

The Racial School Climate Gap: Within-School Disparities in Students' Experiences of Safety, Support, and Connectedness

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Abstract This study used student and teacher survey data from over 400 middle schools in California to examine within-school racial disparities in students' experiences of school climate. It further examined the relationship between a school's racial climate gaps and achievement gaps and other school structures and norms that may help explain why some schools have larger or smaller racial disparities in student reports of climate than others. Multilevel regression results problematized the concept of a "school climate" by showing that, in an average middle school, Black and Hispanic students have less favorable experiences of safety, connectedness, relationships with adults, and opportunities for participation compared to White students. The results also show that certain racial school climate gaps vary in magnitude across middle schools, and in middle schools where these gaps are larger, the racial achievement gap is also larger. Finally, the socioeconomic status of students, student–teacher ratio, and geographic location help explain some cross-school variation in racial climate gaps. These findings have implications for how school climate is conceptualized, measured, and improved.

Keywords School climate · Race · Adolescence · Youth development · Schools · Diversity

Introduction

Racial and ethnic disparities in academic achievement and school discipline are fundamental problems of educational equity in the United States. A chorus of research findings have demonstrated that Black and Hispanic students achieve at lower levels than their White¹ peers (see Duncan and Murnane 2011) and are suspended and expelled from school more often (Losen 2015; Skiba et al. 2011). Racial² gaps exist due to both school segregation as well as racial disparities within individual schools (Fryer and Levitt 2004; Page et al. 2008). Reducing these racial gaps is central to the priorities of the US Department of Education and to the values of community psychology (Sarason 1996; Weinstein 2002).

One feature of schools that may be related to these gaps and that has garnered increased attention of late among researchers and policymakers is school climate (e.g., Kim et al. 2014; US Department of Education 2014; Voight et al. 2013). Climate refers to experiences of safety, connectedness to school, opportunities for meaningful participation, and the quality of relationships between students and staff, and these factors are related to student achievement and behavior (Hanson and Voight 2014; Thapa et al. 2013). Conceptually, climate is generally understood as a characteristic of schools, though there is mixed evidence—reviewed below—to suggest that students within the same

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¹ The racial/ethnic labels "Black," "Hispanic," and "White" were used herein in lieu of "African American," "Latina/o," and "White," respectively, as they correspond with the California Department of Education's racial/ethnic designations, and thus our subsequent operationalizations. Where appropriate, more specific racial/ethnic labels are used.

² While we appreciate the distinction between the terms "race" and "ethnicity," we use the term "race" herein to refer to both for the sake of brevity.

school may experience safety, support, and relationships differently based on their race. This study examines the nature of the racial school climate gap using a large sample of California middle schools. It further examines the relationship between a school's racial climate gaps and achievement gaps and other school structures and norms that may help explain why some schools have larger or smaller racial disparities in climate experiences than others.

Literature Review

Racial Disparities in Education

Education inequity is a persistent reality of American culture. Almost 50 years ago, the Coleman Report (Coleman et al. 1966) put race-based achievement gaps on the national radar. Since that time, achievement gaps have remained largely unchanged (Duncan and Murnane 2011). As early as kindergarten, there are marked differences in academic performance between racial minority students and their peers (Fryer and Levitt 2004). These differences are sustained as students progress through school (Clotfelter et al. 2009; Hanushek and Rivkin 2006).

Various reasons have been proposed to explain the racial achievement gap. One of the simplest explanations is that race is inextricably connected to socioeconomic status in the United States. Poor students have fewer resources for learning and must overcome greater barriers, and a disproportionate number of poor families are racial minorities (Hanushek and Rivkin 2006). However, even when socioeconomic status is taken into consideration, an achievement gap among racial groups remains (Clotfelter et al. 2009). Social psychologists note “stereotype threat” as a possible contributor to the gap, wherein test takers of stigmatized racial groups worry that they may confirm stereotypes about intelligence, and thus perform worse due to this stress (Steele and Aronson 1995). Other explanations are socio-cultural, suggesting that minority peer groups reward disengagement or that certain racial identities are not conducive to valuing academic success (Fryer 2010), although this explanation has been strongly contested and met with much countervailing evidence (e.g., Warikoo and Carter 2009). Finally, some scholars point to the disproportionate rate at which Black, Hispanic, and American Indian students are disciplined and suspended, distracting from learning time and undermining school connectedness. This disparity is presumed to be a function of either objective differences in student behavior or discrimination on the part of school staff in their subjective interpretation of student behavior (Gregory et al. 2010). A common thread to these explanations is that the divergent

school social experiences of racial groups contribute to educational inequalities.

School Climate

School climate refers to the school social experience (Cohen et al. 2009). Seidman et al. (Seidman 1988; Seidman and Cappella, in press; Tseng and Seidman 2007) describe climate as a social process or “within-setting social regularities” that affect members’ subjective experiences of the setting. The conceptualization and measurement of social climate are longstanding projects of community psychology (Henry, in press; Moos 1973; Trickett and Moos 1974). A recent study identified several specific dimensions of school climate in a survey of California middle school students, including: (a) *safety and connectedness*; (b) *adult-student relationships*; and (c) *opportunities for meaningful student participation* (Hanson and Voight 2014). Based on this definitional framework (which is characteristic of and encompassed by other common definitions in the research literature; see Cohen et al. 2009) a positive school climate is characterized by a school environment that makes students feel emotionally and physically safe, part of the school community, that adults in the school respect them, care about them, and have high expectations for their well-being and success, and that they have opportunities to provide input in how things work at the school.

Theoretically, having caring, supportive, respectful relationships with adults and peers and having opportunities to meaningfully engage at school (that is, having a positive school climate) is particularly important for middle school students, as early adolescents are understood to have an increasing desire for autonomy and social acceptance (Eccles et al. 1993). Person-environment fit theories suggest that middle schools with positive climates are a good fit for students, leading to improved achievement through increases in academic interest and motivation (Moos 1987). These theories suggest that performance and well-being are maximized when members of a setting see their personal characteristics, abilities, and preferences as congruent with the social processes of the setting (Moos 1987).

There is empirical evidence that a positive middle school climate is associated with higher levels of student achievement and lower rates of suspension and expulsion (Brand et al. 2003; Hanson and Voight 2014). McCoy et al. (2013) conducted one of the only studies that used longitudinal data analyses to examine the directionality of the relationship between school climate and academic achievement in Chicago elementary schools, finding a positive bidirectional relationship between the two variables. Furthermore, middle school students’ perceptions of positive adult-student relationships are associated with

higher self-esteem and lower rates of depression and behavior problems (Way et al. 2007). Student participation and positive adult–student relationships have been correlated with lower rates of secondary school violence in both quantitative (Khoury-Kassabri et al. 2004) and qualitative research (Johnson et al. 2012). Elementary and middle schools with more positive relationships between adults and students were found to have greater success implementing a classroom-based violence intervention (Gregory et al. 2007). A positive school climate appears to be generally beneficial for middle schools students.

