates of suspension in these schools that seemed to reflect principal attitude. Mukuria (2002) contrasted schools with high and low rates of suspension in urban, predominantly African American communities in the state of Louisiana, and found substantial differences in the attitudes expressed by administrators in high- versus low-suspending schools. Principals in low-suspending schools were more willing to bring issues of context into their decisions about consequences, while principals in schools with high suspension rates reported that they strictly adhered to district disciplinary policy without attending to circumstances. Principals in low-suspending schools were also more likely to express a clear philosophy and vision (e.g., a strong commitment to African American education) that guided their disciplinary policy. In a comprehensive study of the relationship of principal attitudes and disciplinary outcomes, Skiba, Edl, and Rausch (2007), surveying 325 principals regarding their attitudes toward zero tolerance, suspension and expulsion, and violence prevention strategies, reported an association between principal attitude toward discipline and school disciplinary outcomes. Rates of out-of-school suspension were significantly lower and the use of preventive measures more frequent at schools whose principals believed that suspension and expulsion were unnecessary given a positive school climate.
The overall rate of poverty of the school district appears to play a role in both the rate of discipline and in racial disparities in suspension and expulsion, but not always in the expected direction. Absolute rates of suspension appear to be highest in poor urban districts (Losen & Skiba, 2010; Nicholson-Crotty, Birchmeier, & Valentine, 2009). Yet disparities between Black and White suspension rates appear to be as great or greater in more highly resourced suburban districts (Eitle & Eitle, 2004; Rausch & Skiba, 2006; Wallace et al., 2008).

Finally, the percentage of African American students enrolled in a particular school has been shown to be a predictor of more punitive and exclusionary discipline. The statistical relationship between Black enrollment and increased punishment has been well documented (Rocha & Hawes, 2009; Welch & Payne, 2010). In particular, schools with higher proportions of African American students appear to use more punitive and fewer supportive interventions for school discipline. In a nationally representative sample, Welch and Payne (2010) found that schools with higher Black enrollments were more likely to have higher rates of exclusionary discipline, court action, and zero tolerance policies, even after controlling for school levels of misbehavior and delinquency.

Summary and Purpose

Together, these results suggest that both rates of and disparities in out-of-school suspension and expulsion are determined by a complex interaction of behavioral, student, and school characteristics. The advent of multilevel modeling approaches has allowed a more sophisticated exploration of this range of variables, simultaneously examining student and teacher (Bradshaw et al., 2010; Gregory & Weinstein, 2008) or student and school contributions (Peguero & Shekarkhar, 2011). Yet there has not been to this point an investigation exploring characteristics of infractions, student demographics, and schools simultaneously. The purpose of this study was to use a hierarchical linear modeling approach to more precisely examine the contributions and interactions of behavior, student characteristics, and school-level variables to exclusionary discipline and racial disparities in discipline. In the context of an escalating national conversation that has begun to shift the focus to an exploration of alternatives to suspension and expulsion, the results of such an analysis may be highly important in determining where to put resources in school discipline reform efforts.

Methods

Data and Measures

Disciplinary Outcomes

School discipline records. The primary data source was an extant database containing records for all incidents of suspension and expulsion in
all public schools, including charter schools, in a Midwestern state, for the 2007–2008 school year. Since previous results for Latino students have been inconsistent, and there is a smaller Latino population in the state from which the data were drawn, we chose to focus only on the comparison of African American and White students in these analyses. The database included a total of 323,104 incidents of suspension and expulsion for 126,310 students in 1,720 schools. It is important to note that the sample represents not all students in the state, but rather those students who had received an in-school or out-of-school suspension or expulsion for some infraction. Student demographic information, including gender and race/ethnicity, was obtained from a second extant state database. School-level demographic data obtained from the state’s Department of Education were combined with school-level data on principal attitudes toward discipline generated from a survey conducted in 2008. The incident data were linked to the student data using the common student identifier present in both data sets; both of these sets of data were linked to the school database with the common school identifier present in all three data sets. In order to be included in the final data set, complete information at all three levels was required. The final data set used in the following analysis consisted of 730 schools, 43,320 students, and 104,445 incidents. All data collection procedures and analyses were submitted to and approved by the institutions’ Internal Review Board with respect to protection of human subjects.

Principal Perspectives on Discipline

Disciplinary Practices Survey (DPS). In order to assess principal perspectives on school discipline, we adapted the Disciplinary Practices Survey (Skiba, Edl, & Rausch, 2007), a survey instrument designed to provide data on a broad range of principal attitudes toward the process of school discipline. Items were generated based on a review of previous surveys of principals’ perceptions and practices related to school discipline: National Study of Delinquency Prevention in Schools (Gottfredson et al., 2000), Discipline in Secondary Schools (Green & Barnes, 1993), Violence and Discipline Problems in U.S. Public Schools (Heaviside et al., 1998), Suspension, a Wake-up Call (Henderson & Friedland, 1996), and Indicators of School Crime and Safety (Kaufman et al., 2001). In the current version, items were added to the survey concerning views on race and culture and the total number of items was reduced.

