ORIGINAL ARTICLE

Race, Exclusionary Discipline, and Connectedness to Adults in Secondary Schools

Yolanda Anyon,[1] Duan Zhang,[2] and Cynthia Hazel[2]

Abstract This study examines racial differences in students' connectedness to school adults and considers the possibility that disparities in exclusionary discipline practices may reduce all students' sense of connection to educators, not just those who have been disciplined or are from racial groups overrepresented in out-of-school suspensions. Data sources include a self-report survey of secondary school students ($n = 29{,}148$) linked to administrative data ($n = 107$ schools) from a large urban district. Multilevel modeling techniques were used to estimate the relationships between students' racial background, youths' connection to school adults, and school-level racial discipline gaps. Controlling for school racial composition, gender, grade level and other covariates, students of color were significantly less likely to feel connected to school adults than their White peers. Additionally, the racial discipline gap was significantly and negatively associated with connectedness for all students. Results indicate that strategies to improve educational outcomes for youth of color need to attend to relational dynamics between students and school adults. Research findings also suggest that efforts to reduce discipline disparities may improve all students' connectedness.

Keywords School discipline · School connectedness · Racial disparities · Race · suspensions

✉ Yolanda Anyon
yanyon@du.edu

[1] Graduate School of Social Work, University of Denver, Denver, CO, USA

[2] Morgridge College of Education, University of Denver, Denver, CO, USA

Racial inequities in education are once again prominent in the public eye. Increasing media and scholarly attention is being paid to the more severe and exclusionary discipline consequences that Black youth receive from preschool through high school for offenses similar to those of their White peers (American Psychological Association, 2008; Anyon et al., 2014; Skiba, Chung, Trachok & Hughes, 2014; Skiba et al., 2011). In the wake of Ferguson and the Black Lives Matters movement, concerns about the punishment of youth of color by public authorities are now in the forefront of national conversations about racial justice. Widely disseminated videos of police brutality against adults bear striking resemblance to those documenting the use of excessive force by school resource officers against students of color (Bever, 2016; Fausset & Southall, 2015). These disturbing images reflect pervasive racial disparities in school discipline that have become the focus of several federal, state, and local initiatives (e.g., Morgan, Salomon, Plotkin & Cohen, 2014; Padres y Jovenes Unidos, 2011; United States Department of Education, 2014).

Such attention is warranted; there is a growing body of evidence indicating that racial inequities in out-of-school suspension and expulsion contribute to lower academic, behavioral, and social outcomes for recipient students of color (e.g., Skiba et al., 2003). Advocates and researchers alike have argued that poor relationships between students of color and school adults are one root cause of racial discipline gaps, and recommend that educators increase their focus on the affective dimensions of schooling (Carter, Fine & Russell, 2014). Recent research indicates that there are substantial differences between students of color and their White peers in their experience of care, support, and encouragement from teachers and administrators (Bottiani, Bradshaw & Mendelson, 2014, 2016; Kim, Schwartz,

Cappella & Seidman, 2014; Voight, Hanson, O'Malley & Adekanye, 2015). For community psychologists committed to reducing social inequalities, understanding the causes and consequences of racial disparities in both school connectedness and discipline is an important area of inquiry. Indeed, Weinstein (2002) argues that "given our field's concern with respecting and capitalizing upon human diversity and our commitment to eradicating unequal opportunity in our society, there is no place more important for intervention than in the culture and structure of schools" (p. 35).

Scholars in community psychology have responded to Weinstein's charge, yet few have considered racial differences in students' psychosocial experiences at school, or the possible consequences of exclusionary discipline practices at the school level on student-level outcomes. The latter subject is especially understudied. Some psychologists have theorized that racial gaps in school discipline are "likely perceived by the students as biased and may lead to negative student–teacher interactions as well as a diminished sense of school climate" (Bradshaw, Mitchell, O'Brennan & Leaf, 2010, p. 517; also see Gregory, Allen, Mikami, Hafen & Pianta, 2014). This potential link between discipline disparities and students' relationships with school adults seems clearest for students from non-dominant groups, for perception of discrimination against communities of which one is a member likely impacts school connectedness (Bingham & Okagaki, 2012). However, it is also possible that students from groups not disproportionately represented in office referrals, suspensions, and expulsions may also notice inequitable patterns, perceive that they are unfair, and feel less trust or connection to school adults as a result. For example, studies of high school and college students have found that perceptions of inequity are negatively related to all students' interactions with, and connections to, their instructors (Cabrera, Nora, Terenzini, Pascarella & Hagedorn, 1999; Debnam, Johnson, Waasdorp & Bradshaw, 2013). Other studies of adolescents have found that poor racial climate is related to lower GPA, greater likelihood of out-of-school suspension, and increased perceptions of peer discrimination for students of diverse backgrounds, including White youth (Bellmore, Nishina, You & Ma, 2012; Mattison & Aber, 2007). The current study therefore adds to this body of literature by considering whether there are racial group differences in student's connectedness to school adults, and if school-level discipline disparities are related to all youths' connections to teachers and administrators.