Within-School Racial Disparities in School Climate

As mentioned above, person-environment fit theories concern individuals' appraisals of the congruence between their personal characteristics and their settings. Different people within the same setting can have different views of what goes on in the setting, or how well it is working for them based on their identity. Theorists of educational inequalities suggest that students' race may be an important personal characteristic that conditions the way they experience school social processes, with Black and Hispanic students reporting less favorable relationships and opportunities to participate at school than White students, due in part to objective differences in how Black and Hispanic students are treated (e.g., tracking them into less rigorous courses) and in part to students' subjective interpretations of the school environment (e.g., not relating to dominant culture teachers; Hill 1993; Noguera 2003). Thus, there is a question as to whether the notion of climate can be generalized across an entire school. Is there a "school" climate or are there "microclimates" of unique experiences, for example based on a student's race? The former understanding is representative of a positivist ontology, wherein a single unified representation of climate adequately describes any school environment, and the latter a contextualist one, suggesting that different students within a school carry different representations of their school (see Tebes 2005).

Few research studies have directly addressed this question, but some studies of student perceptions of school climate have included race as a control variable and report correlations and regression coefficients that provide evidence for racial disparities. Using a racially diverse sample of middle school students pooled across schools in Illinois, Way et al. (2007) found that students' racial minority status was weakly correlated with their perceptions of several dimensions of school climate ($-0.08 < r < 0.08$), including adult-student relationships and opportunities for meaningful participation. Using data from 19 middle schools in a large district in Maryland, Bradshaw et al. (2009) found that Black and Latino students were less

likely than White students to report feeling safe at school, although these findings were not statistically significant. These studies do not distinguish within-school differences from between-school differences.

Several studies have documented a within-school racial gap in school climate experiences. Shirley and Cornell (2012) analyzed data from 400 students in one suburban middle school in Virginia and found that Black students were more likely than White students to report that their peers supported aggressive behavior and less likely to express willingness to seek help from their teachers for bullying and threats of violence. Kuperminc et al. (1997) examined one urban middle school in New York state and found that being Black or Hispanic was weakly correlated with the positivity of a student's school climate perceptions. Using multilevel analyses, research in two separate samples of Maryland schools found that, within particular schools, White grade-5 (Mitchell et al. 2010) and high school (Bottiani et al. 2014) students had significantly more positive perceptions of school climate than their Black peers. Fan et al. (2011), in a multilevel analysis of the nationally representative Educational Longitudinal Study of 2002, found that Hispanic students had less favorable perceptions of school safety, and Black students reported less positive teacher-student relationships than did their same-school White peers. Evidence from various geographic locations and grade levels suggest that Black, Hispanic, and White students experience their schools differently from one another. The presence of within-school climate gaps across middle schools in California is addressed in the present study's research question #1.

No research of which we are aware has directly examined the relationship between racial disparities in both school climate experiences and achievement in a school, but given the theoretical and empirically demonstrated connection between climate and achievement, it stands to reason that this relationship may exist and that racial disparities in climate experiences (specifically safety and connectedness, adult-student relationships, and opportunities for meaningful participation) could, indeed, explain racial achievement gaps, as depicted in Fig. 1. This association is examined in the present study's research question #2.

School Characteristics Associated with Students' Experiences of School Climate

Why might some schools have larger or smaller racial gaps in school climate experiences? Little is known about school characteristics that are differentially related to student school climate perceptions and experiences based on race. School setting characteristics that may influence students' school experience, in general, include setting norms (e.g.,

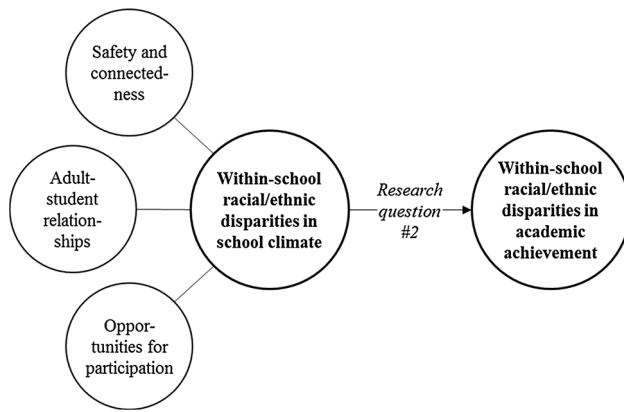


Fig. 1 Conceptual model of the relationship between within-school racial disparities in school climate experiences and academic achievement. *Note* Concepts or linkages addressed by each of the study research questions are noted

respecting racial diversity; Katz and Kahn 1978), structural characteristics such as the average background characteristics (Moos 1973) of students and teachers in the school, and whether the school is located in an urban, suburban, or rural location. In this section we review characteristics of schools that have been empirically associated with students' school climate perceptions and experiences, independent of race in most cases. Though few among the reviewed studies examined how these school characteristics are differentially associated with climate experiences among student racial subgroups, their linkage with school climate may serve as a starting point for an exploratory investigation of school factors associated with greater equity. An exploratory examination of the relationship between these school structural characteristics and norms and within-school racial climate gaps is described in this study's research questions #3 and #4, respectively.

School Norms of Respect for Diversity

When schools foster an appreciation and respect for student diversity and culture—for example by encouraging students of all racial and cultural backgrounds to enroll in rigorous courses and using instructional materials that reflect the culture—students may feel safer and more supported, especially students of color, like Black and Hispanic students. Mattison and Aber (2007), using a sample of Black and White high school students in a Midwest town, found reductions in the Black–White discipline gap in schools with high levels of racial fairness, reported by students. Datnow and Cooper (1997), in a qualitative investigation of Black students attending affluent, predominantly White high schools, found that involvement in cultural groups and clubs such as Black Student Unions, Black Awareness clubs, and multicultural

alliances was related to a greater sense of school connectedness. Chang and Le (2010) found that Hispanic middle school students were more empathic to their peers when they felt their schools respected cultural diversity (e.g., providing opportunities to learn about diverse cultures and ethnic groups in the curriculum and work with diverse students in school activities). Tan (1999) found that Hispanic middle and high school students who felt that their culture was respected by other students and teachers reported more interest in school. Bellmore et al. (2012), using a racially diverse sample of grade-9 students, found that students, in general, reported less racial discrimination in schools that had strong norms of respect for racial diversity, evident, for example, in celebrations of traditions and music of various cultures and teachers encouraging collaboration among students of diverse cultural groups.

Two experimental studies found that interventions intended to improve a school's culture of respect for diversity also improved students' perceptions of school climate. One intervention that involved a racially and socioeconomically diverse sample of grade-8 students in a 10-week racism and prejudice awareness program was found to improve student relationships and decrease fighting and racist attitudes (Schultz et al. 2001). The second intervention involved enrolling students in an urban middle school who self-identified as being of African descent in an African and African American culture class and was found to improve participants' sense of school connectedness (Lewis et al. 2006).

