

Where Should We Intervene? Contributions of Behavior, Student, and
School Characteristics to Suspension and Expulsion

Russell J. Skiba

Megan Trachok

Choong-Geun Chung

Timberly Baker

Adam Sheya

Robin Hughes

Indiana University

Running Head: CONTRIBUTIONS TO SUSPENSION AND EXPULSION

Abstract

It has been widely documented that the characteristics of behavior, students, and schools all make a contribution to school discipline outcomes. The purpose of this study is to report on a multilevel examination of variables at these three levels to identify the relative contributions of type of behavior, student demographic variables, and school characteristics to rates of and racial disparities in out-of-school suspension and expulsion. Results indicated that variables at all three levels made a contribution to the odds of being suspended or expelled. Type of behavior and previous incidents at the behavioral level; race, gender and to a certain extent SES at the individual level; and percent Black enrollment, school achievement levels, and principal perspectives on discipline at the school level all made a contribution to the probability of out-of-school suspension or expulsion. For racial disparities in discipline, however, school level variables, including principal perspective on discipline, appear to be stronger predictors of disproportionality in suspension and expulsion than either behavioral or individual characteristics. These results indicate that school suspension and expulsion are not simply an inevitable result of student misbehavior, but are rather determined by a complex set of factors, including irrelevant factors such as race, and the school principal's belief in the necessity of suspension and expulsion. For racial disparities in particular, these results suggest that a focus, in policy and practice, on changing characteristics of the way schools carry out discipline may be the course most likely to reduce inequity in school suspension and expulsion.

Where Should We Intervene? Contributions of Behavior, Student, and School Characteristics to Suspension and Expulsion

Recent national reports have increasingly documented issues involving the use of out-of-school suspension and expulsion as disciplinary responses (Council of State Governments, 2011; USDOE Office for Civil Rights, 2012), while the overrepresentation of African American students in school discipline outcomes continues to be sizeable and pervasive across school districts and states, and appears to be increasing over time (Losen & Skiba, 2010). These findings have motivated the U.S. Departments of Justice and Education to announce a national initiative to support reform in school discipline practices (St. George, 2011).

The path from student misbehavior to administrative consequences is complex, determined by a number of factors (Morrison & Skiba, 2001). One would expect the racial/ethnic gap in school discipline to be similarly complex, an interaction of the type or frequency of behavior exhibited, characteristics of students, and characteristics of the school. Although some studies have begun to examine discipline across multiple levels (see Bradshaw Bradshaw, Mitchell, O'Brennan, and Leaf, 2010; Peguero & Shkarkhar, 2011), there has not yet been a study that has simultaneously considered the contribution of behavioral, student, and school characteristics to school discipline outcomes. The purpose of this research was to examine variables at these three levels simultaneously, in order to identify relative contributions to out-of-school suspension and expulsion, and racial/ethnic disparities in school exclusion. We believe that this information is potentially very important in determining how to best intervene to reduce such disparities and improve school discipline.

A review of previous literature shows that characteristics of behavior, students, and schools all make a contribution to school discipline outcomes.

Behavioral characteristics

At first glance, the use of out-of-school suspension appears to be scaled to the severity of student behavior. It is not surprising that, as students engage in more serious behavior, they are more likely to be suspended (Skiba, Horner, Chung, Rausch, Tobin & May, 2011). On the other hand, it is important to note that these most serious behaviors, such as weapons-carrying or drug possession, occur relatively infrequently, and account for less than 5% of the behavioral incidents in America's schools (Heaviside, Rowand, Williams, & Farris, 1998; Raffaele Mendez, et al., 2002; Robers, Zhang, & Truman, 2012). .

It is also important to note that suspension is among the most widely used disciplinary techniques for a wide range of student behaviors; its use is not by any means restricted to serious, safety threatening behaviors (Imich, 1994; Skiba et al., 1997). Suspension practices can vary by school district and by buildings within the same school district (Bacon, 1999). In fact, students are suspended most frequently for minor to moderate infractions such as disobedience and disrespect, defiance, attendance problems, and general classroom disruption (Brooks et al., 1999; Gregory & Weinstein, 2008; Rosen, 1997; Skiba, Peterson, & Williams, 1997).

In summary, more serious, safety-threatening behaviors are more likely to result in suspension and expulsion. Yet these behaviors represent a small proportion of actual student misbehavior. The tendency for suspension to be used indiscriminately for a wide range of behavior, especially minor misbehavior, means that the vast majority of school suspensions will occur in response to minor and moderate misbehavior that do not threaten the safety of the school.

Student characteristics

The literature also suggests that particular student characteristics make students more likely to be disciplined. For example, males are suspended and expelled at a higher rate than females (e.g., Costenbader & Markson, 1998; McFadden, et al., 1992; Raffaele Mendez et al., 2002; Skiba et al., 2002; Skiba et al., 1997; Thornton & Trent, 1998; Wu et al., 1982). Boys have been found to be over four times as likely as girls to be disciplined (Imich, 1994; Gregory, 1996) and comprise over three quarters of all disciplinary referrals (McFadden et al., 1992).