Racial Disparities in Exclusionary School Discipline Practices

Racial disparities in exclusionary discipline sanctions are the result of complex multi-level interactions between risk and protective factors. Characteristics of students, families, teachers, administrators, classroom environments, school climates, neighborhoods, district policies, and historical context all affect the way young people of color are disciplined (Morris, 2005; Skiba et al., 2014; Vavrus & Cole, 2002). For example, Kirk (2008) found that increased parental supervision, student–teacher trust, and neighborhood collective efficacy were all negatively associated with youths' likelihood of suspension. Skiba et al.'s (2014) analysis of state discipline records linked to a survey of administrators demonstrated that principals' discipline orientations (punitive vs. preventative) were among the strongest predictors of racial gaps in out-of-school suspension. Finally, in an ethnographic study of an urban school Morris (2005) found that administrators perceived Black girls to be unladylike and viewed Latino and Black boys as threatening; such biases contributed to higher dress code infractions among students of color. Unfortunately, these findings are supported by a growing body of evidence which suggests that racial disparities persist after accounting for student behavior and a range of confounding variables like poverty, disability, previous academic achievement, teacher-rated behavior, and school composition (Anyon et al., 2014; Bradshaw et al., 2010; Skiba, Michael, Nardo & Peterson, 2002; Skiba et al., 2014).

To explain this persistent pattern of inequality, theorists have focused on institutional decisions at two key points in the discipline process: (a) *differential selection* of students for office disciplinary referrals; and (b) *differential processing* of discipline consequences, particularly exclusionary sanctions like out-of-school suspension and expulsions (Gregory, Skiba & Noguera, 2010). Decisions about high-level infractions, such as bringing a firearm to school, are dictated by federal policy. However, referrals and consequences for the most common forms of student misconduct are at the discretion of school staff and are rarely applied consistently (Skiba et al., 2011; Vavrus & Cole, 2002). This kind of local control has led to students of color being removed from the classroom and school more often than their White peers, even for the same types of misbehavior (Anyon et al., 2014; Skiba et al., 2011).

Racial gaps in differential selection and processing are widest for low-level infractions and subjective categories of student misconduct, such as classroom disruption or defiance (Bradshaw et al., 2010; Skiba et al., 2002, 2011; Vavrus & Cole, 2002). Skiba et al.'s (2002) seminal study of discipline records from 19 middle schools found that Black students were less likely than White youth to be disciplined for objective misconduct like smoking and vandalism. In contrast, youth of color were more likely to be referred to the office for behaviors that were highly dependent on the adults' point of view, such as disrespect or excessive noise. Other literature suggests that school

staff members' perceptions of this type of student miscon-duct are often racially biased. Compared with White and Asian youth, school staff tend to perceive Black and Latino students as oppositional and threatening (Chang & Sue, 2003; Morris, 2005; Neal, McCray, Webb-Johnson & Bridgest, 2003). To illustrate, Neal et al. (2004) found that teachers rated students with "African American cul-ture-related movement styles" as more aggressive than youth with "standard" walking styles (p. 49). An experi-ment using vignettes of student behavior randomly paired with photographs of students from different backgrounds also provide causal evidence of racial bias in behavioral referrals (Chang & Sue, 2003). Okonofua and Eberhardt's (2015) recent experiment confirmed these more general findings and demonstrated the causal impact of race on teachers' responses to discipline incidents by manipulating student names paired with office referral records.

Racial Disparities in Students' Connectedness to School Adults

There are many different terms for the concept of stu-dents' sense of connection to school adults, including bonding, attachment, support, and relationships. All of these constructs, however, involve an affective component that includes students' feelings of care, concern, or respect from teachers and administrators (Libbey, 2004). Our terminology is guided by the Centers for Disease Control and Prevention (2009), who define connectedness as "the belief by students that adults in the school care about their learning as well as about them as individuals" (p. 3). Con-nectedness to school adults has been shown to be posi-tively associated with student' academic performance, motivation, and college attendance; and negatively associ-ated with delinquency, discipline incidents, social-emo-tional maladjustment, dissatisfaction with school, and dropout (Crosnoe, Johnson & Elder, 2004; Durlak, Weiss-berg, Dymnicki, Taylor & Schellinger, 2011; Murray & Greenberg, 2000; Wooley, Kol, & Bowen, 2009).

Although there is growing evidence of the importance of connectedness to school adults for academic and behavioral outcomes among all students, empirical research about racial differences in connectedness is much more limited. This is surprising, as perceived adult support may be especially important for students of color (Bingham & Okagaki, 2012). To our knowledge, only four recent peer-reviewed publica-tions have addressed the question of racial disparities in stu-dents' connections to teachers and administrators (Bottiani et al., 2014, 2016; Kim et al., 2014; Voight et al., 2015). In their study of 754 California middle schools, Voight et al. (2015) documented within-school disparities between Black and White youth in their reports of positive adult–student relationships. They use the term "microclimates" to

elucidate that student identities impact their interactions with school adults. Another study of nearly 20,000 Maryland high school students from more than 50 sites found that Black students' reports of teacher caring were lower than those of White students (Bottiani et al., 2014, 2016). Finally, using a national dataset, Kim et al. (2014) found that there were demographic differences in students' attach-ment to school, which included an item assessing whether youth felt close to their teachers. Of note, most of the vari-ance in student reports of connectedness to school adults in these studies were explained by within-school differences.