Teacher Race

Research that examines the association of teacher race and school climate outcomes is scant, but there is evidence to suggest a connection between teacher race and student academic engagement. Goldsmith (2004) used a nationally representative sample of grade-8 students to show that a higher proportion of Black and Hispanic teachers in a school was associated with more positive attitudes toward school for Black and Hispanic students but was not significantly associated with the attitudes of White students. Using a sample of Texas school districts, Meier et al. (1999) found that, after controlling for poverty rate and expenditures, districts with more Black and Hispanic teachers had higher levels of student academic performance, both for racial minority students and for White students.

Student–Teacher Ratio

Research has shown that lower student–teacher ratios are associated with lower frequencies of student victimization in elementary and middle school (Bradshaw et al. 2009; Khoury-Kassabri et al. 2004). In schools with large

student–teacher ratios, it can be difficult for teachers to effectively manage student behavior, which may in turn provide more opportunities for bullying to occur and influence students' perceptions of safety (Koth et al. 2008). Research has shown that higher student–teacher ratios in grade 5 are associated with more negative overall student perceptions of school climate (Mitchell et al. 2010).

Student Racial Composition

The racial composition of a student's school peer group may condition her own social behavior, and this conditioning may depend on the student's own race. For example, Voight et al. (2014) found that White urban middle school students exhibited less prosocial behavior in educational settings with higher compositions of Black students but Black students' behavior was unaffected by racial composition. Thus, the proportion of Black students in the setting was related to the racial disparities in student prosocial behavior.

Student Socioeconomic Status

Waters et al. (2010), using a sample of grade-8 Australian students, found that in schools with more poor students, students felt less connected to school. A number of studies have shown that, across diverse contexts, students experience more violence and victimization in schools with higher poverty rates (Bevans et al. 2007; Bradshaw et al. 2009; Khoury-Kassabri et al. 2004; Koth et al. 2008).

Location

Where a school is located may have some bearing on how students of different races experience climate. Rural schools have been shown to have lower rates of student victimization and higher student reports of feeling safe than schools in suburban and urban locales, respectively (Bradshaw et al. 2009).

When schools maintain a norm of respect for diversity, Black and Hispanic students may have more equitable experiences of safety, connectedness, positive relationships with adults, and engagement, compared to their White peers. Further, a number of school structural characteristics have been linked to students' general perceptions and experiences of school climate. While many of these latter studies did not examine the moderating effects of student race, they point to school structural characteristics that could be explored for their equity-enhancing value. The conceptual relationships between school norms and structural characteristics and within-school racial disparities in school climate experiences are shown in Fig. 2.

Rationale and Research Questions

As the above review shows, there is limited evidence for racial gaps in school climate experiences within individual schools. A novel contribution of the present study is that it uses a large sample of middle schools to provide broader evidence for within-school racial climate gaps. Another contribution of this study is that it directly examines whether a school's racial climate gap is associated with its racial achievement gap. Finally, there is some evidence that suggests how characteristics of schools affect students' experiences of school climate, but little of that evidence shows whether such effects are different for students of different races. A final contribution of this study is that it examines how school norms and structural characteristics correlate with the school's racial climate gap. Each of these contributions add to the literature on school climate. The specific research questions addressed in this study are:

1. What, if any, racial school climate gap exists within middle schools?
2. Are within-school racial climate gaps associated with within-school racial achievement gaps?
3. What school structural characteristics are correlated with the magnitude of a school's racial climate gap?
4. Is a school's norm of respect for diversity associated with the magnitude of its racial climate gap?

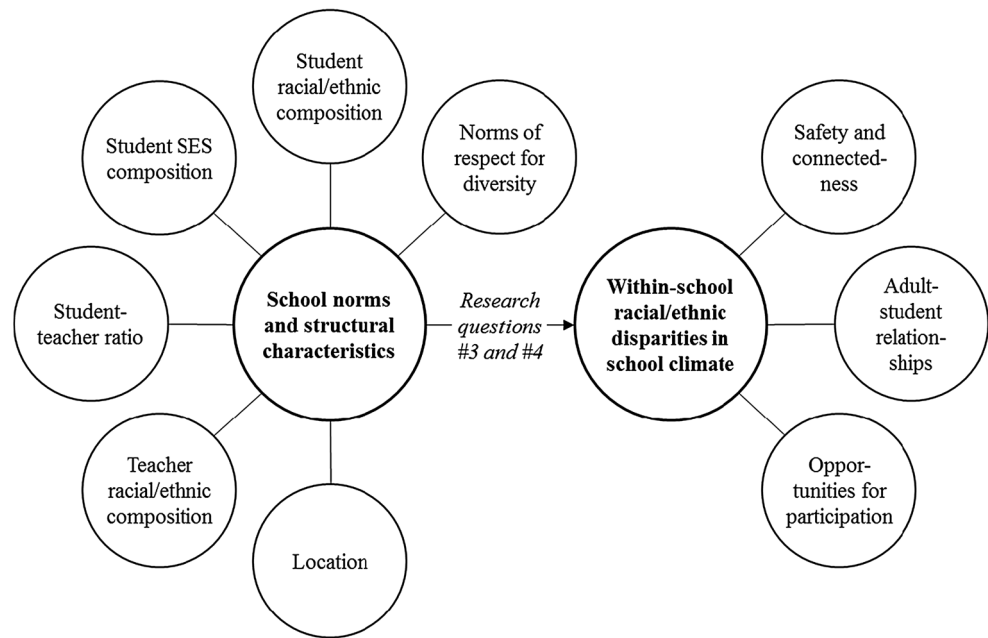
Method

Sample

This study relied on student and staff survey data and state administrative data from 754 middle schools in California that administered both the California Healthy Kids Survey to grade-7 students and the California School Climate Survey to teachers in either the 2008–2009 or 2009–2010 school year.³ In those years, 187,120 grade-7 students and 17,646 teachers completed the survey. A single administration of the surveys was required of California public schools during the 2008–2009 to 2009–2010 period as a condition of Safe and Drug-Free School and Communities (Title IV) funding and the state tobacco prevention program. The sample middle schools comprised approximately half of all middle schools in the state and reflected similar student demographics, on average, compared to all middle schools statewide. In one large district, a sample of the entire population of schools completed the survey, and other schools did not administer the survey due to not

³ Schools in California typically complete the surveys every other year.

Fig. 2 Conceptual model of the relationship between school structural characteristics and norms and within-school racial disparities in school climate experiences. *Note* Concepts or linkages addressed by each of the study research questions are noted



receiving Title IV or tobacco prevention funding, being exempt from this requirement under the Rural Education Achievement Program, or for unknown reasons.

From this group of 754 schools, two separate analytic samples were employed to examine the Black–White and Hispanic–White school climate gaps, respectively. The inclusion criteria for each of these samples required that a school (a) have at least 10 student survey responses from each of the two relevant racial subgroup categories, (b) have a significant number of students of each of the two relevant racial subgroup categories based on federal reporting regulations for the Elementary and Secondary Education Act, and (c) have at least 5 staff survey responses. Forty-six middle schools were retained in the Black–White school climate gap analytic sample (descriptive statistics for these school are in shown in Table 1) and 420 middle schools in the Hispanic–White school climate gap analytic sample (Table 2). Within these schools, only Black and White grade-7 students ($n = 3805$) were retained in the Black–White school climate gap analytic sample, and only Hispanic and White grade-7 students ($n = 70,526$) were retained in the Hispanic–White school climate gap analytic sample. The number of respondents to the teacher survey in these two analytic subsamples of schools were 1331 and 9942, respectively.