Poverty has also been found to be a consistent predictor of school discipline, with students of low socioeconomic status (SES) receiving suspension and expulsion at a higher rate (Brantlinger, 1991; Christle, Nelson, & Jolivette, 2004; Nichols, 2004; Petras et al., 2011; Raffaele Mendez, et al., 2002; Skiba et al., 1997; Wu et al., 1982). A wide range of variables associated with SES, including father or mother absence and quality of home resources, have been found to be predictors of the likelihood of suspension (Hinojosa, 2008). Even when controlling for aggressive student behaviors, students who live in poverty were still more likely to be removed from school (Petras et al., 2011).

Finally, race has been consistently documented as a predictor for school discipline (e.g., Costenbader, & Markson, 1998; Gordon, Piana, & Keleher, 2000; McFadden, et al., 1992; Morrison, & D'Incau, 1997; Petras et al., 2011; Raffaele Mendez, et al., 2002; Skiba, Michael, Nardo & Peterson, 2002). African American students are overrepresented in a range of school disciplinary outcomes including classroom referrals to the office (Bradshaw et al., 2010; Rocque, 2010), out-of-school suspension (Gregory & Weinstein, 2008; Hinojosa, 2008; Eitle & Eitle, 2004), and zero-tolerance related expulsions (Tailor & Detch, 1998).

The association in American society between race/ethnicity and socioeconomic status (Duncan, Brooks-Gunn, & Klebanov, 1994; McLoyd, 1998) might lend itself to the idea that disproportionality due to race is primarily a by-product of disproportionality associated with poverty. Yet the relationship between race/ethnicity and socioeconomic status is not straightforward. Complex statistical analyses have consistently shown 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). Further, higher rates of suspension and expulsion are not due higher rates of African American misbehavior. Skiba, Michael, Nardo and Peterson (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 more subjective behaviors. 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. Together these findings argue that there are important factors other than poverty or different rates of behavior that drive consistent findings of racial disparity in school discipline.

School contributions

Finally, sophisticated statistical analyses have shown that school characteristics also play an important role in the likelihood that a student will be suspended or expelled. Teachers' attitudes and tolerance level, as well as their skill in managing their classroom, all influence teacher rates of office disciplinary referral (Gregory & Weinstein, 2008; Skiba et al., 2011; Vavrus & Cole, 2002). Disproportionality in discipline also begins at the classroom level. Gregory and Weinstein found that defiance was among the most common reasons for office

referral among African American, and that such referrals showed a high level of inconsistency across classrooms (Gregory & Weinstein, 2008).

Decisions and beliefs at the administrative level also predict whether a student will receive a suspension or expulsion. Different school rates of school suspension and expulsion seem to be due in part to differences in principal attitudes toward discipline (Advancement Project/Civil Rights Project, 2000; Fenning & Rose, 2007; Mukuria, 2002). African American students are more likely than White students to receive suspension and expulsion when they engage in minor infractions, and more likely to be suspended out-of-school for serious infractions such as weapons offenses than white students committing a similar offense (Skiba et al., 2011 , Nicholson-Crotty, Birchmeier, and Valentine, 2009).

Positive or negative school climate is another contributor to rates of racial and ethnic disparities in discipline. One study found that Black students are more likely to report personal experiences of racism and unfairness in schools with higher rates of detention and suspension (Mattison and Aber, 2007). Others have found that schools expressing less warmth/support and having lower expectations have higher rates of suspension, and a larger Black-White suspension gap (Gregory, Cornell, and Fan, 2011). Thus, school climate can serve either as a protective factor reducing the likelihood of suspension, or a contributing factor that increases racial disparities in discipline.

Percentage of African American students enrolled in a particular school has been shown to be a predictor of more punitive and exclusionary discipline (Rocha & Hawes, 2009; Welch & Payne, 2010). In a nationally representative sample, Welch & Payne (2010) found that schools with a higher Black enrollment 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.

The level 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 et al., 2009). Yet the gap between black and white suspension rates appears to be as great or greater in richer suburban districts (Eitle & Eitle, 2004; Rausch & Skiba, 2006; Wallace et al., 2008).

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 statistical approaches that allow for modeling at multiple levels 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 & Shkarkhar, 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 multi-level modeling approach to explore the contributions and interactions of behavior, student characteristics, and school level variables to exclusionary discipline and racial disparities in discipline. The results of such an analysis could be extremely important in deciding where to put limited resources for intervention.

Method

Data Base and Measures

School discipline data. Discipline data were drawn from an extant data base containing records of all incidents of suspension and expulsion in all public schools in a Midwestern state for a single year. The data reported by schools to the state was originally organized by disciplinary incident within student in the 2007-2008 school year. The database included a total of 104,445 in- and out-of-school suspensions, and school expulsions. These incidents represented a total of 43,320 students suspended or expelled at 365 schools.