The final Disciplinary Practices Survey was comprised of 42 questions organized into seven content areas: (a) attitude toward discipline in general, (b) awareness and enforcement of disciplinary procedures, (c) beliefs concerning suspension/expulsion and zero tolerance, (d) beliefs about responsibility for handling students misbehaviors, (e) attitude toward differential
discipline of disadvantaged students or students with disabilities, (f) resources available for discipline, and (g) attitude toward and availability of prevention strategies as an alternative to exclusion. Principals were asked to rate their agreement with statements reflecting various attitudes about the purpose, process, and outcomes of school discipline. Thirty-one of the questions assessed principal opinion about one of these aspects of discipline, using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The other 11 items asked principals to estimate how frequently they used certain disciplinary or preventive strategies (peer mediation or in-school suspension) with response anchors ranging from 1 = never used to 5 = frequently used. Overall internal consistency reliability assessment of the scale yielded a Cronbach’s alpha of .70.

Two forms of the survey were developed: an online survey and a hard copy mailed to those who did not participate online. As recommended by Weisberg, Kronsnick, and Bowen (1989), each recipient of the hard copy survey received $5 along with the survey as an incentive for completion, and e-mail participants received the same amount after submitting a completed survey. Of the 1,875 surveys sent out, a total of 1,068 (N = 1,068) were completed, yielding a response rate of 57%, above the 50% minimum recommended in the literature (Weisberg et al., 1989). Data from the DPS were linked to the other data sources using the common school identifier.

A cluster analysis of the results from the DPS was conducted using the KMEANS procedure in SPSS, placing individuals in clusters based on their proximity to the group centroid. The analysis yielded a two-cluster solution representing two different perspectives on school discipline. Responding principals fell into two groups: one group more favorable to a preventive orientation toward school discipline and another representing attitudes more favorable to the use of school exclusion and zero tolerance as a disciplinary strategy.

Statistical Method

Multilevel Modeling

A multilevel analysis was conducted in order to parse the influence of behavioral, student, and school characteristics on disparities in the use of out-of-school suspension and expulsion. In this analysis the disciplinary outcome (out-of-school suspension and expulsion) was modeled using a multinomial logit hierarchical linear regression model. A hierarchical model was used because it provides unbiased estimates of regression coefficients when observations are not independent. A student may receive multiple disciplinary outcomes, and multiple students from the same school (discipline system) may receive disciplinary outcomes. The use of hierarchical linear modeling is thus more appropriate than ordinary least squares or logistic regression, since observations (disciplinary outcomes) are not independent.
but rather nested (Raudenbush & Byrk, 2002)—behavioral incidents are
nested within students, who are in turn nested within schools. The presence
of three possible disciplinary outcomes—in-school suspension, out-of-
school suspension, and expulsion—led us to choose a multinomial logistic
model. In multinomial models, a reference level for the dependent variable
must be defined, and regression coefficients indicate changes in odds rela-
tive to this reference level. In order to characterize the outcome variable,
increases in severity of disciplinary outcome, the reference level throughout
all analyses was in-school suspension. Thus, the models assesses the severity
of punishment at the office level; that is, the contribution of variables in the
model to the odds that a student, having been referred to the office for dis-
cipline, will receive the consequence of out-of-school suspension or expul-
sion, in comparison to an in-school suspension.

Description of Model Fitting

The HLM software version 7.00 was used to fit Model 1 and Model 2
(Raudenbush, Bryk, & Congdon, 2004). For Model 1, the HLM2 procedure
was used to fit a multinomial logit model, and for Model 2, the HLM3 pro-
cedure was used and the continuous covariates were centered using the
grand mean. For both models, the penalized quasilikelihood method
(PQL) was used to estimate the coefficients (Raudenbush et al., 2004).

Specification of the Model

A sequential logistic regression approach (Peng, So, Stage, & St. John,
2002) was used within the hierarchical linear model (HLM) analysis to model
the contribution of predictor variables, representing type of infraction, stu-
dent characteristics, and school characteristics, on the two levels of increased
severity of the disciplinary outcome (out-of-school suspension and expul-
sion): Model 1 consisted of a block of infraction type and student-level vari-
ables, while Model 2 included these two levels of variables while adding
a block of school-level variables. Sequential logistic modeling was also cho-

en because it provides one method for examination of the interaction
effects of potentially confounded variables (Peng et al., 2002).

The three levels of variables included across Model 1 and Model 2 were
as follows.

Type of infraction. Variables at this level included the type and fre-
quency of infraction leading to each incident of suspension/expulsion.
Seventeen original classifications present in the database were regrouped
into four categories: Use/Possession (USE_POS) (alcohol, drugs, deadly
weapons, handguns, rifles or shotguns, other firearms, tobacco), Fighting/
Battery (FIGHT) (fighting, battery), Moderate Infractions (MODERAT)
(intimidation, verbal aggression or profanity, destruction of property), and
Defiance/Disruption (defiance, attendance, other). The last variable represented the reference level for the analyses in this block of variables.