Measures

This study relied on three sources of data: (a) the California Healthy Kids Survey for grade-7 students; (b) the

California School Climate Survey for staff; and (c) publicly available school administrative data from the California Department of Education (CDE). Survey data were identified by school identification number but not at the student level; thus, *individual*-level student survey data was linked with *school*-level aggregated staff survey data and *school*-level administrative data.

Student Race

Race was operationalized via a series of binary variables for Black, Hispanic, and White, scored based on students' self-reported race and ethnicity (i.e., non-Hispanic Black, Hispanic, or non-Hispanic White) on the California Healthy Kids Survey.

School Climate

Recent psychometric evidence (Hanson and Voight 2014) suggests that the California Healthy Kids Survey validly and reliably measures three school climate factors examined in this study: (a) *safety and connectedness* (6 items, Cronbach's $\alpha = 0.80$); (b) *adult-student relationships* (6 items, $\alpha = 0.85$); and (c) *opportunities for meaningful student participation* (3 items, $\alpha = 0.68$). Students use 4- and 5-item strength-of-agreement Likert-type response scales to indicate their personal feelings of safety and connectedness at schools (for example, one item reads, "I feel like I am a part of this school"), the quality of their personal relationships with adults at school (for example, "At my school, there is a teacher or some other adult who

Table 1 Black–White sample demographics

Student level (n = 13,460 surveyed)	M	Range
Safety and connectedness, overall	−0.17	−3.81–1.82
Safety and connectedness, Black students	−0.33	−3.37–1.82
Safety and connectedness, White students	−0.12	−3.81–1.77
Adult-student relationships, overall	−0.07	−3.46–1.77
Adult-student relationships, Black students	−0.06	−2.82–1.52
Adult-student relationships, White students	0.03	−2.73–1.77
Opportunities for participation, overall	−0.11	−2.12–2.87
Opportunities for participation, Black students	−0.07	−2.12–2.87
Opportunities for participation, White students	−0.06	−2.12–2.87
		%
Race		
Asian or Pacific Islander (%)		13.6
Black (%)		12.3
Hispanic (%)		39.9
Mixed race (%)		8.2
White (%)		16.0
Other (%)		10.3
Male (%)		48.2
		%
School level (n = 46)	M	Range
Student characteristics		
Black-White achievement gap	112.8	−2–301
Academic performance	764.2	675–890
Percent Black students	18.3	9–33
Percent Hispanic students	39.3	15–68
Percent White students	25.0	8–54
Percent low-income	53.1	12–83
Staff characteristics		
School-wide respect for diversity	0.01	−0.83–0.90
Percent Black staff	7.5	0–26.9
Percent Hispanic staff	10.1	0–26.2
Student–teacher ratio	20.1	11.7–25.3
		%
Location		
Rural		23.9
Suburban		50.0
Urban		26.1

really cares about me”), and their perceptions of opportunities to personally engage in the life of the school (for example, “At school, I help decide things like class activities or rules”; see Hanson and Voight 2014 for all item wordings and technical details). For the present study, individual students’ scores were standardized (i.e., $M = 0$, $SD = 1$) relative to all 187,120 grade-7 students in the 754

Table 2 Hispanic–white sample demographics

Student level (n = 109,386 surveyed)	M	Range
Safety and connectedness, overall	0.02	−3.81–1.85
Safety and connectedness, Hispanic students	0.00	−3.58–1.82
Safety and connectedness, White students	0.12	−3.81–1.85
Adult-student relationships, overall	0.01	−3.46–1.77
Adult-student relationships, Hispanic students	−0.06	−3.46–1.77
Adult-student relationships, White students	0.13	−3.46–1.77
Opportunities for participation, overall	0.01	−2.12–2.87
Opportunities for participation, Hispanic students	−0.09	−2.12–2.87
Opportunities for participation, White students	0.10	−2.12–2.87
		%
Race		
Asian or Pacific Islander (%)		12.3
Black (%)		4.8
Hispanic (%)		40.7
Mixed race (%)		7.0
White (%)		23.8
Other (%)		11.4
Male (%)		48.7
		%
School level (n = 420)	M	Range
Student characteristics		
Hispanic–White achievement gap	94.9	−46–267
Academic performance	801.8	625–967
Percent Black students	5.9	0–33
Percent Hispanic students	40.4	9–86
Percent White students	39.0	8–80
Percent low-income	43.3	0–100
Staff characteristics		
School-wide respect for diversity	0.01	−3.43–1.13
Percent Black staff	2.4	0–26.9
Percent Hispanic staff	9.6	0–42.0
Student–teacher ratio	20.7	11.7–29.1
		%
Location		
Rural		18.6
Suburban		47.3
Urban		34.0

schools that completed the survey in 2008–2009 and 2009–2010.

Academic Achievement

School and student racial subgroup academic performance were measured using California’s Academic Performance

Index (API), which is a single number ranging from 200 to 1000 that reflects average student performance across multiple content areas of the California Standards Tests (CST), the annual statewide standardized test. In 2010, the statewide average school API was 765 for grades 7 and 8, according to the CDE (2011), and the student subgroup averages for Black, Hispanic, and White students were 677, 706, and 842 respectively. Each school has its own student subgroup API for each numerically significant subgroup. For each school in each analytic sample, a school-level achievement gap was calculated for Black–White students ($M = 114.1$) and Hispanic–White students ($M = 94.7$) that represented the difference in API between the two subgroups (i.e., White API minus Black API and White API minus Hispanic API).

School Norms of Respect for Diversity

A single score representing norms of respect for diversity was calculated for each sample school by averaging all teacher survey responses to six strength-of-agreement Likert-type items regarding the degree to which the school encourages students of all races to enroll in rigorous courses, prioritizes closing the racial achievement gap, emphasizes culturally relevant instructional materials, has staff examine cultural biases, and fosters an overall appreciation and respect for student diversity. For example, one item reads, “This school emphasizes using instructional materials that reflect the culture or ethnicity of its students.” Teacher survey responses were standardized relative to all 17,646 teachers in the sample prior to being aggregated to the school level.

School Structural Characteristics

School demographic information was extracted from the CDE’s California Basic Educational Data System, including the percentage of students in a school who were Black, Hispanic, and eligible for free or reduced-priced meals (a proxy for poverty), the student–teacher ratio, the percentage of teachers who were Black and Hispanic, and the geographic location of the school (i.e., rural, suburban, or urban).