Disciplinary Practices Survey

To measure principal attitudes towards suspension and expulsion, we administered a survey, The Disciplinary Practices Survey (DPS) to all school principals in the state. The DPS is 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 (Gottfredson, Gottfredson, Czeh, Cantor, & Hantman, 2000; Greene & Barnes, 1993; Heaviside et al., 1998; Henderson & Friedland, 1996; Kaufman et al., 2001). Principals were asked to rate their agreement with statements reflecting various attitudes about the purpose, process and outcomes of school discipline; they also rated the usage of a number of preventive disciplinary strategies (e.g., bullying prevention, conflict resolution, metal detectors) in their school.

A cluster analysis of the results yielded two clusters representing two different perspectives on school discipline; responding principals fell into one group representing a more preventive orientation, and another representing attitudes more favorable to the use of school exclusion and zero tolerance as a disciplinary strategy.

Data Analysis¹

We used hierarchical linear modeling (HLM) (Raudenbush, Bryk, & Congdon, 2004) to examine the relative contribution of incidents, student characteristics, and school variables to the severity of school punishment. The model predicted the probability of two possible disciplinary outcomes, out-of-school suspension and expulsion, in comparison to the likelihood of in-school suspension. Predictor variables were contained within three levels: incident level (behavioral characteristics), student level (individual characteristics), and school level (school characteristics). Two models were tested; Model 1 contained incident and student level variables, while Model 2 included those variables plus all level 3 (school level) variables.

Incident Level Variables

Level 1 (Incident) variables included the type and frequency of infraction leading to each incident of suspension/expulsion. Seventeen original classifications present in the database were regrouped into four categories: Use/Possession, Fighting/Battery, Moderate Infractions, and Defiance/Disruption.

Student Level Variables

Level 2 (Student) included student characteristics: Gender, eligibility for free and reduced lunch (FRL: Eligibility for the National School Lunch Program, based on family income, and race (Black or White).

School Level Variables

Level 3 (School) included characteristics at the school level: proportion of African American students enrolled in the school, average years of teacher experience, percentage of students in the school eligible for free or reduced lunch, percentage of students passing math and

¹ In the interest of clarity, technical details of the HLM modeling were minimized in this version of the paper. A fuller description of analytical techniques may be obtained from the first author.

English on the state accountability exam, and principal perspective on school discipline. This last variable was generated from the cluster analysis of the DPS (see above).

Results

Descriptive Data

Tables 1a, 1b and 1c present descriptive statistics for the variables included in the analysis. Level 1 (Incident) indicates an apparent increase in the severity of discipline administered in proportion to the severity of the offense. While Defiance/Disruption/Other is the most frequently-occurring infraction, students who participated in Fighting/Battery appear to be more likely to receive out-of-school suspension, while Use/Possession, the least common infraction, appears to be the infraction most often associated with expulsion.

Level 2 (Student) indicates the particular student demographic characteristics included in this study. Of all the students, 68.6% were male. Slightly more than half of the students received free or reduced lunch, and 76.3% were White students in this analysis.

In terms of Level 3 (School) variables, the mean percentage of Black students enrolled in the schools was 7.9%. The average number of years of teacher experience in these schools was 15 years. The mean percentage of free or reduced lunch was 38.7% and percentage of students passing math and English in ISTEP testing is 65.3%. Among the principals surveyed, 57.1% of responding principals expressed beliefs that placed them in a cluster supporting the use of suspension and expulsion, while 42.9% of respondents fell into a cluster indicating support of preventive alternatives.

Results of Analyses

As noted, a hierarchical linear modeling was used in order to identify incident, individual, and school-level influences on severity of school punishments. Results, presented in Table 2 in

the form of odds ratios, will be described across the three levels of analysis. Note that odds ratios greater than 1.0 indicate a variable that increases the odds of receiving an out-of-school suspension and expulsion compared to in-school suspension, while odds ratios less than 1.0 represent a *decrease* in the odds of OSS or expulsion relative to in-school suspension.

Incident. All three types of infractions entered in Level 1 (Incident)—Use/Possession, Fighting/Battery, and Moderate Infractions--increased the odds of receiving more severe levels of suspension and expulsion as compared to Defiance/Disruption/Other, suggesting that the probability of receiving more severe consequences increased with the seriousness of the offense. As in previous research, the least common infraction, Use/Possession, was the type of behavior most likely to lead to out-of-school suspension (OSS) and expulsion.

Student characteristics. Among Level 2 (Student) variables, race was the strongest predictor of out of school suspension. Black students were significantly more likely to receive OSS than White students, and males were more likely to receive OSS than females. Students eligible for free or reduced lunch were slightly more likely to receive out-of-school suspension, but less likely to incur expulsion.

School characteristics. The addition of school-level variables in Model 2 (see columns 3-4, Table 2) resulted in a better fit of the model (e.g., a more comprehensive level of explanation). The greater the proportion of Black students in a school, the more likely a student was to receive OSS. Indeed, proportion of black enrollment was among the strongest predictors of OSS, behind only Use/Possession and Fighting/Assault. As was the case at the individual level, poverty proved an inconsistent predictor of school discipline; percent 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. Rates of both suspension and

expulsions were negatively related to achievement: the odds of both OSS and expulsion were significantly lower the higher the percentage of students passing the state accountability test. Finally, principal perspective on discipline was predictive of disciplinary practices concerning expulsion: In schools in which principals were more oriented towards prevention efforts, students were significantly less likely to receive expulsion.