Student characteristics. Student-level variables included were gender (MALE), eligibility for free and reduced lunch (FRL), and race (BLACK). Each of these characteristics has two levels: The reference level for gender was female, for FRL the reference was paid lunch, and for race the reference level was White.

School characteristics. School-level variables included percentage of African American students enrolled in the school (PCTBLACK), average years of teacher experience at the school (TCHEXP), percentage of students in the school eligible for free or reduced lunch (PCTFRL), percentage of students passing math and English on the state accountability exam (PCTPASS), and principal perspective on school discipline (DPS). This last variable consisted of two categories (favorable toward prevention/favorable to use of exclusionary discipline) generated from the cluster analysis of the Disciplinary Practices Scale.

Description of Models

Models 1 and 2 consist of two linear equations at each level. One linear model characterizes the change in odds of out-of-school suspension relative to in-school suspension and the other the change in odds of expulsion relative to in-school suspension. Both Model 1 and Model 2 are the simplest versions of a hierarchical model, an intercept model. In the intercept model, the influence of different levels of characteristics on the change in odds is additive. A random coefficient was included in the student- and school-level equations to capture the dependence in observations clustered by student and school.

Model 1 consists of two sets of linear equations: a model of the influence of the characteristics of the behavioral incident and a model of the influence of student characteristics.

\[
\log \left( \frac{\phi_{2i}}{\phi_{1i}} \right) = \pi_{0i(2)} + \pi_{1i(2)} \times (USE_{POS_{it}}) + \pi_{2i(2)} \times (FIGHT_{it}) + \pi_{3i(2)} \times (MODERAT_{it})
\]

\[
\log \left( \frac{\phi_{3i}}{\phi_{2i}} \right) = \pi_{0i(3)} + \pi_{1i(3)} \times (USE_{POS_{it}}) + \pi_{2i(3)} \times (FIGHT_{it}) + \pi_{3i(3)} \times (MODERAT_{it})
\]

\[
\pi_{0i(2)} = \beta_{00(2)} + \beta_{01(2)} \times (MALE_{i}) + \beta_{02(2)} \times (FRL_{i}) + \beta_{03(2)} \times (BLACK_{i}) + r_{0i(2)}
\]

\[
\pi_{0i(3)} = \beta_{00(3)} + \beta_{01(3)} \times (MALE_{i}) + \beta_{02(3)} \times (FRL_{i}) + \beta_{03(3)} \times (BLACK_{i}) + r_{0i(3)}
\]
Model 2 consists of three sets of linear equations, the two levels modeled by Model 1 and a third set for the school-level characteristics:

\[ \log\left(\frac{\phi_{2ij}}{\phi_{4ij}}\right) = \pi_{0ij(2)} + \pi_{2ij(2)} * (USE_{POS_{ij}}) + \pi_{3ij(2)} * (FIGHT_{ij}) + \pi_{4ij(2)} * (MODERAT_{ij}) \]

\[ \log\left(\frac{\phi_{3ij}}{\phi_{4ij}}\right) = \pi_{0ij(3)} + \pi_{2ij(3)} * (USE_{POS_{ij}}) + \pi_{3ij(3)} * (FIGHT_{ij}) + \pi_{4ij(3)} * (MODERAT_{ij}) \]

\[ \pi_{0ij(2)} = \beta_{00j(2)} + \beta_{01j(2)} * (MALE_{ij}) + \beta_{02j(2)} * (FRL_{ij}) + \beta_{03j(2)} * (BLACK_{ij}) + r_{0ij(2)} \]

\[ \pi_{0ij(3)} = \beta_{00j(3)} + \beta_{01j(3)} * (MALE_{ij}) + \beta_{02j(3)} * (FRL_{ij}) + \beta_{03j(3)} * (BLACK_{ij}) + r_{0ij(3)} \]

\[ \beta_{00j(2)} = \gamma_{000(2)} + \gamma_{001(2)} (PCTBLACK_{j}) + \gamma_{002(2)} (TCHEXP_{j}) + \gamma_{003(2)} (PCTFRL_{j}) + \gamma_{004(2)} (PCTPASS_{j}) + \gamma_{005(2)} (DPS_{j}) + u_{00j(2)j} \]

\[ \beta_{00j(3)} = \gamma_{000(3)} + \gamma_{001(3)} (PCTBLACK_{j}) + \gamma_{002(3)} (TCHEXP_{j}) + \gamma_{003(3)} (PCTFRL_{j}) + \gamma_{004(3)} (PCTPASS_{j}) + \gamma_{005(3)} (DPS_{j}) + u_{00j(3)j} \]