Analytic Approach

A series of multilevel regression models were estimated in Stata 13 to examine within-school, shared variance in students’ reports of school climate experience and explore how various school characteristics explain this within-school variance (Raudenbush and Bryk 2002). Separate models were estimated for the Black–White and the Hispanic–White analytic samples. Students’ school climate

experiences were modeled as dependent variables. Prior to analysis, all school-level covariates were standardized within their respective analytic sample to allow for a comparison of regression coefficients across covariates (Rabe-Hesketh and Skrondal 2012).

To test the existence of racial school climate gaps within schools, we first estimated a one-level OLS regression to determine the overall statewide school climate gap, irrespective of school membership using the equation:

$$y_i = \beta_0 + \beta_1 \text{Race}_i + r_i \quad (1)$$

where y is alternatively, in separate models, the reported (a) safety and connectedness, (b) adult-student relationships, or (c) opportunities for participation of student i . The coefficient β_1 is the model-implied overall statewide gap in the outcome between White students and either Black or Hispanic students. To determine the average *within*-school racial gaps, random-slope multilevel models were estimated that allowed school-specific racial gaps to vary across schools.

$$y_{ij} = \beta_{0j} + \beta_{1j} \text{Race}_{ij} + r_{ij} \quad (2)$$

$$\beta_{0j} = \gamma_{00} + \mu_{0j}$$

$$\beta_{1j} = \gamma_{10} + \mu_{1j}$$

In the multilevel Eq. (2), the coefficients are subscripted with a j to indicate that each school j has a unique racial gap. The model-implied mean within-school gap is indicated by γ_{10} in the level-2 equation. The proportion of the overall statewide racial school climate gap that is attributable to within-school disparities can be estimated by dividing γ_{10} in Eq. (2) by β_1 in Eq. (1).

To address the second research question, another set of multilevel models were estimated to determine the relationship between the model-implied racial climate gap, β_1 , of school j and its racial achievement gap. School-level covariates indicating the racial achievement gap, $AchGap$, and the overall academic performance, Ach , were added to the level-2 equations that solve for the intercept and slope:

$$\beta_{0j} = \gamma_{00} + \gamma_{01} \text{AchGap}_j + \gamma_{02} \text{Ach}_j + \mu_{0j} \quad (3)$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11} \text{AchGap}_j + \gamma_{12} \text{Ach}_j + \mu_{1j}$$

The coefficient γ_{11} indicates the model-implied association between a school’s racial school climate and achievement gaps, controlling for the overall academic performance of the school.

To address the third research question, another set of multilevel models were estimated to determine the relationship between the model-implied racial climate gap, β_1 , of school j and its structural characteristics. Six school-level covariates were added to the level-2 equations, indicating the percentage of students in a school who were (1)

Black or Hispanic (depending on the analytic sample) and (2) low-income, the (3) student–teacher ratio, the (4) percentage of teachers in the school who were Black or Hispanic (depending on the analytic sample), and binary variables indicating whether the school was in (5) a suburban location or (6) a rural location (urban location was the reference category).

$$\beta_{0j} = \gamma_{00} + \sum_{k=1}^6 \gamma_{0k} \text{Structure}_{kj} + \mu_{0j}$$

$$\beta_{1j} = \gamma_{10} + \sum_{k=1}^6 \gamma_{1k} \text{Structure}_{kj} + \mu_{1j}$$
(4)

Each of the six coefficients, γ_{11} through γ_{16} , provide an estimate of the relationship between an aspect of school structure and the racial school climate gap, controlling for other aspects of school structure.

In the final set of models, a school-level covariate indicating norms of respect for diversity was added to the level-2 Eq. (4) to address the fourth research question. The coefficient associated with norms of respect for diversity estimated the relationship between the magnitude of a school's racial climate gap and its norm of respect for diversity, controlling for school structural characteristics.

Due to the standardization procedures described above, coefficients estimated by these multilevel models can be treated as standardized regression coefficient effect sizes. We further report the percentage of the overall cross-school variance in racial school climate gaps that is explained by each set of covariates. Multilevel models were estimating using a maximum likelihood approach. There were no missing data on the school-level covariates and less than 1 % of cases had missing data on student survey constructs. This lack of missing data may be due to the fact that schools are required to administer the surveys, as noted above, and typically devote instructional time to allow students to complete them.

Results

The results of the study analyses are reported below, organized according to the four research questions. Standardized regression coefficients and p values are reported in parentheses (“n.s.” indicates that the coefficient was not significant at the $p < .05$ level).

Research Question #1: Do Racial School Climate Gap Exists Within Particular Schools?

The analyses showed that, for both racial comparisons and for most school climate dimensions, significant gaps existed within schools (Table 3). In schools with significant

numbers of both Black and White students, Black students reported, on average, lower levels of safety and connectedness ($\gamma = 0.154$, $p < 0.001$) and adult-student relationships ($\gamma = 0.077$, $p < 0.05$). There was significant variation across the 46 sample schools in the magnitude of the Black–White gap in safety and connectedness ($SD = 0.117$). However, the within-school gap in adult-student relationships did not vary across schools ($SD < 0.001$), suggesting that in the 46 sample schools, the Black–White gap was more or less steady at 0.077. On average across the Black–White subsample, there was no significant within-school gap in opportunities for meaningful participation between Black and White students. However, there was substantial variation in this subgroup difference across the 46 sample schools ($SD = 0.088$). In other words, the average Black–White gap in opportunities for meaningful participation across the 46 schools was not significantly different from zero, but the cross-school variation in the gap suggests that in certain schools it was larger, smaller, or reversed direction.

The results showed an overall statewide gap in experiences of safety and connectedness ($\beta = 0.202$, $p < 0.001$) and adult-student relationships ($\beta = 0.090$, $p < 0.001$) between Black and White students and suggested that these overall gaps were due more to disparities *within* schools (76 and 86 %, respectively) rather than to inequalities between schools segregated by race.

In schools with significant numbers of both Hispanic and White students, Hispanic students reported lower levels of safety and connectedness ($\gamma = 0.049$, $p < 0.001$), adult-student relationships ($\gamma = 0.151$, $p < 0.001$), and opportunities for meaningful participation ($\gamma = 0.155$, $p < 0.001$). There was substantial variation across the 420 sample schools in the magnitude of the Hispanic–White gap in safety and connectedness ($SD = 0.067$) and adult-student relationships ($SD = 0.079$). However the within-school gap in perceived opportunities for meaningful participation did not vary across schools ($SD < 0.001$), suggesting that the Hispanic–White gap was more or less constant at 0.155 across all of the sample schools.

The results further showed overall statewide Hispanic–White gaps in adult-student relationships ($\beta = 0.182$, $p < 0.001$) and opportunities for meaningful participation ($\beta = 0.190$, $p < 0.001$) and suggested that these overall gaps were due more to within-school (83 and 82 %, respectively) rather than between-school disparities. The results further showed an overall statewide Hispanic–White gap in safety and connectedness ($\beta = 0.130$, $p < 0.001$); however, the results suggested that this gap was due more to differences between schools, which are often segregated by race (37 % of the overall statewide gap was due to within-school disparities).