Perhaps the most important finding of these analyses was the impact of the contribution of student race to discipline. Black students were significantly more likely to receive an out-of-school vs. an in-school suspension regardless of the type of infraction or poverty status. When school level variables, including percent of Black enrollment, school achievement, and principal perspectives on discipline were introduced into the equation, however, the contribution of individual student race to the likelihood of out-of-school suspension was reduced to non-significance. This is a key finding, demonstrating that racial disparities in out-of-school suspension are determined, not so much by student behavior or poverty status as by a range of school-level variables, including principal perspective on discipline.

Discussion

The purpose of this study was to use a complex statistical model to better understand the relative contributions of behavioral, individual, and school level characteristics to the likelihood of receiving a suspension or expulsion. Our hypothesis was that the use of suspension and expulsion would be a complex function of variables at all three levels. For suspension this hypothesis was upheld, as type of behavior, race, gender, SES, and school characteristics such as 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 seem to account for racial disparities in OSS. For racial disparities in suspension, system level characteristics appear to be more important predictors than behavioral or individual student characteristics. Together, these results have important implications for policy and practice, suggesting that the choice of out-of-school suspension and expulsion is based, not simply on behavior or student characteristics, but also upon school characteristics, such as the perspective of the principal. Further, racial disparities in out-of-school suspension appear to be *more* determined by school characteristics than behavioral or individual characteristics, suggesting that those interested in reducing such disparities would do well to focus on changing school responses to student behavior.

Behavioral Characteristics

The findings of this study are consistent with previous research in discovering that the most reliable predictors of more serious outcomes in school discipline are more serious, less frequently occurring infractions. In general, more serious behavior leads to more serious consequences. This relationship was even stronger for expulsion, where the use or possession of drugs or weapons led to drastically increased odds of expulsion, 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 do not necessarily predict racial disparities in discipline. Race remained a significant predictor of out-of-school suspension regardless of the severity of behavior. These results are consistent with previous research that has found that African American and Latino students are far more likely to receive a suspension or expulsion for mild and moderate offenses (Skiba et al., 2011).

Individual Characteristics

As in previous studies, race proved to be 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 of increased likelihood of out-of-school suspension, but not expulsion. Although SES has been found to be a predictor of school discipline in general (Brantlinger, 1991; Skiba et al., 1997; Wu et al., 1982), in the current study, SES proved inconsistent in its effects, predicting out-of school suspension positively, but changing dramatically in its contribution to predicting expulsion across different models.

School Characteristics

Finally, even controlling for behavioral and student characteristics, school characteristics made a contribution to the likelihood of more severe consequences. 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. As expected, 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. It is somewhat surprising that when controlling for all other variables, higher school rates of eligibility for free and reduced lunch at a school predicted lower rates of expulsion. Although the specific reasons for this unexpected finding are somewhat unclear, in general they support previous findings that poverty is a much less reliable and consistent predictor of school outcomes than is generally believed (Skiba et al., 2005).

The results of the current analyses were consistent with recent studies that have found that school percentage of Black enrollment is a strong and consistent predictor of school suspension (Rocha & Hawes, 2009; Welch & Payne, 2010). In the current study, attending a school with a higher percentage of Black students is among the strongest predictors of OSS, behind only use/possession 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 possessing or using drugs or weapons. It is even more startling to realize that this relationship holds *even after* controlling for student demographics or behavior. In rich and poor schools alike, regardless of the severity of one's behavior, one's gender, or one's school achievement level, simply attending a school with more Black students greatly increases one's risk for receiving an out-of-school suspension.

Race and Exclusionary Discipline

This study was consistent with numerous previous investigations in finding race to be among the strongest predictors of out-of-school suspension. Regardless of the severity of behavior or individual characteristics such as poverty, race remained a significant predictor of out-of-school suspension. In contrast, school characteristics, including percent of black enrollment and principal attitudes towards school discipline, accounted for racial differences in the probability of out-of-school suspension. In general, the results of this investigation found that OSS and expulsion are determined by a combination of behavioral characteristics, student demographics, and school level variables. When it comes to the contribution of race to out-of-school suspension, however, we found that systemic school level variables are *more* important in determining the overrepresentation of Black students in discipline than are any behavioral or student characteristics.

Relationships between race, type of infraction and odds of being disciplined appear to be somewhat different for expulsion than suspension. In Model 1, without considering school level variables, race appears to play less of a role in determining who will be expelled. It is possible 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. On the other hand, race re-emerges as a significant factor in determining the odds of expulsion once school level factors are re-introduced into the equation in Model 2. These results support previous findings suggesting that racial disproportionality remains a problem for zero tolerance enforcement (see e.g., Tailor & Detch, 1998). Further research investigating the relationship between codes of conduct, subjective and objective factors, and racial disparities in discipline would be valuable in better understanding these relationships for school expulsion.