**Results**

**Descriptive Data**

Tables 1, 2, and 3 provide descriptions respectively of the 104,445 incidents, 43,320 students, and 730 schools in the sample. Table 1 shows an overall increase in the severity of discipline administered with an increase in the severity of the offense. Defiance/disruption is the most frequently occurring, least serious type of infraction: The majority of students (60.3%) who participate in this type of infraction received in-school suspension or out-of-school suspension (OSS; 38.1%). While fighting/battery was a less frequently occurring infraction, the majority of students who participated in fighting/battery (71.6%) received out-of-school suspension, while only 1.7% were expelled for fighting or battery. The most serious infraction, use/possession, was also the least frequent and had the highest rate of expulsion (15.2%). The student characteristics for this sample (Table 2) indicate some disproportionality for students included in the suspension and expulsion report versus the state student population on all three demographic characteristics included at this level: Males represent 68.8% of the...
population of students subjected to in- or out-of-school suspension or expulsion in this state sample, as opposed to the state population (51.3% male). There was also overrepresentation by FRL status (53.4% of the current sample, 37.5% in the overall state population) and race (23.7% Black among those suspended or expelled, 12% in the overall state enrollment). Table 3 presents the mean of variables included in the block of school characteristics in Model 2. For the two clusters representing principal perspectives on the Disciplinary Practices Scale, a larger percentage of principals evidenced scores that led them to be included in the cluster favorable to exclusion than the favorable to prevention cluster.
Preliminary Tests of the Model

A preliminary analysis was conducted in order to determine if bivariate associations between school- and student-level characteristics could impact the interpretation of estimates obtained from fitting Model 1 and Model 2 (Raudenbush et al., 2004). There was a moderate correlation in this data set between percentage Black enrollment and percentage free or reduced lunch ($r = .53$) and between percentage Black enrollment and percentage passing math and English ($r = -.47$). At the student level, race was associated with free or reduced lunch status, with Black students being more likely to be eligible for FRL ($\Phi_c = .248$). A series of multinomial logit regression models were fit and no evidence of an influence of these bivariate associations on estimates of the influence of student or school characteristics was found. This finding is consistent with previous research that found an independent influence of SES and race on disproportionality (Skiba et al., 2002).

Results of HLM for Models 1 and 2

The estimates obtained from fitting Model 1 and Model 2 using the HLM software are presented in Table 4. In both models, random effects (variance components) were significant, indicating that the dependence between observations due to clustering by student (Model 1) and school (Model 2) was greater than 0. Results are described sequentially across each model: Behavioral incident and student characteristics variables in Model 1 are described prior to the entry of school characteristics in Model 2. After describing the contributions of school characteristics introduced in Model 2, changes in the odds of behavioral incident and student characteristic variables are described in the final section.2

---

**Table 3**

Descriptive Statistics for Data Used in Hierarchical Linear Model Analyses: Level 3 Variables

<table>
<thead>
<tr>
<th>Level 3: School</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of enrollment</td>
<td>608</td>
</tr>
<tr>
<td>Average years of teacher experience</td>
<td>15</td>
</tr>
<tr>
<td>Percentage African American enrollment</td>
<td>7.9</td>
</tr>
<tr>
<td>Percentage free/reduced lunch</td>
<td>38.7</td>
</tr>
<tr>
<td>Percentage passing state accountability test</td>
<td>65.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disciplinary Practices Survey</th>
<th>N</th>
<th>% of Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favorable to prevention</td>
<td>313</td>
<td>42.9</td>
</tr>
<tr>
<td>Favorable to school exclusion</td>
<td>417</td>
<td>57.1</td>
</tr>
</tbody>
</table>

---

2 Contributions to Suspension and Expulsion
### Table 4
Hierarchical Linear Model Multinomial Logit Regressions on Discipline Outcome<sup>a</sup>

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Out-of-School Suspension</td>
</tr>
<tr>
<td></td>
<td>Odds Ratio</td>
</tr>
<tr>
<td>Level 1: behavioral characteristics</td>
<td></td>
</tr>
<tr>
<td>Type of infractions</td>
<td></td>
</tr>
<tr>
<td>Use/possession</td>
<td>7.454</td>
</tr>
<tr>
<td>Fighting/battery</td>
<td>4.944</td>
</tr>
<tr>
<td>Moderate infractions</td>
<td>2.455</td>
</tr>
<tr>
<td>Level 2: student characteristics</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1.204</td>
</tr>
<tr>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td></td>
</tr>
<tr>
<td>Free or reduced lunch</td>
<td>1.051</td>
</tr>
<tr>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>1.248</td>
</tr>
<tr>
<td>White</td>
<td></td>
</tr>
<tr>
<td>Level 3: school characteristics</td>
<td></td>
</tr>
<tr>
<td>Percentage Black in enrollment</td>
<td>5.975</td>
</tr>
<tr>
<td>Average years of teacher experience</td>
<td>0.991</td>
</tr>
<tr>
<td>Percentage free or reduced lunch</td>
<td>0.405</td>
</tr>
<tr>
<td>Percentage passing math and English</td>
<td>0.076</td>
</tr>
<tr>
<td>Principal’s attitude</td>
<td></td>
</tr>
<tr>
<td>Favorable to school exclusion</td>
<td>1.376</td>
</tr>
<tr>
<td>Favorable to prevention</td>
<td></td>
</tr>
<tr>
<td>Random Effect</td>
<td></td>
</tr>
<tr>
<td>Variance Component</td>
<td></td>
</tr>
<tr>
<td>Level 2 effect</td>
<td>1.123</td>
</tr>
<tr>
<td>Level 3 effect</td>
<td>4.629</td>
</tr>
</tbody>
</table>