Because the subsequent analyses attempted to explain variation in within-school racial climate gaps using school-

Table 3 Within-school means and standard deviations of racial school climate gaps (standard errors in parentheses and percent of total gap attributable to within- versus between-school disparities in italics)

	Safety and connectedness		Adult-student relationships		Opportunities for participation	
	M	SD	M	SD	M	SD
Black-White within-school gap (<i>N</i> = 46 schools)	0.154*** (0.039) <i>76 %</i>	0.117	0.077* (0.034) <i>86 %</i>	<0.001	0.008 (0.036) <i>n/a</i>	0.088
Hispanic-White within-school gap (<i>N</i> = 420 schools)	0.049*** (0.009) <i>37 %</i>	0.067	0.151*** (0.009) <i>83 %</i>	0.079	0.155*** (0.008) <i>82 %</i>	<0.001

Only schools with a significant number of Black and White students and Hispanic and White students, respectively, were included in the two sets of analyses

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

level covariates, those gaps that did *not* vary across schools were not included (i.e., Black-White gap in adult-student relationships and Hispanic-White gap in student participation).

Research Question #2: Are Schools' Racial Climate Gaps Associated with Their Racial Achievement Gaps?

The first set of multilevel regression models included school racial achievement gaps and overall school academic performance as predictors of within-school racial climate gaps. In general, the results showed that there is a significant relationship between the racial climate gap and racial achievement gap in a middle school. Holding constant overall academic performance, schools with larger Black-White achievement gaps had larger Black-White gaps in perceived safety and connectedness ($\gamma = 0.095$, $p < 0.05$) and opportunities for participation ($\gamma = 0.084$, $p < 0.05$; see Table 4). This suggests that in a school with *no* Black-White achievement gap—equity between the two groups—there would be no significant difference in reports of safety and connectedness between Black and White students (see Fig. 3), and Black students would report significantly *more* opportunities for meaningful participation compared to their White peers by 0.15 standard deviation units.

The same general findings, with lesser magnitudes, were evident for Hispanic-White disparities (see Table 5). Again, holding constant overall academic performance, schools with larger Hispanic-White achievement gaps had larger Hispanic-White gaps in perceived safety and connectedness ($\gamma = 0.029$, $p < 0.001$) and adult-student relationships ($\gamma = 0.025$, $p < 0.01$). This suggests that in a school with *no* Hispanic-White achievement gap, there would be no significant difference in reports of safety and

connectedness between Hispanic and White students, and the gap in adult-student relationships between Hispanic and White students would be reduced by half that in an average school (Fig. 4).

Research Question #3: What School Structural Characteristics are Associated with the Magnitude of its Racial Climate Gap?

The third set of multilevel regression models added a series of school-level structural variables to the model to help explain variation in within-school racial climate gaps. In sum, few structural characteristics were significantly related to either the Black-White or Hispanic-White school climate gaps. Schools with more low-income students ($\gamma = -0.091$, $p < 0.05$) and larger student-teacher ratios ($\gamma = -0.084$, $p < 0.05$) had smaller Black-White gaps in safety and connectedness. Point estimates suggested that, with all other structural characteristics fixed at the sample mean, there is no significant gap in safety and connectedness between Black and White students in schools where more than 60 % of students are low-income or where the student-teacher ratio is 23 or higher. A higher concentration of low-income students is associated with reduced safety and connectedness for both Black and White students, but this negative association is stronger among White students. This suggests that, in general, Black-White gaps in safety and connectedness are more prominent in higher income, highly staffed schools.

As with the Black-White sample, schools that serve more low-income students had smaller Hispanic-White gaps in safety and connectedness ($\gamma = -0.045$, $p < 0.05$). Point estimates suggested that in schools where more than 52 % of students are low-income, there is no significant Hispanic-White gap. As with the Black-White sample, a higher concentration of low-income students is associated

Table 4 Multilevel regression results with random-slopes for Black-White school climate gaps and school-level covariates ($n = 3798$ students in 46 schools)

	Safety and connectedness			Opportunities for participation		
1. Within-school Black-White gap in outcome	0.141*** (0.037)	0.145*** (0.038)	0.149*** (0.035)	0.002 (0.036)	-0.002 (0.037)	0.002 (0.035)
1a. School Black-White achievement gap	0.092* (0.037)			0.085* (0.036)		
1b. School overall academic performance	0.056 (0.038)			0.063 (0.037)		
1c. School-wide respect for diversity			-0.067 (0.037)			-0.069 (0.037)
1d. School percent Black students		-0.040 (0.048)	-0.042 (0.045)		0.017 (0.047)	0.013 (0.045)
1e. School percent low-income students		-0.091* (0.044)	-0.114 (0.042)**		-0.061 (0.043)	-0.084 (0.041)*
1f. School student-teacher ratio		-0.084* (0.041)	-0.101 (0.039)*		-0.043 (0.040)	-0.059 (0.039)
1g. School percent Black teachers		0.085 (0.044)	0.083 (0.042)		-0.005 (0.043)	-0.003 (0.042)
1h. Suburban location		-0.012 (0.049)	-0.014 (0.046)		0.006 (0.048)	0.002 (0.045)
1i. Rural location		-0.056 (0.047)	-0.056 (0.044)		-0.020 (0.046)	-0.024 (0.043)
19 %		<1 %	58 %	15 %	<1 %	67 %

Not shown in the results table are main effect coefficients for variables 1a–1i

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

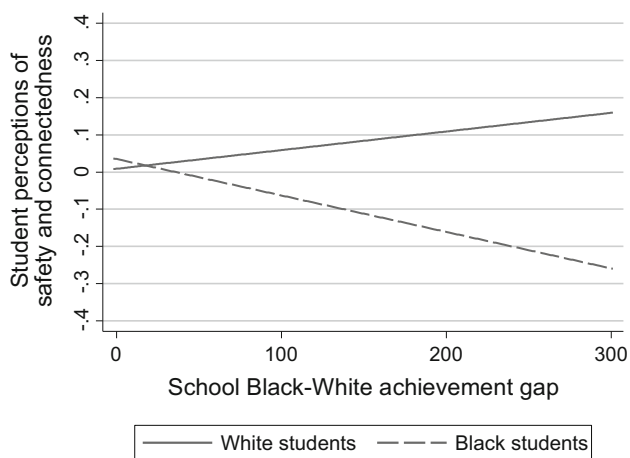


Fig. 3 Relationship between school Black-White achievement gap and student report of safety and connectedness, by race

with reduced safety and connectedness for both Hispanic and White students, but this negative association is stronger among White students. Further, rural schools had smaller Hispanic-White gaps in safety and connectedness than did urban schools ($\gamma = -0.019$, $p < 0.05$). This suggests that, in general, Hispanic-White gaps in safety and connectedness are more prominent in higher income, urban schools.

Because the Black-White sample was smaller (46 schools versus 420 schools in the Hispanic-White sample),

models based on that sample had less power to detect significant school-level effects. For instance, despite not reaching statistical significance, the estimated effect sizes for the rural covariate on gaps in safety and connectedness was actually larger for the Black-White ($\gamma = -0.056$, n.s.) than for the Hispanic-White sample.