Limitations

The ultimate decision to suspend or expel a student is the end result of a complex process with contributions from multiple sources (Morrison & Skiba, 2001). Previous research (Gregory et al., 2010; Skiba et al., 2011) has indicated that racial disparities in suspension and expulsion begin at the classroom level when a teacher makes an office disciplinary referral. In turn, a teacher's decision to refer a student to the office is influenced by variations in teachers' instructional effectiveness (Scott, Nelson, & Liaupsin, 2001), classroom management abilities (Blankemeyer, Flannery, & Vazsonyi, 2002; Reinke & Herman, 2002) and tolerance levels for different student activity and learning styles (Gerber, 1988; Wright & Dusek, 1998). It is important to recognize that the data for these analyses was drawn from a statewide database containing all incidents of in- and out-of-school suspension and expulsion. Thus, the results are

limited to administrative decisions concerning the seriousness of the punishment to be administered; the data contained no information about the contribution of points earlier in the disciplinary process, such as classroom office referrals. Given the significant contribution of classroom referral to racial differences in school discipline, estimates of racial and ethnic disparity in these data may well be *underestimates* of the extent of disproportionality in out-of-school suspension and expulsion.

Conclusions

In undertaking this work, our working hypothesis was that decisions to apply out-of-school suspension or expulsion are determined by a complex interaction of behavioral, student, and school level variables. With respect to the overall probability of OSS and expulsion, that hypothesis was supported: Type of behavior and previous incidents at the behavioral level; race, gender and to a certain extent SES at the individual level; and percent Black enrollment, school achievement level, and principal perspectives on discipline all made a contribution to the probability of out-of-school suspension or expulsion. As importantly, 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 are more likely to occur wherever there are more Black students, regardless of SES and seriousness of infraction. The single most important finding from this analysis may well be that systemic, school-level variables contribute to disproportionality in out-of-school suspension far more than either student behavior or individual characteristics. Such a finding strongly suggests that those wishing to have an effect on racial disparities in discipline would be well advised to seek interventions that focus on the school rather than the characteristics of students or their behaviors.

References

- Advancement Project/Civil Rights Project. 2000. Opportunities Suspended: The Devastating Consequences of Zero Tolerance and School Discipline. Cambridge, MA: Civil Rights Project.
- American Psychological Association. (2008). APA-accredited doctoral programs in professional psychology: 2008. *American Psychologist*, 63, 888–902.
- Bickel, F., & Qualls, R. (1980). The impact of school climate on suspension rates in the Jefferson County Public Schools. *The Urban Review*, 12(2), 79–86. [doi:10.1007/BF02009317](https://doi.org/10.1007/BF02009317)
- Blankemeyer, M., Flannery, D. J., & Vazsonyi, A. T. (2002). The role of aggression and social competence in children's perceptions of the child-teacher relationship. *Psychology in the Schools*, 39, 293-304. [doi: 10.1002/pits.10008](https://doi.org/10.1002/pits.10008)
- Bradshaw, C. P., Mitchell, M. M., O'Brennan, L. M., & Leaf, P. J. (2010). Multilevel exploration of factors contributing to the overrepresentation of black students in office disciplinary referrals. *Journal of Educational Psychology*, 102(2), 508-520. [doi:10.1037/a0018450](https://doi.org/10.1037/a0018450)
- Brantlinger, E. (1991). Social class distinctions in adolescents' reports of problems and punishment in school. *Behavioral Disorders*, 17, 36–46.
- Children's Defense Fund. (1975). *School suspensions: Are they helping children?* Cambridge, MA: Washington Research Project.
- Christle, C., Nelson, C.M., & Jolivette, K. (2004). School characteristics related to the use of suspension. *Education and Treatment of Children*, 27(4), 509-529.
- Costenbader, V., & Markson, S. (1998). School suspension: A study with secondary school students. *Journal of School Psychology*, 36(1), 59-82. [doi: 10.1016/S0022-4405\(97\)000502](https://doi.org/10.1016/S0022-4405(97)000502)

Council of State Governments Justice Center. (2011). *Breaking schools' rules: A statewide study of how school discipline relates to student's success and juvenile justice involvement.*

Duncan, G., Brooks-Gunn, J., & Klebanov, E (1994). Economic deprivation and early childhood development. *Child Development*, 65, 296-318. [doi:10.2307/1131385](https://doi.org/10.2307/1131385)

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

Fenning, P., & Rose, J. (2007). Overrepresentation of African American students in exclusionary discipline: The role of school policy. *Urban Education*, 42(6), 536-559. [doi:10.1177/0042085907305039](https://doi.org/10.1177/0042085907305039)

Gerber, M. M. (1988). Tolerance and technology of instruction: implications for special education reform. *Exceptional Children*, 54, 309–314.