<sup>a</sup>Reference category is in-school suspension for outcome.

<sup>b</sup>Since these are the reference categories against which the category of interest is compared, there is no odds ratio reported.

*<i>p</i> < .10. **<i>p</i> < .05. ***<i>p</i> < .01.
Contributions to Suspension and Expulsion

Type of Infraction

As compared to defiance/disruption, more serious categories of infractions—use/possession, fighting/battery, and moderate infractions—increased the odds of receiving more severe levels of suspension and expulsion, indicating that the severity of the consequence increased with the seriousness of the offense and that this general tendency is independent of student characteristics (Model 1). As in previous research (see e.g., Skiba et al., 2011), the least common infraction, use/possession, showed the greatest increase in the odds of out-of-school suspension (OSS) relative to in-school suspension (OR = 7.454) and expulsion (OR = 37.246).

Student characteristics. In Model 1, race showed the largest increases in odds of OSS relative to in-school suspension, with Black students being more likely to receive OSS (OR = 1.248) than White students. Males were more likely to receive OSS (OR = 1.204) than females. In Model 1, including only behavioral and student characteristics, students eligible for FRL were significantly more likely to receive OSS (OR = 1.051), but significantly less likely to incur expulsion (OR = 0.830) relative to in-school suspension.

School Characteristics

In the sequential multinomial logistic regression used in this study, school characteristics were entered along with behavioral and student characteristics in Model 2. The single strongest predictor among school characteristics was the influence of percentage of Black enrollment on OSS: The greater the proportion of Black students in a school, the more likely a student was to receive OSS (OR = 5.975) relative to in-school suspension. Indeed, percentage of Black enrollment at a school was among the strongest predictor of OSS across all levels; the size of the contribution of Black enrollment was only slightly less than the contribution of fighting/battery to the odds of receiving OSS. As was the case with FRL at the student level, poverty proved an inconsistent predictor of school discipline; percentage of students at the school receiving free or reduced lunch was not significantly related to OSS, but the odds of an expulsion were higher at a school with a lower school rate of FRL. As school-level achievement increased, both OSS (OR = 0.076) and expulsions (OR = 0.000) were less likely relative to in-school suspension. Finally, principal perspective on discipline was predictive of disciplinary practices concerning the use of out-of-school suspension and expulsion. In schools in which principals expressed attitudes more favorable toward school exclusion, students were significantly more likely to receive out-of-school suspension (OR = 1.376) and expulsion (OR = 2.320) relative to in-school suspension.
Sequential Effects

Sequential effects—the influence of variables added later in the model on the contribution of variables already included in the model—were examined in order to assess interactions among the variables (Peng et al., 2002). The influence of school-level characteristics on the contribution of student-level characteristics is apparent in changes to student-level coefficients from Model 1 to Model 2. When school characteristics were added in Model 2, students eligible for FRL were more likely to receive both OSS (OR = 1.189) and expulsion (OR = 1.175). Among the most notable findings of the analysis was the impact on the contribution of student race to discipline when school-level characteristics were introduced. Black students were significantly more likely to receive an out-of-school versus an in-school suspension in Model 1 but not in Model 2. This finding suggests that racial disparities in the use of out-of-school suspension may be explainable by a range of school-level variables, including principal perspective on discipline. The pattern of odds was reversed for expulsion.

Discussion

The purpose of this study was to use a multilevel modeling approach to provide estimates of the relative contributions of behavioral, individual, and school-level characteristics to the odds of receiving more severe exclusionary consequences when disciplined: Our operating hypothesis was that the use of the more severe disciplinary consequences of out-of-school suspension and expulsion would be a complex function of variables at all three levels. For school discipline in general, this hypothesis was upheld, as type of infraction, student characteristics (e.g., race, gender, and SES), and school characteristics (e.g., Black enrollment rate and principal perspective), all made significant contributions to the likelihood of being suspended. Yet the analyses also suggested a somewhat different picture regarding racial disparities in discipline. While neither behavioral nor other individual characteristics fully accounted for the contribution of race to out-of-school suspension, school-level characteristics did reduce that relationship to non-significance. For racial disparities in suspension and expulsion, school-level characteristics appear to be more important predictors than behavioral or individual characteristics.