In addition to this empirical evidence, disparities in stu-dent connectedness seem likely in light of research indi-cating that students of color are perceived and treated differently than their White peers by school adults (Chang & Sue, 2003; Morris, 2005; Neal et al., 2003). A meta-analysis of teachers' behavior toward students based on their race found great heterogeneity in teacher biases, but overall teachers more frequently stated positive expecta-tions and made positive referrals for White students com-pared with Black and Latino students (Tenenbaum & Ruck, 2007). When school adults engage in fewer positive interactions with students of color than White youth, it seems likely that differences in connectedness will follow. In addition, the historical legacy of racism in American educational system may lead students of color to believe that they are purposefully being discriminated against, even when differential treatment is unintentional.

Moreover, it has been theorized that being a student from a non-dominant racial group can negatively impact school connectedness through two mechanisms: (a) *cultural dis-continuity* (such as differences between language and behavioral norms), and (b) *cultural ecology* (when the school environment is perceived as oppressive and discrimi-natory toward one's group) (Bingham & Okagaki, 2012). In the case of school discipline, punitive consequences may be perceived as unfair by students of color if taken-for-granted notions of legitimate or appropriate behavior are not made explicit to all students and only recognized when norms are breached (Monroe, 2006; Morris, 2005). From a *cultural ecology* lens, racial disproportionalities in exclusionary dis-cipline may reduce connectedness among students of color if they are understood as a signal of discrimination against one's self or group(s) of which one is a member (Byrd, 2015; Dotterer, McHale & Crouter, 2009; Mattison & Aber, 2007; Smalls, White, Chavous & Sellers, 2007).

The Relationship between Discipline Disparities and All Students' Connectedness

Highly inequitable contexts, where racial discipline gaps are pronounced and visible to students, may contribute to lower connectedness to school adults among *all* students, not just

youth of color or those who have been punished (Bradshaw et al., 2010; Gregory, Cornell & Fan, 2011; Morris, 2005; Vavrus & Cole, 2002). This hypothesis is supported by a small number of studies that have documented that students' perception of a hostile or unfair "racial climate" is associated with poorer outcomes for youth of all backgrounds (Bellmore et al., 2012; Debnam et al., 2013; Mattison & Aber, 2007). For example, in a study of 52 Maryland high schools, multilevel analysis showed that all students reported a lower connection to teachers and peers, along with lower engagement, when they perceived their school culture to be inequitable (Debnam et al., 2013). However, few schools or districts regularly collect information about students' perceptions of racial hostility, which precludes replication of these findings, or their practical application, in a wide variety of contexts.

In contrast, out-of-school suspension rates, disaggregated by race, are widely available to researchers and practitioners alike. To our knowledge, only one study has considered the relationship between disparities in out-of-school suspensions and all students' sense of connectedness to school, but in this study, suspension rates were treated as the dependent variable (Gregory et al., 2011). Using a statewide random sample of Virginia ninth-grade students from 199 high schools, the authors found that schools where students had strong connections with adults had lower out-of-school suspension rates for Black and White students and a reduced gap in suspension rates, even after controlling for many other school variables (such as size, urbanicity, student poverty, and racial composition) (Gregory et al., 2011). There appear to be complex recursive forces that impact students' perceptions of connection to school adults and school-level racial disparities.

The Current Study

This study used administrative and survey data from a large urban school district to explore two research questions: (a) Are there racial disparities in students' connectedness to school adults? (b) Is the school context of racial gaps in out-of-school suspensions related to *all* students' sense of connectedness? First, we hypothesized that White students would report significantly higher connectedness to school adults than their peers of color. Second, we expected that racial disparities in student discipline would be negatively associated with connectedness to school adults for students of all racial backgrounds.

Method

This study relied on secondary data from the Denver Public Schools (DPS) School Satisfaction Survey for student-level reports of school connectedness. Archival administrative data were used to generate school-level contextual variables of discipline disproportionality. The research was approved by the Internal Review Board of the University of Denver (DU) and the DPS Research Review Board. The study was conducted as part of a researcher–practitioner partnership between the Graduate School of Social Work at DU and Denver Public Schools to address racial discipline gaps.

Participant Characteristics

DPS is a large urban district with nearly 200 schools. This study focuses on students in grades 6–12, who were enrolled during the 2012–2013 school year. However, students attending schools without any Black youth were excluded from the study, as it was not possible to generate the independent variable (racial discipline gap) for these sites (five schools, 357 students). In the remaining 107 schools with 42,364 students, 68% of youth received free or reduced lunch prices, 1% were Native American, 4% were Asian or Pacific Islander, 16% were Black people, 58% were Latino, 19% were White, and 3% were Multiracial (see Table 1). Fifty one percent of students were male. In terms of grade level, 16% of students were in the sixth grade, 15% were in the seventh grade, 14% were in the eighth grade, 15% were in the ninth grade, 14% were in the 10th grade, 12% were in the 11th grade, and 15% were in the 12th grade.

Table 1 Student-level sample characteristics

	All students (n = 42,364 students) (%)	Survey participants (n = 29,148 students)[a] (%)
Demographic characteristics		
Gender		
Male	50.83	48.57***
Grade level (6–12th)		
6th	16.23	19.71***
7th	14.73	16.90***
8th	13.98	15.32***
9th	15.09	14.73
10th	13.56	12.61***
11th	11.48	11.45
12th	14.94	9.27***
Race		
Native American	0.91	1.57***
Black	16.07	12.21***
Latino	57.50	51.11***
Asian or Pacific Islander	3.80	4.74***
White	18.78	18.88
Multiracial	2.93	11.49***

[a]All descriptive statistics reported are based on the original dataset, prior to multiple imputation.
*$p < .05$; **$p < .01$; ***$p < .001$ based on a two-sample test of proportions.