Research Question #4: Is a School's Norm of Respect for Diversity Associated with the Magnitude of its Racial Climate Gap?

A stronger norm of respect for diversity in a school, as reported by teachers, was related to smaller Black-White school climate gaps ($\gamma = -0.067$ for safety and connectedness; $\gamma = -0.069$ for opportunities for meaningful participation), but while these associations approached statistical significance, they did not meet the $p < 0.05$ criterion. In the Hispanic-White sample, the results suggested, paradoxically, that schools with higher norms of respect for diversity had larger Hispanic-White gaps in safety and connectedness ($\gamma = 0.018$, $p < 0.05$), controlling for school structural characteristics. Of note, school norms of respect for diversity have a significant positive relationship with the reported safety and connectedness of both Hispanic and White students, but because the relationship is significantly stronger for White students, higher

Table 5 Multilevel regression results with random-slopes for Hispanic–White school climate gaps and school-level covariates ($n = 70,427$ students in 420 schools)

	Safety and connectedness			Adult-student relationships		
I. Within-school Hispanic–White gap in outcome	0.032*** (0.009)	0.030*** (0.009)	0.029*** (0.009)	0.140*** (0.009)	0.147*** (0.010)	0.146*** (0.010)
1a. School Hispanic–White achievement gap	0.030*** (0.009)			0.025** (0.009)		
1b. School academic performance	0.047*** (0.009)			–0.008 (0.009)		
1c. School-wide respect for diversity			0.018* (0.009)			0.016 (0.010)
1d. School percent Hispanic students		–0.018 (0.016)	–0.018 (0.016)		0.026 (0.017)	0.025 (0.016)
1e. School percent low-income students		–0.045* (0.014)	–0.042** (0.014)		–0.016 (0.015)	–0.014 (0.015)
1f. School student–teacher ratio		–0.018 (0.009)	–0.018 (0.009)		–0.010 (0.010)	–0.010 (0.010)
1g. School percent Hispanic teachers		–0.004 (0.012)	–0.004 (0.012)		0.000 (0.012)	0.000 (0.012)
1h. Suburban location		–0.009 (0.010)	–0.008 (0.010)		–0.007 (0.011)	–0.006 (0.011)
1i. Rural location		–0.019 (0.009)*	–0.016 (0.010)		–0.010 (0.010)	–0.008 (0.010)
Percentage of overall cross-school variance in Hispanic–White gap explained by school-level covariates	13 %	27 %	21 %	8 %	8 %	6 %

Not shown in the results table are main effect coefficients for variables 1a–1i

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

norms of respect for diversity in a school are actually associated with larger subgroup gaps.

Discussion

The findings from this study problematize the concept of a “school climate” by showing that different student racial subgroups within a particular middle school may have significantly different experiences of safety, connectedness, relationships with adults, and opportunities for participation. In middle schools with significant numbers of Black and White students, Black students, on average, reported poorer safety and connectedness and adult-student relationships than White students. In middle schools with significant numbers of Hispanic and White students, Hispanic students, on average, reported poorer safety and connectedness, adult-student relationships, and opportunities for meaningful participation. Just as previous research has illustrated racial gaps in achievement and discipline, this study shows that students’ experiences of school climate may also be function of race. Discussing climate as a whole school phenomenon, therefore, may obscure

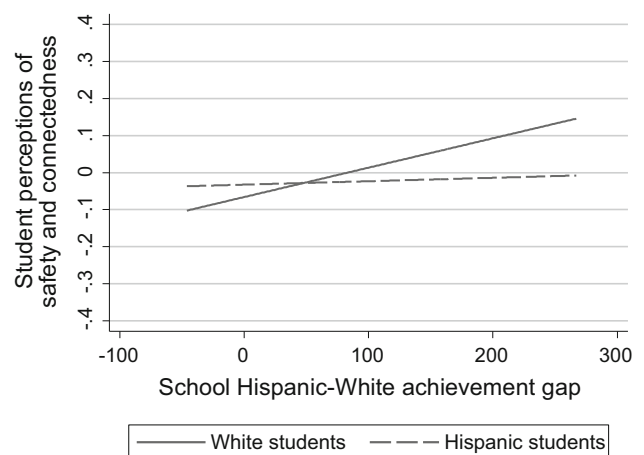


Fig. 4 Relationship between school Hispanic–White achievement gap and student report of safety and connectedness, by race

important inequities. To borrow a term from the atmospheric sciences, school climate may better be understood as a series of “microclimates” within a school that are organized around student identity. For example, schools may, at once, create an environment characterized by

safety and connectedness for White students and one characterized by lack of safety and disconnectedness for Black students.

This study also shows that Black–White gaps in safety and connectedness and opportunities for participation and Hispanic–White gaps in safety and connectedness and adult–student relationships vary across middle schools. That is, these gaps are larger or smaller from school to school. In middle schools where these gaps are larger, the racial achievement gap is also larger. In middle schools where these gaps are smaller, the racial achievement gap is smaller. There is a significant association between racial disparities in achievement and climate within a given school. While causality cannot be inferred from these cross-sectional analyses, the results point to the racial school climate gap as a potential source of inequities in achievement. This finding represents evidence contrary to the “cultural” explanation (e.g., that minority peer groups reward disengagement or that certain racial identities are not conducive to valuing academic success) for the racial achievement gap, suggesting instead that middle school environments are systematically perceived as less welcoming, nurturing, and engaging for students of color.

Why might some middle schools have larger racial climate gaps than others? Few of the school structural characteristics examined in this study helped explain cross-school variation in climate gaps. The socioeconomic status of students, student–teacher ratio, and geographic location may offer some explanation. While there was evidence for a racial gap in safety and connectedness in low-poverty schools, the gap was insignificant in poorer, under-resourced schools. In these latter schools, results suggested that all students, regardless of race, had more or less equally low reports of safety and connectedness. An increase in socioeconomic and human resources to a school appear to benefit all students’ feelings of safety and connectedness, but White students seem to benefit more than their Black and Hispanic peers.

Similarly, all students appear to have more positive experiences of school climate in schools that create a strong norm of respect for diversity by prioritizing closing the achievement gap, training staff in multicultural competencies, and reflecting students’ ethnic background in course curricula. However, the present results suggest that White students benefit more from this norm than Hispanic students, thus widening that racial gap in felt safety and connectedness. This suggests that the activities that many schools undertake with the express purpose of closing racial gaps and appreciating diversity may “lift all boats” but may not help students of color, in particular.

Limitations

This study is descriptive and exploratory, and due to its cross-sectional design, its findings are insufficient evidence to draw casual conclusions regarding model variables. The study results would not allow one to assert that a racial climate gap causes a racial achievement gap or that certain school structures and norms cause a racial climate gap. There are potential third-variable explanations for the associations demonstrated in the study, as are there questions regarding the directionality of the associations.