Type of Infraction

The relative strength of a range of infractions supports previous findings that the most reliable predictors of more serious outcomes in school discipline are more serious, less frequently occurring infractions. Consistent with previous studies (e.g., Skiba et al., 2011), the least severe behaviors of defiance and disruption resulted in the least serious outcomes, whereas
behaviors such as use and possession resulted in the most severe outcomes. There was a proportional and consistent increase in the likelihood of more severe consequences according to the severity of behavior; this relationship was even stronger for expulsion, where the use or possession of drugs or weapons led to dramatically increased odds of removal, perhaps because expulsion is mandatory in the case of firearms under the Gun-Free Schools Act (1994). Yet while these relationships are predictive of overall likelihood of discipline, they may not necessarily predict racial disparities in discipline as well. Race remained a significant predictor of out-of-school suspension regardless of the severity of behavior. In a national study of schools implementing PBIS, Skiba et al. (2011) reported that while the assumptions of graduated discipline—that consequences are scaled in proportion to the severity of behavior—held in general across a national sample of elementary and middle schools, African American and Latino students were far more likely to receive exclusionary discipline consequences for mild and moderate offenses.

Student Characteristics

These results replicate and extend previous findings concerning the importance of individual demographic characteristics—in particular race and gender—in predicting disciplinary outcomes. Previous studies indicate that African American students are overrepresented in a range of disciplinary outcomes including classroom referrals (Bradshaw et al., 2010; Rocque, 2010), out-of-school suspension (Eitle & Eitle, 2004; Gregory & Weinstein, 2008; Hinojosa, 2008), and zero tolerance–related expulsions (Tailor & Detch, 1998). In the current study, race proved a significant predictor of more severe disciplinary outcomes, even when holding a variety of other behavioral and demographic variables constant. Gender was also a significant predictor in the present study of increased likelihood of out-of-school suspension but not expulsion. Previous research suggests that males receive disciplinary action at disproportionate rates compared to females (Raffaele Mendez & Knoff, 2003; Skiba et al., 1997, 2002). In the current study, SES proved inconsistent in its effects, predicting out-of-school suspension positively, but changing in contribution and even sign across different models in predicting expulsion (see the following for fuller discussion of the role of poverty in contributing to disciplinary disparity).

School Characteristics

A number of school characteristics, including self-reported principal orientation toward school discipline, were found to be significant in predicting the probability of out-of-school suspension and expulsion. Consistent with previous findings (Advancement Project, 2000; Mukuria, 2002; Skiba, Edl, & Rausch, 2007), out-of-school suspension and expulsion were significantly
less likely in schools with a principal with a perspective favoring preventive alternatives to suspension and expulsion. The importance of principal leadership in creating systemic change appears to be especially critical when the focus of the change effort is race, culture, or equity. Young, Madsen, and Young (2010) reported that a number of the principals they interviewed failed to view equity initiatives as a priority and perceived themselves as lacking the knowledge, skills, or abilities to effectively address issues of inequity and cultural difference. In contrast, Theoharris and Haddix (2011) found that principals who raised achievement for marginalized groups addressed issues of race and inequity creatively and forcefully. Findings on the importance of principal perspective on school disciplinary outcome suggest the need for increased support and training for school administrators, such as the recent initiative by the AASA to support school superintendents in systemic reform around issues of school discipline (AASA, 2013).

As expected, achievement proved a protective factor for more severe consequences: Students at schools with higher average achievement were significantly less likely to be suspended and highly less likely to experience expulsion. These results suggest that just as higher academic achievement is a protective factor for individuals, a school’s ability to maintain high overall achievement is a protective factor for students attending that school. Student behavior and academic outcomes have consistently been found to be strongly related: Gregory et al. (2010) term the achievement gap and discipline gap two sides of the same coin. Thus, interventions that improve the quality of academic instruction and learning outcomes can have important outcomes in terms of improved student behavior and school climate (Scott, Nelson, & Liaupsin, 2001); at the same time, consistent findings of a negative relationship between school achievement and rates of exclusionary discipline (see also Davis & Jordan, 1994; Rausch & Skiba, 2005) suggest that schools that focus on the proactive development of a supportive school climate are likely to see academic benefits as well.