In contrast, School Satisfaction Survey respondents represent 29,148 students in the 107 schools with Black students (see Table 1). These students were the sample of the current study. The racial composition of survey participants was 2% Native American, 5% Asian or Pacific Islander, 12% Black, 51% Latino, 19% White, and 11% Multiracial. In terms of grade level, 20% of students were in the sixth grade, 17% were in the seventh grade, 15% were in the eighth grade, 15% were in the ninth grade, 13% were in the 10th grade, 11% were in the 11th grade, and 9% were in the 12th grade. The survey did not include questions about language proficiency, poverty/free and reduced lunch status, or whether the participant had been suspended from school.

Comparing the survey sample to the general student population, with two-sample t-tests of proportions there were statistically significant differences on nearly all demographic variables (see Table 1). Female, sixth, seventh and eighth graders were overrepresented in the survey sample, whereas male, 10th and 12th-grade students were underrepresented. Asian, Native American and Multiracial youth were overrepresented in the sample of survey respondents, whereas Black and Latino students were underrepresented. The latter may reflect differences in how student racial background is collected by the district (via parent report), in contrast to the survey, in which students self-report their racial identity. It is also possible that Black and Latino were disproportionately absent from school on the day of survey administration given their overrepresentation in out-of-school suspensions and lower attendance rates in this school district. Additional descriptive statistics and correlations of study variables are presented in Table 2.

Data Collection Procedure and Measures

Student-level Survey

The School Satisfaction Survey was administered by teachers as a census to all students present on the day of survey administration in the spring of 2013. Participation was voluntary and anonymous; no incentive for participation was provided. The district estimates the response rate as 80% for students in attendance on the day of administration.

Student-level dependent variables. The dependent outcome was a composite scale of five items on the survey that focused on students' connection to school adults: (a) "Most of the adults who work at the school treat me with respect;" (b) "If I have a problem or concern there is at least one adult in the school I feel comfortable talking to;" (c) "Most of my teachers care about how I am doing in their class; (d) "Most of my teachers encourage me to do my best;" and, (e) "If I felt my safety or the safety of others was

threatened, there is at least one adult in the school I could go to." A four-point response scale was used for these items including strongly agree (4), agree (3), disagree (2), and strongly disagree (1). The dependent variable represented a sum of each students' response to the five individual items, so that a higher score indicated greater connectedness. The values of this variable ranged from 5 to 20, with a mean score of 15.89, and a standard deviation of 2.77. The composite measure yielded a satisfactory reliability coefficient (Cronbach's α) of .82. Similar items have been used in other studies to measure students' connectedness to school adults (e.g., Debnam et al., 2013).

Student-level independent variables. Student' racial background was classified based on one survey item asking students to select their identity from a provided list. Responses included: "American Indian, Asian, African American, White, Hispanic, and Multi-ethnic." For data analysis, each racial category was recoded into dummy variables.

Student-level covariates. Student grade and gender was based on survey items requesting students mark one applicable category. Responses for grade included: "6, 7, 8, 9, 10, 11, and 12." Responses for gender included "male" and "female."

School-level Administrative Dataset

All school-level covariates were generated from an administrative dataset provided by the school district.

School-level independent variable. To create a measure of in-school disparities in exclusionary discipline practices, the out-of-school suspension rate for Black students was subtracted from the suspension rate for White students (Gregory et al., 2011). The mean value of the gap was .07 (SD = 0.07), ranging from a minimum of −.22 to a maximum of .57. Larger values indicated higher out-of-school suspension rates for Black than White students.

School-level covariates. School-level covariates were selected based on research addressing the influence of school context on discipline disparities (Payne & Welch, 2010; Skiba et al., 2013, 2014). School racial composition, proportion of students who are eligible for free and reduced lunch, and average daily attendance were continuous variables based on applicable percentages. School Performance Framework ratings were also included as a measure of school quality, relative to other schools serving similar student populations. These ratings had five possible values, coded so that higher values indicated better performance. The ratings are calculated using information about student progress on standardized tests over time (disaggregated by race, language proficiency, disability status, and free and reduced lunch eligibility), enrollment changes, dropout rate, and parent

Table 2 Descriptive statistics and correlations of study variables (n = 29,148)[a]

	1	2	3	4	5	6	7	8	9	10	11
Student-level covariates											
Gender	1										
Grade level	.01	1									
School-level covariates											
Middle school	−.01	−.60***	1								
% Black	.01	.06***	−.16***	1							
% Free/reduced lunch	.04***	−.10***	.06***	−.34***	1						
SPF	−.02**	−.20***	.04***	.07***	−.37***	1					
Attendance rate	−.01	−.46***	.25***	−.01	−.14***	.57***	1				
School-level independent variable											
Racial discipline gap[b]	.01	−.22***	.34***	.22***	−.07***	.13***	.02**	1			
% White students suspended	.02**	−.07***	.22***	−.10***	.41***	−.33***	−.16***	−.21***	1		
% Black students suspended	.02**	−.25***	.45***	.14***	.19***	−.09***	−.08***	.80***	.43***	1	
Student-level dependent variables											
Connectedness to school adults[c]	−.04***	−.09***	.04***	−.05***	−.02***	.04***	.02*	−.05***	−.02*	−.06***	1
Min, max	0, 1	6, 12	0, 1	0, 0.5	0.1, 1	1, 5	0.6, 1	0, 0.4	0, 0.3	0, 0.4	5, 20
Mean or %	0.48	8.53	0.37	0.16	0.72	3.35	0.9	0.07	0.06	0.12	15.89
Standard deviation	0.5	1.94	0.48	0.12	0.22	1.09	0.05	0.09	0.06	0.1	2.77

*p < .05; **p < .01; ***p < .001.