Gordon, R., Piana, L.D., & Kelecher, T. (2000). *Facing consequences: An examination of racial discrimination in U.S. public schools*. Oakland, CA: Applied Research Center.

Gottfredson, G. D., D. C. Gottfredson, E. R. Czeh, D. Cantor, S. Crosse, and I. Hantman. 2000. The National Study of Delinquency Prevention in Schools (Final Rep., Grant No. 96-MU-MU-0008). Ellicott City, MD: Gottfredson Associate.

Green, J., & Barnes, D. (1993). Discipline in secondary schools: How administrators deal with student misconduct. (ERIC Document Reproduction Service No. ED 357 507).

Gregory, J. F. (1996). The crime of punishment: Racial and gender disparities in the use of corporal punishment in the U.S. Public Schools. *Journal of Negro Education*, 64, 454-462. [doi: 10.3102/0002831211398531](https://doi.org/10.3102/0002831211398531)

- Gregory, A., Cornell, D., Fan, X. (2011). The relationship of school structure and support to suspension rates for black and white high school students. *American Educational Research Journal*, 1-31. [doi:10.3102/0013189X09357621](https://doi.org/10.3102/0013189X09357621)
- Gregory, A., Skiba, R., & Noguera, P. (2010). The achievement gap and the discipline gap: Two sides of the same coin? *Educational Researcher*, 39, 59–68.
- Gregory, A., & Thompson, A.R. (2010). African American high school students and variability in behavior across classrooms. *Journal of Community Psychology*, 38(3), 386-402.
- Gregory, A., & Weinstein, R.S. (2008). The discipline gap and African Americans: Defiance or cooperation in the high school classroom. *Journal of School Psychology*, 46, 455-475.
- Heaviside, S., Rowand, C., Williams, C., & Farris, E. (1998). *Violence and Discipline Problems in U.S. Public Schools: 1996-1997*. Rockville, MD: National Centre for Education Statistics.
- Henderson, J., & Friedland, B. (March, 1996). Suspension, a wake-up call: Rural educators' attitudes toward suspension (Report No. RC 020 545). *Rural Goals 2000: Building Programs that Work*. (ERIC Document Reproduction Service No. ED 394 749)
- Individuals with Disabilities Education Act Regulations, 34 C.F.R. [section] 300 and 303. (1999).
- Hinojosa, M. S. (2008). Black-white differences in school suspension: Effect on student beliefs about teachers. *Sociological Spectrum*, 28, 175-193. [doi:10.1080/02732170701796429](https://doi.org/10.1080/02732170701796429)
- Imich, A. (1994). Exclusions from school: Current trends and issues. *Educational Research*, 36, 3–11. [doi: 10.1080/0013188940360101](https://doi.org/10.1080/0013188940360101)
- Kaufman, P., Chen, X., Choy, S. P., Peter, K., Ruddy, S. A., & Miller, A. K., et al. (2001).

- Indicators of school crime and safety: 2001 (NCES 2002-113/NCJ-190075). Washington, DC: U.S. Departments of Education and Justice.
- Krezmien, M.P., Leone, P.E., & Achilles, G.M. (2006). Suspension, race and disability: Analysis of statewide practices and reporting. *Journal of Emotional and Behavioral Disorders, 14*(4), 217-226. [doi: 10.1207/515326985EP3502_6](https://doi.org/10.1207/515326985EP3502_6)
- Lewis, C.W., Butler, B.R., Bonner III, F.A., Joubert, M. (2010). African American male discipline patterns and school district responses resulting impact on academic achievement: Implications for urban educators and policy makers. *Journal of African American Males in Education, 1*(1), 7-25.
- Losen, D. and Skiba, R. (2010). Suspended Education: Urban Middle Schools in Crisis. Southern Poverty Law Center.
- McCarthy, J. D., & Hoge, D. R. (1987). The social construction of school punishment: Racial disadvantage out of universalistic process. *Social Forces, 65*, 1101–1120.
[doi:10.2307/2579025](https://doi.org/10.2307/2579025)
- McFadden, A.C., Marsh, G.E., Price, B.J., & Hwang, Y. (1992). A study of race and gender bias in the punishment of school children. *Education and Treatment of Children, 15*, 140-146.
- McLoyd, V. C. (1998). Socioeconomic disadvantage and child development. *American Psychologist, 53*, 185–204. [doi:10.1037/0003-066X.53.2.185](https://doi.org/10.1037/0003-066X.53.2.185)
- Morrison, G.M., & D'Incau, B. (1997). The web of zero-tolerance: Characteristics of students who are recommended for expulsion from school. *Education and Treatment of Children, 20*, 316–335
- Morrison, G. M., & Skiba, R. J. (2001). Predicting violence from school misbehavior:

- Promises and perils. *Psychology in the Schools*, 38, 173–184.
- Mukuria, G. (2002). Disciplinary challenges: How do principals address this dilemma? *Urban Education*, 37, 432-452. [doi: 10.1177/00485902037003007](https://doi.org/10.1177/00485902037003007)
- Nichols, J.D. (2004). An exploration of discipline and suspension data. *The Journal of Negro Education*, 73(4), 408-423.
- Nicholson-Crotty, S., Birchmeier, Z., & Valentine, D. (2009). Exploring the impact of school discipline on racial disproportion in the juvenile justice system. *Social Science Quarterly*, 90(4), 1003-1018. [doi:10.1111/j.1540-6237.2009.00674.x](https://doi.org/10.1111/j.1540-6237.2009.00674.x)
- Payne, A. A., & Welch, K. (2010). Modeling the effects of racial threat on punitive and restorative school discipline practices. *Criminology*, 48(4), 1019-1062. [doi:10.1111/j.1745-9125.2010.00211.x](https://doi.org/10.1111/j.1745-9125.2010.00211.x)
- Peguero, A.A., & Shekarkhar, Z. (2011). Latino/a student misbehavior and school punishment. *Hispanic Journal of Behavioral Sciences*, 33(1), 54-70. [doi:10.1177/0739986310388021](https://doi.org/10.1177/0739986310388021)
- Petras, H., Masyn, K.E., Buckley, J.A., Ialongo, N.S., & Kellam, S. (2011). Who is most at risk for school removal? A multilevel discrete-time survival analysis of individual- and context-level influences. *Journal of Educational Psychology*, 103(1), 223-237. [doi:10.1037/0021545](https://doi.org/10.1037/0021545)
- Piquero, A. R. (2008). Disproportionate minority contact. *Future of Children*, 18, 59–79. [doi:10.1353/foc.0.0013](https://doi.org/10.1353/foc.0.0013)
- Raffaele Mendez, L.M., Knoff, H.M., & Ferron, J.M. (2002). School demographic

variables and out-of-school suspension rates: A quantitative and qualitative analysis of a large, ethnically diverse school district. *Psychology in the Schools*, 39(3), 259-277.

[doi:10.1002/pits.10020](https://doi.org/10.1002/pits.10020)

Raffaele Mendez, L.M., & Knoff, H.M. (2003). Who gets suspended from school and why: A demographic analysis of schools and disciplinary infractions in a large school district. *Education and Treatment of Children*, 26(1), 30-51.

Raudenbush, S. W., Bryk, A. S., & Congdon, R. T. (2004). *Hierarchical linear and nonlinear modeling*. Chicago, IL: Scientific Software International.

Rausch, M. K., & Skiba, R. J. (2004). Unplanned outcomes: Suspensions and expulsions in Indiana. Bloomington, IN: Center for Evaluation and Education Policy.

Rausch, M. K., & Skiba, R. J. (2006). Exclusion is not the only alternative: The children left behind project. In A. Reyes (Ed.), Discipline, achievement, and race: Is zero tolerance the answer? (pp. 105-126). Lanham, MD: Rowman & Littlefield Publishing Group.

Reinke, W. M., & Herman, K. C. (2002). Creating school environments that deter antisocial behaviours in youth. *Psychology in the Schools*, 39, 549–559.

Robers, S., Zhang, J., and Truman, J. (2012). *Indicators of School Crime and Safety: 2011* (NCES 2012-002/NCJ 236021). National Center for Education Statistics, U.S. Department of Education, and Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice. Washington, DC.

Rocha, R., & Hawes, D. (2009). Racial diversity, representative bureaucracy, and equity in multicultural districts. *Social Science Quarterly*, 90 (2), 326-344. [doi:10.1111/j.1540-6237.2009.00620.x](https://doi.org/10.1111/j.1540-6237.2009.00620.x)

- Rocque, M. (2010). Office discipline and student behaviors: Does race matter? *American Journal of Education*, 116(4), 557-581. [doi:10.1086/653629](https://doi.org/10.1086/653629)
- Rosen, L. (1997). School discipline: Best practices for administrators. Thousand Oaks, CA: Corwin Press.
- Scott, T. M., Nelson, C.M., & Liaupsin, C. J. (2001). Effective instruction: The forgotten component in preventing school violence. *Education and Treatment of Children*, 24, 309-322.
- Skiba, R.J., Horner, R.H., Chung, C-G., Rausch, M.K., May, S.L., Tobin, T. (2011). Race is not neutral: A national investigation of African American and latino disproportionality in school discipline. *School Psychology Review*, 40(1), 85-107.
- Skiba R.J., Michael, R.S., Nardo, A.C., & Peterson. R. (2002). The color of discipline: Sources of racial and gender disproportionality in school punishment. *Urban Review*, 34, 317-342.
- Skiba, R. J., Peterson, R. L., & Williams, T. (1997). Office referrals and suspension: Disciplinary intervention in middle schools. *Education and Treatment of Children*, 20(3), 295-315
- Skiba, R.J., Poloni-Staudinger, L., Simmons, A.B., Feggins-Azziz, R., Chung, C-G. (2005). Unproven links: Can poverty explain ethnic disproportionality in special education? *Journal of Special Education*, 39(4), 130-144. [doi:10.1177/00224669050390030101](https://doi.org/10.1177/00224669050390030101)
- Skiba, R. J., Simmons, A., Staudinger, L. P., Rausch, M. K., Dow, G., & Feggins, L. R. (2003). *Consistent removal: Contribution of school discipline in the school-prison pipeline*. Paper presented at the Harvard Civil Rights School-to-Prison Pipeline Conference, Cambridge, MA.