The effects of economic disadvantage are widely assumed to be a key predictor of rates of discipline and disproportionality, both in the literature (MacMillan & Reschly, 1998) and in the national dialogue (Chavez, 2014). Yet, these data join other research in suggesting that the effect of socioeconomic status may be less pronounced than commonly believed. In contrast to the inconsistent effects of individual poverty on the likelihood of suspension, when all three levels were included in the model, higher school rates of eligibility for free and reduced lunch at a school were not significantly related to the probability of out-of-school suspension, and higher school FRL rate predicted lower rates of expulsion. These patterns accord with previous findings regarding the inconsistency of the contribution of poverty to student behavior and disproportionality. Indicators of poverty have been found to be predictors of school discipline and school suspension (Nichols, 2004; Petras et al., 2011; Skiba et al., 1997; Wu et al., 1982). Yet
the association between individual and family poverty and student behavior has been found to be weak at best (Duncan et al., 1994; Letourneau, Duffett-Leger, Levac, Watson, & Young-Morris, 2011). Contrary to expectation, the contributions of indicators of poverty to racial disparities in discipline have been found to be nonsignificant, or insufficient to explain disproportionality in discipline (Wallace et al., 2008).

The most striking of the school-level results was the consistency with recent studies (e.g., Rocha & Hawes, 2009; Welch & Payne, 2010) in finding that school percentage of Black enrollment is a strong and robust predictor of school suspension. In this study, attending a school with a higher percentage of Black students was among the strongest predictors of OSS, behind only weapons possession and fighting/battery in importance. It is somewhat striking that attending a school with more Black students increases one’s risk of out-of-school suspension nearly as much as engaging in a fight or battery. It is even more startling to realize that this relationship holds even after controlling for student demographics or behavior. This is not simply a matter of higher rates of suspension in poor urban schools with higher concentrations of African American students. Simultaneous entry of a number of individual and school characteristics in the multivariate model means that in rich and poor schools alike, regardless of one’s gender, one’s school achievement level, or the severity of one’s behavior, simply attending a school with more Black students substantially increases one’s risk for receiving an out-of-school suspension.

As findings concerning the relationship between Black enrollment and use of more restrictive and punitive disciplinary measures continue to accumulate, even when controlling for other possible explanations, it becomes increasingly difficult to avoid consideration of racial stereotypes (e.g., Ferguson, 2001) or implicit bias (Devine, Forscher, Austin, & Cox, 2012) as a contributor to disparities in discipline. Research continues to show that racial stereotypes and implicit bias remain widespread in society in general (Cunningham, Nezlek, & Banaji, 2004) and in schools in particular (Ferguson, 2001; Howard, 2008). The assumption that Black students from more disadvantaged backgrounds are at greater behavioral risk and will hence require tighter controls and supervision may lead to an a priori inclination to impose more restrictive and punitive measures as Black enrollment increases, regardless of the actual individual or behavioral characteristics of the school’s Black students. The possible influence of implicit bias in school discipline, currently under-researched and under-theorized, is thus a key area for future research. In particular, promising early results suggest that it may be possible to identify and remediate sources of implicit bias: In a study conducted within a college course, Devine et al. (2012) reported that a 12-week instructional intervention that taught participants strategies for prejudice reduction resulted in a significant reduction among participants in implicit bias.
Findings from this study are consistent with numerous previous investigations in identifying race to be among the strongest predictors of out-of-school suspension and expulsion. One of the key advantages to any multivariate approach is the ability to draw conclusions about a variable’s unique variance, and the changes in that variance, as other variables are entered into the equation. Thus, the continuing significance of race in Model 1 in predicting higher levels of out-of-school suspension cannot be explained by the severity of infraction or student characteristics—it is rather the unique contribution of race in and of itself. When, however, school characteristics, including percentage of Black enrollment and principal attitudes toward school discipline, are entered in Model 2, race becomes nonsignificant in predicting OSS. In general, these analyses supported the general hypothesis that OSS and expulsion are determined by a complex combination of type of infraction, student demographics, and school-level variables. When it comes to the contribution of race to out-of-school suspension, however, these results indicate that systemic school-level variables may be more important in determining the overrepresentation of Black students in discipline than are any behavioral or student characteristics. Together with results indicating a weak or counterintuitive contribution of individual or school rates of poverty to disciplinary disparity, these results suggest that policy or practice interventions addressing disproportionality in discipline will be more likely to be efficacious to the extent that they target alterable variables at the school level, rather than focusing on student or family demography.

Relationships between race, type of infraction, and odds of being disciplined appear to be somewhat different, and certainly more complex, in predicting expulsion. In Model 1, without considering systemic variables, race is not a significant factor in determining who will be expelled. Similarly, the percentage of Black students in the school, a highly significant predictor for out-of-school suspension, failed to enter the equation for expulsion. Garibaldi, Blanchard, and Brooks (1996) have argued that inadequate definition in the school discipline process allows greater room for individual bias to emerge. This observation is buttressed by consistent findings that disparities in out-of-school suspension are greatest in those behavioral categories (e.g., defiance, disrespect) that allow more room for subjective definition (Gregory & Weinstein, 2008; Skiba et al., 2002). In the current data set, as in previous research, out-of-school suspension was applied for a wide variety of offenses, including infractions that are likely more subjective and less well defined. It may be that the more objective nature of more serious offenses such as carrying weapons, as well as state and federal requirements for expulsion for certain offenses, may reduce the opportunity for subjective judgments regarding expulsion, thereby decreasing the opportunity for decisions to be influenced by non-behavioral characteristics. Yet, the race of the individual student reemerges as a significant factor in
determining the odds of expulsion once systemic factors are reintroduced into the equation in Model 3. These results are consistent with previous findings suggesting that racial disproportionality remains a problem for zero tolerance policies, despite arguments that zero tolerance will reduce disparities through increased consistency in enforcement (see e.g., Tailor & Detch, 1998). Thus, although out-of-school suspension and expulsion are often linked together in investigations of racial disparity in exclusionary discipline, differences in both governing policies and the way in which the two measures are used in practice suggest that it may be more fruitful to examine racial disparities in out-of-school suspension and expulsion independently. A particular focus for policy and practice may be the contribution of ill-defined infraction categories to disproportionality in disciplinary outcomes; the Los Angeles Unified School District, for example, recently removed the subjective category willful defiance from the list of suspendable offenses in that district (Jones, 2013).