[a]All descriptive statistics reported are based on the original dataset, prior to multiple imputation.

[b]The racial discipline gap was calculated by subtracting the White student suspension rate from the Black student suspension rate.

[c]Connectedness to school adults is a composite measure of the five items measuring students' perceptions of teacher care, concern and encouragement, the availability of an adult at school to talk about a problem or a safety concern, and respectful treatment from school adults.

satisfaction, in comparison with similar schools (Removed for review, 2014).

Missing Data

The proportion of missing data for student-level survey responses was 20%. To prevent the biases produced by list-wise deletion, missing values were estimated using multiple imputation methods (Graham, 2009). The imputations were carried out using the "mi impute" command in STATA 13 (StataCorp, 2013), generating 20 datasets with estimated values created using an iterative Markov Chain Monte Carlo method (Rabe-Hesketh & Skrondal, 2008). Results of analyses for each of the 20 imputed datasets were combined into a single set of results.

Data Analysis

Study questions were answered by merging student-level school connectedness indicators from the survey with school-level variables from the administrative dataset, using school ID as the matching variable. Multilevel regression analyses were conducted using Stata 13 (StataCorp, 2013) to predict the composite score of student connectedness to school adults (Rabe-Hesketh & Skrondal, 2008). Multilevel modeling was employed because this analytic approach accounts for the dependence among observations that occurs when research subjects are nested within clusters, as students are within schools (Rabe-Hesketh & Skrondal, 2008). Data analyses revealed statistically significant variation in connectedness across schools, warranting the use of multilevel modeling techniques. The intraclass coefficient in unconditional strained model was .06 with a standard error of .01. For hypothesis testing, a .05 a priori Type I error rate was selected. The multilevel regression model assessed relationships between student' racial background, the school-level racial discipline gap, and student-level scores for connectedness with school adults.

For comparison purposes, following the example of Gregory et al. (2011), we also ran models that used the out-of-school suspension rate for Black or White students as the school-level independent variable instead of the racial discipline gap. We expected that the results from predicting connectedness from these three different school-level contextual measures of discipline would allow us to assess the unique contribution of the racial discipline gap and its relationship with other malleable factors at the school level.

Results

As shown in Table 3 (Model A) all student-level variables were significant predictors of connectedness to school adults. Male students ($-.18$, $p < .001$) and those in higher grades ($-.14$, $p < .001$) reported lower connectedness than their female and younger peers. Native American ($\beta = -.45$, $p < .01$), Black ($\beta = -0.35$, $p < .001$), Latino ($\beta = -.24$, $p < .001$), Asian ($\beta = -.26$, $p < .05$), and Multiracial ($\beta = -0.47$, $p < .001$) youth also reported significantly lower scores than White students. As expected, the racial discipline gap was negatively associated with all students' connectedness to school adults ($\beta = -1.71$, $p < .01$). At the school level, the performance framework rating was positively related to connectedness ($\beta = .11$, $p < .05$), whereas the attendance rate (-3.72, $p < .001$) and proportion of low-income students in the school population ($-.67$, $p < .04$) were negatively associated with the dependent variable.

Post-hoc analyses (see Table 3, Models B and C) also revealed that the Black student out-of-school suspension rate was significantly and negatively correlated with the dependent variable ($\beta = -1.82$, $p < .001$), whereas the suspension rate for White students was not a statistically significant predictor ($\beta = -.37$, $p = .66$) of connectedness. Of note, the results for all student-level variables remained virtually unchanged across the three models. However, a different pattern in school-level variables emerged between these two models. The proportion of Black ($= -1.18$ $p < .001$) and low-income students ($-.74$, $p < .001$) were statistically significant negative predictors of connectedness, when covaried with the White student suspension rate (Model B). Yet these school context measures were not significant and were of a lower magnitude in Model C, when the proportion of Black students suspended served as the independent variable.

Discussion

Results from the multilevel models provide support for two study hypotheses: (a) there were significant racial differences in students' connectedness to school adults; and (b) disparities in out-of-school suspensions were negatively associated with *all* students' sense of connectedness.

Research Question #1: Are there Racial Disparities in Students' Connectedness to School Adults?