Tailor, H., & Detch, E. R. (1998). *Getting tough on kids: A look at zero tolerance*. Nashville, TN: Tennessee Office of Education Accountability, Comptroller of the Treasury.

Theriot, M.T., & Dupper, D.R. (2010). Student discipline problems and the transition from elementary to middle school. *Education and Urban Society*, 42(2), 205-222.
[doi:10.1177/0013124509349583](https://doi.org/10.1177/0013124509349583)

Thornton, C.H., & Trent, W. (1998). School desegregation and suspension in East Baton Rouge Parish: A preliminary report. *Journal of Negro Education*, 57, 482-501.

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

Wallace, J.M., Jr., Goodkind, S.G., Wallace, C.M., & Bachman, J. (2008). Racial, ethnic and gender differences in school discipline among American high school students: 1991-2005. *Negro Educational Review*, 59, 47-62.

Welsh, W. N. (2003). Individual and institutional predictors of school disorder. *Youth Violence and Juvenile Justice*, 1(4), 346-368. [doi:10.1177/1541204003255843](https://doi.org/10.1177/1541204003255843)

Welch, K. and Payne, A.A. 2010. Racial threat and punitive school discipline. *Social Problems* 57, 25–48. [doi:10.1525/SP.2010.57.1.25](https://doi.org/10.1525/SP.2010.57.1.25)

Wright, J.A., & Dusek, J.B., (1998). Compiling school base rates for disruptive behaviors from student disciplinary referral data. *School Psychology Review*, 27(1), 138-147.

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

Table 1a

Descriptive Statistics for Data used in HLM Analyses: Level 1 Variables

Level 1: Incident

	ISS		OSS		Expulsion		Total	
	N	% of Incidents	N	% of Incidents	N	% of Incidents	N	% of Incidents
<i>Type of Infraction</i>								
Use/Possession	692	16.8%	2,795	68.0%	626	15.2%	4,113	100%
Fighting/Battery	3,630	26.7%	9,727	71.6%	227	1.7%	13,584	100%
Moderate Infractions	4,513	41.8%	6,138	56.8%	155	1.4%	10,806	100%
Defiance/Disruption/Other	45,757	60.3%	28,951	38.1%	1,234	1.6%	75,942	100%
Total	54,592	52.3%	47,611	45.6%	2,242	2.1%	104,455	100%

Table 1b

Descriptive Statistics for Data used in HLM Analyses: Level 2 Variables

Level 2: Student

		N	% of Students
Gender	Male	29,712	68.6%
	Female	13,608	31.4%
SES	Free or Reduced Lunch	23,125	53.4%
	None	20,195	46.6%
Race	Black	10,251	23.7%
	White	33,069	76.3%

Table 1c

Descriptive Statistics for Data used in HLM Analyses: Level 3 Variables

Level 3: School and Principal Data	N	Mean N	Mean School %
Total Number of Enrollment	608		
Avg. Yrs. of Tchr. Experience	15		
% African Amer. Enrollment		7.9%	
% Free/Reduced Lunch		38.7%	
% Passing State Accountability Test		65.3%	
Disciplinary Practices Survey (Principals in Each Cluster)			
Pro-prevention	313		42.9%
Pro-suspension	417		57.1%

Table 2

HLM Multinomial Logit Regressions on Discipline Outcome¹

	Model 1				Model 2			
	OSS		Expulsion		OSS		Expulsion	
	Odds Ratio	Sig.	Odds Ratio	Sig.	Odds Ratio	Sig.	Odds Ratio	Sig.
Level 1: Incident								
Type of Infractions								
Use/Possession	7.454	***	37.246	***	9.276	***	37.266	***
Fighting/Battery	4.944	***	2.747	***	6.322	***	3.546	***
Moderate Infractions	2.455	***	1.314	**	2.924	***	1.477	***
Defiance/Disruption/Other								
Level 2: Student								
Gender								
Male	1.204	***	1.030		1.172	***	1.049	
Female								
SES								
Free or Reduced Lunch	1.051	**	0.830	***	1.189	***	1.175	**
None								
Race								
Black	1.248	***	1.052		0.982		1.249	**
White								
Level 3: School								
% Black in Enrollment								
Avg. Yrs. of Tchr. Experience					5.975	**	0.662	
% Free or Reduced Lunch					0.991		1.066	
% Passing Math and English					0.405		0.000	***
					0.076	**	0.000	***
Principal's Attitude								
Prevention					0.727	*	0.495	**
Pro-Suspension								
Random Effect								
Level 2 Effect	1.123	***	1.764		Variance Component			
Level 3 Effect					4.629	***	5.245	***

¹ Reference category is In-School Suspension for outcome.

*** p<0.01, ** p<0.05, * p<0.1