Limitations

It is important to note that these analyses refer to only one portion of the disciplinary decision-making process. Drawn from an extant database containing all incidents of in- and out-of-school suspension and expulsion for an entire state, the results are limited to administrative decisions. Previous research (Gregory et al., 2010; Skiba et al., 2011) has indicated that racial disparities in suspension and expulsion begin at the classroom level with office disciplinary referral. These data thus allow no statements about all the sources of variance that may enter into the disciplinary process prior to the administrative disposition. In addition, the use of an extant statewide disciplinary database, without more local measures such as student perceptions of school climate and the degree to which supports are available to teachers, does not offer an opportunity to understand micro-level processes in classrooms and schools that clearly shape disciplinary decisions and outcomes on a day-to-day basis. Clearly, more on-the-ground analyses, potentially involving a mixed-methods approach, are critical in gaining a richer understanding of why and how the variables that emerged in this analysis create and maintain inequity in school discipline.

The use of extant disciplinary data creates measurement questions, due to the numerous sources of variance that each disciplinary incident represents (Morrison, Peterson, O’Farrell, & Redding, 2004). Specifically, the end result—the decision to suspend or expel a student—is influenced at various points by variations in instructional effectiveness (Scott, Nelson, & Liaupsin, 2001), teachers’ classroom management abilities (Blankemeyer, Flannery, & Vazsonyi, 2002; Reinke & Herman, 2002), and tolerance levels for student activity and learning styles (Gerber, 1988; Wright & Dusek, 1998), all of which affect teachers’ rates of office referral. Again, it must be made clear that these data speak only to the seriousness of the consequence

Contributions to Suspension and Expulsion
applied to students who have reached the point of suspension or expulsion. Further analyses exploring the entirety of the disciplinary process, including infractions, teacher tolerance and classroom management, principal perspectives, and school and district policy, will be invaluable in gaining a richer understanding of school discipline outcomes.

Conclusions

The range of short- and long-term negative outcomes documented for exclusionary discipline has motivated an increasingly visible national dialogue (Fabelo et al., 2011; USDOE/DOJ, 2014) on the use of such strategies. In that context, a multilevel exploration of the factors contributing to the likelihood of out-of-school suspension and expulsion are important in providing a guide to the most promising avenues for policy and practice interventions. In undertaking this research, our working hypothesis was that decisions to apply out-of-school suspension or expulsion are determined by a complex interaction of infraction, student, and school-level variables. With respect to the overall probability of OSS and expulsion, that hypothesis was supported: Severity of infraction; race, gender, and to a certain extent SES at the individual level; percentage Black enrollment; school achievement level; and principal perspectives on discipline all made a contribution to the probability of out-of-school suspension or expulsion. Equally important, these data continue to raise serious concerns about the extent to which race predicts exclusionary discipline, and especially the factors that contribute to that disproportionality. Racial disparities in out-of-school suspension are ubiquitous and more likely to occur wherever there are more Black students, regardless of seriousness of infraction. The single most important finding from this analysis may well be that systemic, school-level variables appear to contribute to disproportionality in out-of-school suspension far more than either type of infraction or individual demographics. Such a finding strongly suggests that those wishing to have a positive effect on reducing or eliminating racial disparities in discipline would be well advised to seek interventions that focus on school policies and practices—principal leadership, achievement orientation, and the possible contributions of implicit bias—rather than on the characteristics of students or their behaviors.

Notes

The authors gratefully acknowledge the support of the William T. Grant Foundation for this research through their Major Grants Program.

^Of the 730 schools in the final sample, 399 were classified as elementary schools, 123 as middle schools, 125 as high schools, and 83 as other, such as less common grade configurations such as K–8 or 6–12.

^Reference categories, against which the categories of the variables of interest are compared, are noted in Table 2. Note that for bicategory variables (e.g., Black/White), the odds ratio for the reference category is simply the inverse of the odds ratio presented.
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Contributions to Suspension and Expulsion


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Skiba et al.


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