Consistent with extant studies that have quantitatively analyzed racial differences in school connectedness (Bottiani et al., 2014, 2016; Kim et al., 2014; Voight et al., 2015), findings indicate that Black, Native American, Asian, Latino, and Multiracial students generally reported depressed connectedness compared with their

Table 3 Adjusted regression coefficients (multilevel model) predicting students' connectedness to school adults[a] ($n = 29,148$)

	Model A Racial discipline gap		Model B White OSS rate		Model C Black OSS rate	
	β	95% CI	β	95% CI	β	95% CI
Student-level covariates						
Gender (male)	−.18***	−.25, −.11	−.18***	−.24, −.11	−.18***	−.25, −.11
Grade	−.14***	−.17, −.10	−.13***	−.17, −.10	−.14***	−.17, −.10
Student-level independent variables						
Race (ref. group = White)						
Native American	−.46**	−.76, −.15	−.46**	−.76, −.15	−.45**	−.76, −.15
Black	−.35***	−.49, −.21	−.35***	−.49, −.21	−.35***	−.49, −.21
Latino	−.24***	−.36, −.13	−.24***	−.36, −.12	−.24***	−.36, −.12
Asian	−.26*	−.47, −.06	−.26*	−.46, −.05	−.26*	−.47, −.06
Multiracial	−.47***	−.61, −.33	−.47***	−.61, −.33	−.47***	−.61, −.33
School-level covariates						
Middle school	−.04	−.31, .22	−.16	−.43, .11	.01	−.26, .28
% Black	−.72	−1.59, .15	−1.18**	−2.05, −.31	−.64	−1.51, .24
% Free and reduced lunch	−.67*	−1.18, −.14	−.74*	−1.31, −1.6	−.47	−1.01, .08
SPF rating	.11*	.01, .23	.11	−.01, .22	.11	−.01, .22
Attendance rate	−3.72***	−5.55, −1.90		−3.56***	−3.77***	−5.59, −1.96
School-level independent variables						
Racial discipline gap[b]	−1.71**	−2.80, −.62				
White OSS[c] rate			−.37	−2.07, 1.32		
Black OSS rate					−1.82**	−2.89, −.76

*$p < .05$; **$p < .01$; ***$p < .001$.
[a]Connectedness to school adults is a composite measure of the five items measuring students' perceptions of teacher care, concern and encouragement, the availability of an adult at school to talk about a problem or a safety concern, and respectful treatment from school adults.
[b]The racial discipline gap was calculated by subtracting the White student suspension rate from the Black student suspension rate.
[c]OSS stands for out-of-school suspension.

White peers, even after accounting for student gender, grade, and school-level covariates. Theory about the role of *cultural discontinuity* and *cultural ecology* in the affective experiences of youth of color at school suggest several potential explanatory mechanisms. School adults often have academic and behavioral expectations that are not aligned with the experiences of families or communities of color; such *cultural discontinuity* may alter youths' belief that teachers and administrators respect, encourage, or care about them (Monroe, 2006; Morris, 2005). Racial differences in connectedness might also reflect the perception among students of color that the *cultural ecology* of their school is not inclusive, or that adults are racially discriminatory (Bingham & Okagaki, 2012; Dotterer et al., 2009; Smalls et al., 2007). As a result, students of color may feel that teachers or administrators do not care about, encourage, or respect them.

Research Question #2: Is the School Context of Racial Gaps in Out-of-School Suspensions Related to All Students' Sense of Connectedness?

The within-school racial discipline gap was statistically significant as a predictor of lower connectedness to school adults among students of all racial backgrounds. This finding supports our hypothesis that inequitable school

discipline contexts are related to all students' feelings of care, encouragement, and respect from school adults. Since racial discipline gaps are also associated with academic achievement gaps, racial disparities in out-of-school suspension rate may be picking up other inequitable practices in the school, such as tracking (Gregory et al., 2010). Study results are therefore aligned with research suggesting that when students perceive that their peers are treated differently at school because of their racial identities, they are less likely to feel connected to teachers and administrators.

As a correlational, cross-sectional study, however, it is not possible to determine the direction of this effect. It may be that lack of connectedness more powerfully impacts the problem behaviors of students of color than White students, leading to more discipline incidents among non-dominant racial groups and patterns of misbehavior that are then reflected in higher out-of-school suspension rates for Black students (Gregory et al., 2011). However, a growing body of research indicates that differential student behavior does not explain discipline disproportionalities (Anyon et al., 2014; Skiba et al., 2011, 2014). Another possibility is that when students are less connected to school adults, teachers and administrators become more inequitable in their discipline practices, perhaps because racial bias is stronger when adults do not

have knowledge about specific students. Yet theory, longitudinal studies, and intervention research suggests that student connectedness is causally affected by the practices of school adults (e.g., Durlak et al., 2011). It is therefore plausible that the relationship between the racial discipline gap and all students' connectedness is due to adults' practices of *differential processing* and *differential consequences* by race.

The significance of racial discipline gap as a predictor of student connectedness to adults broadens the scope of the deleterious impact of discipline disparities on student outcomes. It suggests that all students, not just students of color, are hurt by inequitable school discipline contexts. Theory regarding the influence of *cultural ecology* on student connectedness for youth of color may therefore also be relevant to White students. In other words, when the school environment is perceived as oppressive and discriminatory toward *any* group (rather than just one's own), students become more critical and suspicious of their teachers' and administrators' actions, while becoming less likely to interpret the behavior of school adults as caring, respectful, and encouraging.

The latter interpretation is supported by our post-hoc analyses, which revealed that the out-of-school suspension rate for Black students was negatively correlated with connectedness, whereas the suspension rate for White students was not, even after accounting for school racial and class composition. Since White youth are much less likely to be suspended than their peers of color, even for the same behavior, this group's suspension rate is not likely a proxy for inequality or unfair treatment. Moreover, when the out-of-school suspension rate for White students was deployed as the independent school-level variable, the pattern of coefficients for school context was markedly different; for example, this was the only model in which the racial composition of the student body was a significantly negative predictor of connectedness. Such patterns suggest that practices by adults in the school building (e.g., suspension decisions), rather than fixed characteristics of students, contribute to young people's sense of connectedness to school adults.

Limitations

There are several important limitations to this study. First, the survey was not the representative of all youth in sampled schools. Moreover, it is unlikely that this pattern was random; the survey was delivered at school and only on 1 day, so Black and Latino youth, who have lower attendance rates in this district, were less likely to have the opportunity to take the survey. Additionally, the investigation was hampered by the cross-sectional nature of our dataset and limited number of relevant items on the student survey. Our study was not longitudinal or experimental; nor did the dataset include other covariates that may also influence the relationship between race and student connectedness, such as student socioeconomic status, instructional strategies, and broader school climate issues. Without accounting for time, selection bias, and more robust control variables, study findings must be interpreted with caution. Finally, findings from this study are only generalizable to other school districts that have similar discipline policies, serving a comparable population of students in an urban setting. Further investigation of these patterns using a larger sample of schools and districts would substantially further knowledge development.

Conclusion and Implications

This study adds to a limited body of research indicating that there are racial differences in students' connectedness to school. Given the link between school connectedness, academic and behavioral outcomes, it is unlikely that discipline and achievement gaps will be eliminated without attention to variation in students' relationships with school staff by race. In other words, policies and practices which aim to improve racial equity in education need to attend to relational dynamics in schools and develop school staff member's skills in connecting with youth of color.

Research findings also suggest that racial disparities in exclusionary discipline are negatively associated with all students' perceptions of care, concern, encouragement, and respect from teachers and administrators. Therefore, efforts to reduce discipline disproportionalities may improve all students' relationships with school adults, not just those who have been disciplined or are from non-dominant racial groups. Historically, scholars have largely focused on the negative impact of discipline disproportionalities on outcomes for Black, Latino and Native American youth, rightly so, as these youth suffer the most serious and harmful consequences of differential selection and processing of discipline incidents in schools. However, it may be useful for practitioners and policy makers to frame the harm of discipline disproportionalities more broadly, so that the motivation toward corrective action draws on the self-interests of all community members, not just those who have a commitment to social justice or racial equality.

References

American Psychological Association Zero Tolerance Task Force. (2008). Are zero tolerance policies effective in the schools?: An

evidentiary review and recommendations. *The American Psychologist*, 63, 852.

Anyon, Y., Jenson, J., Altschul, I., Farrar, J., McQueen, J., Greer, E., . . . & Simmons, J. (2014). The persistent effect of race and the promise of alternatives to suspension in school discipline outcomes. *Children and Youth Services Review*, 44, 379–386.

Bellmore, A., Nishina, A., You, J.I., & Ma, T.L. (2012). School context protective factors against peer ethnic discrimination across the high school years. *American Journal of Community Psychology*, 49, 98–111.

Bever, L. (April 7, 2016). 'She landed on her face!' Video shows Texas school policy officer body slam 12-year-old girl. *The Washington Post*. Available from: https://www.washingtonpost.com/news/education/wp/2016/04/07/she-landed-on-her-face-video-shows-texas-school-police-officer-body-slam12-year-old-girl/ [last accessed April 11, 2016]

Bingham, G.E., & Okagaki, L. (2012). Ethnicity and student engagement. In S.L. Christenson, A.L. Reschly & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 65–96). New York: Springer.

Bottiani, J.H., Bradshaw, C.P., & Mendelson, T. (2014). Promoting an equitable and supportive school climate in high schools: The role of school organizational health and staff burnout. *Journal of School Psychology*, 52, 567–582.

Bottiani, J.H., Bradshaw, C.P., & Mendelson, T. (2016). Inequality in Black and White high school students' perceptions of school support: An examination of race in context. *Journal of Youth and Adolescence*, 45, 1176–1191. doi:10.1007/s10964-015-0411-0. Advance online publication.

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, 508–520.

Byrd, C.M. (2015). The associations of intergroup interactions and school racial socialization with academic motivation. *The Journal of Educational Research*, 108, 10–21.

Cabrera, A.F., Nora, A., Terenzini, P.T., Pascarella, E., & Hagedorn, L.S. (1999). Campus racial climate and the adjustment of students to college: A comparison between White students and African-American students. *Journal of Higher Education*, 70, 134–160.

Carter, P., Fine, M., & Russell, S. (2014). *Discipline disparities series: Overview*. Bloomington, IN: The Equity Project at Indiana University. Available from: http://rtpcollaborative.indiana.edu/briefing-papers/ [last accessed March 13, 2014].

Centers for Disease Control and Prevention. (2009). *School connectedness: Strategies for increasing protective factors among youth*. Atlanta, GA: U.S. Department of Health and Human Services.

Chang, D.F., & Sue, S. (2003). The effects of race and problem type on teachers' assessments of student behavior. *Journal of Consulting and Clinical Psychology*, 71, 235–242.

Crosnoe, R., Johnson, M.K., & Elder, G.H. (2004). Intergenerational bonding in school: The behavioral and contextual correlates of student-teacher relationships. *Sociology of Education*, 77, 60–81.

Debnam, K.J., Johnson, S.L., Waasdorp, T.E., & Bradshaw, C.P. (2013). Equity, connection, and engagement in the school context to promote positive youth development. *Journal of Research on Adolescence*, 24, 447–459.

Dotterer, A.M., McHale, S.M., & Crouter, A.C. (2009). Sociocultural factors and school engagement among African American youth: The roles of racial discrimination, racial socialization, and ethnic identity. *Applied Development Science*, 13, 61–73.

Durlak, J.A., Weissberg, R.P., Dymnicki, A.B., Taylor, R.D., & Schellinger, K.B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82, 405–432.

Fausset, R., & Southall, A. (October 26, 2015). Video shows officer flipping student in South Carolina, prompting inquiry. *New York Times*. Available from: http://www.nytimes.com/2015/10/27/us/officers-classroom-fight-with-student-is-caught-on-video.html?_r=0 [last accessed April 11, 2016].

Graham, J.W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology*, 60, 549–576.

Gregory, A., Allen, J.P., Mikami, A.Y., Hafen, C.A., & Pianta, R.C. (2014). The promise of a teacher professional development program in reducing racial disparity in classroom exclusionary discipline. In D. Losen (Ed.), *Closing the school discipline gap: Equitable remedies for excessive exclusion* (pp. 166–179). New York: Teachers College Press.

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*, 48, 904–934.

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.

Kim, H.Y., Schwartz, K., Cappella, E., & Seidman, E. (2014). Navigating middle grades: Role of social contexts in middle grade school climate. *American Journal of Community Psychology*, 54, 28–45.

Kirk, D. (2008). Unraveling the contextual effects on student suspension and juvenile arrest: An examination of school, neighborhood, and family controls. *Criminology*, 47, 479–520.

Libbey, H.P. (2004). Measuring student relationships to school: Attachment, bonding, connectedness, and engagement. *The Journal of School Health*, 74, 274.

Mattison, E., & Aber, M.S. (2007). Closing the achievement gap: The association of racial climate with achievement and behavioral outcomes. *American Journal of Community Psychology*, 40, 1–12.

Monroe, C.R. (2006). Misbehavior or misinterpretation? Closing the discipline gap through cultural synchronization. *Kappa Delta Pi Record*, 42, 161–165.

Morgan, E., Salomon, N., Plotkin, M., & Cohen, R. (2014). *The school discipline consensus report: Strategies from the field to keep students engaged in school and out of the Juvenile Justice System*. New York: The Council of State Governments Justice Center.

Morris, E.W. (2005). 'Tuck in that shirt!' Race, class, gender and discipline in an urban school. *Sociological Perspectives*, 48, 25–48.

Murray, C., & Greenberg, M.T. (2000). Children's relationship with teachers and bonds with school an investigation of patterns and correlates in middle childhood. *Journal of School Psychology*, 38, 423–445.

Neal, L.V., McCray, A.D., Webb-Johnson, G., & Bridgest, S.T. (2003). The effects of African American movement styles on teachers' perceptions and reactions. *Journal of Special Education*, 37, 49–57.

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

Padres y Jovenes Unidos. (2011). *Books not bars: Students for safe and fair schools*. Washington, DC: The Advancement Project.

Payne, A.A., & Welch, K. (2010). Modeling the effects of racial threat on punitive and restorative school discipline practices. *Criminology*, 48, 1019.

Rabe-Hesketh, S., & Skrondal, A. (2008). *Multilevel and longitudinal modeling using stata*. College Station, TX: Stata Press.

Skiba, R., Chung, C., Trachok, M., & Hughes, R. (2014). Disciplinary disproportionality: Contributions of infraction, student, and school characteristics to out-of-school suspension and expulsion. *American Educational Research Journal*, *51*, 640–670.

Skiba, R., 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*, 85–107.

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

Skiba, R., Simmons, A., Staudinger, L., Rausch, M., Dow, G., & Feggins, R. (2003). *Consistent removal: Contributions of school discipline to the school-prison pipeline*. Paper presented at the School to Prison Pipeline Conference,Boston.

Smalls, C., White, R., Chavous, T., & Sellers, R. (2007). Racial ideological beliefs and racial discrimination experiences as predictors of academic engagement among African American adolescents. *Journal of Black Psychology*, *33*, 299–330.

StataCorp. (2013). *Stata statistical software: Release 13*. College Station, TX: Author.

Tenenbaum, H.R., & Ruck, M.D. (2007). Are teachers' expectations different for racial minority than for European American students? A meta-analysis. *Journal of Educational Psychology*, *99*, 253–273.

United States Department of Education (2014). *Guiding principles: A resource guide for improving school climate and discipline*. Washington, DC: Author.

Vavrus, F., & Cole, K. (2002). 'I didn't do nothin': The discursive construction of school suspension. *The Urban Review*, *34*, 87–111.

Voight, A., Hanson, T., O'Malley, M., & Adekanye, L. (2015). The racial school climate gap: Within-school disparities in students' experiences of safety, support and connectedness. *American Journal of Community Psychology*, *56*, 252–267.

Weinstein, R.S. (2002). Overcoming inequality in schooling: A call to action for community psychology. *American Journal of Community Psychology*, *30*, 21–42.

Wooley, M.E., Kol, K.L., & Bowen, G.L. (2009). The social context of school success for Latino middle school students direct and indirect influences of teachers, family, and friends. *The Journal of Early Adolescence*, *29*, 43–70.