Participating schools in this study were solely from California, which has a unique racial, ethnic, and cultural landscape that may limit the generalizability of these findings to other contexts. Further, this study makes no distinction among various Black or among various Hispanic cultures or national origins, all of which may have different school experiences. Previous research has shown that Mexican–Americans, for example, had lower math and reading standardized test scores than other Hispanic students (Eamon 2005).

Additionally, norms of respect for diversity were measured by teacher report only, and students’ perspectives of norms of respect for diversity are not captured. Furthermore, regarding norms of respect for diversity, teachers were not asked to specify which races, ethnicities, or cultures are the focus of curriculum, professional development, or other interventions. Thus, a teacher could report a strong norm of respect for diversity in his or her school while not considering a particular subgroup like Hispanic students.

Finally, the internal consistency of the opportunities for meaningful participation construct is slightly below the commonly accepted cutoff for good reliability attributed to Nunnally (1978), although this construct was also made up of the fewest items, and a small number of items in a scale strongly reduces alpha values (Cortina 1993).

Implications

Implications for Future Research

In light of this study’s findings, future research on school climate may consider whether school climate is usefully measured as a school-average of individual student reports, the approach most commonly employed (Henry, in press). This study shows that there are significant differences in school climate experiences among various student subgroups within a school; thus, simply averaging all students’ reports to create a single school-level score may obscure important information regarding unique subgroup climates.

Researchers may consider treating student subgroups as a level of analysis, apart from schools or classrooms. This study is also unable to explain how much of the racial climate gap is a function of the different ways in which students of different races may interpret their school environment versus objective differences in treatment of students of different races. A more in-depth qualitative investigation of the experiences of students in mixed race schools could contribute in this area.

Furthermore, there are still many questions regarding why some schools have more pronounced racial school climate gaps than others. What explains this variation across schools and what can be done to close racial school climate gaps? Future exploratory research could consider other characteristics of schools that might explain cross-school variation in racial. Experimental and quasi-experimental research could assess the effectiveness of school interventions in reducing within-school climate gaps. For example, a sample of schools could be divided randomly into a treatment and control group to test whether a restorative justice program reduces disparities in experiences of safety and connectedness between Black and White students in the treatment schools.

Practical Implications

There is increased educational policy interest in school climate of late, at the federal, state, and local levels. Policymakers are encouraging schools to address issues like safety, connectedness, adult-student relationships, and meaningful student participation, and many of these initiatives require schools to measure their climate using student, staff, and parent surveys. The results of this study suggest that such measurement efforts would benefit from reporting survey results disaggregated by student subgroups to allow educators to assess racial (and other forms of difference) gaps in school climate. It would also be prudent for the evaluation and monitoring requirements of school climate policies to consider student subgroup indicators alongside whole school indicators of climate. Furthermore, the activities that schools implement to improve climate should be sensitive to student diversity. For example, a common school climate improvement intervention involves “universal” instruction in social skills (Osher et al. 2010); the present study suggests that educators should carefully consider how responsive such universal interventions are to the cultural experiences of all student subgroups and whether to adjust interventions accordingly. As the results show, this latter point may be of particular concern for more affluent schools. Finally, schools that undertake efforts to address “respect for diversity” should be sensitive to and inclusive of all student subgroups that they serve.

References

- 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. doi:10.1007/s10464-011-9443-0.
- Bevans, K. B., Bradshaw, C. P., Miech, R., & Leaf, P. J. (2007). Staff- and school-level predictors of school organizational health: A multilevel analysis. *Journal of School Health*, *77*(6), 294–302.
- 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*(6), 567–582. doi:10.1016/j.jsp.2014.09.003.
- Bradshaw, C. P., Sawyer, A. L., & O’Brennan, L. M. (2009). A social disorganization perspective on bullying-related attitudes and behaviors: The influence of school context. *American Journal of Community Psychology*, *43*(3–4), 204–220. doi:10.1007/s10464-009-9240-1.
- Brand, S., Felner, R., Shim, M., Seitsinger, A., & Dumas, T. (2003). Middle school improvement and reform: Development and validation of a school-level assessment of climate, cultural pluralism, and school safety. *Journal of Educational Psychology*, *95*(3), 570–588. doi:10.1037/0022-0663.95.3.570.
- California Department of Education. (2011). *DataQuest Retrieved* February 1, 2015, from <http://dq.cde.ca.gov>.
- Chang, J., & Le, T. N. (2010). Multiculturalism as a dimension of school climate: The impact on the academic achievement of Asian American and Hispanic youth. *Cultural Diversity and Ethnic Minority Psychology*, *16*(4), 485–492.
- Clotfelter, C. T., Ladd, H. F., & Vigdor, J. L. (2009). The academic achievement gap in grades 3 to 8. *The Review of Economics and Statistics*, *91*(2), 398–419.
- Cohen, J., McCabe, E. M., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teachers College Record*, *111*(1), 180–213.
- Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., & York, R. L. (1966). *Equality of educational opportunity*. Washington, DC: U.S. Department of Health, Education, and Welfare, Office of Education.
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, *78*(1), 98–104.
- Datnow, A., & Cooper, R. (1997). Peer networks of African American students in independent schools: Affirming academic success and racial identity. *Journal of Negro Education*, *66*(1), 56–72.
- Duncan, G. J., & Murnane, R. J. (Eds.). (2011). *Whither opportunity? Rising inequality, schools, and children’s life chances*. New York: Russell Sage Foundation.
- Eamon, M. K. (2005). Social-demographic, school, neighborhood, and parenting influences on the academic achievement of latino young adolescents. *Journal of Youth and Adolescence*, *34*(2), 163–174. doi:10.1007/s10964-005-3214-x.
- Eccles, J. S., Wigfield, A., Midgley, C., Reuman, D., Mac Iver, D., & Feldlaufer, H. (1993). Negative effects of traditional middle schools on students’ motivation. *The Elementary School Journal*, *93*(5), 553–574.
- Fan, W., Williams, C. M., & Corkin, D. M. (2011). A multilevel analysis of student perceptions of school climate: The effect of social and academic risk factors. *Psychology in the Schools*, *48*(6), 632–647.
- Fryer, R. G. (2010). The importance of segregation, discrimination, peer dynamics, and identity in explaining trends in the racial achievement gap: National Bureau of Economic Research, Working paper No. 16257.

- Fryer, R. G., & Levitt, S. D. (2004). Understanding the Black–White test score gap in the first two years of school. *The Review of Economics and Statistics*, 86(2), 447–464.
- Goldsmith, P. A. (2004). Schools' racial mix, students' optimism, and the Black–White and Latino–White achievement gaps. *Sociology of Education*, 77(2), 121–147.
- Gregory, A., Henry, D. B., & Schoeny, M. E. (2007). School climate and implementation of a preventive intervention. *American Journal of Community Psychology*, 40(3–4), 250–260. doi:10.1007/s10464-007-9142-z.
- Gregory, A., Skiba, R. J., & Noguera, P. A. (2010). The achievement gap and the discipline gap: Two sides of the same coin? *Educational Researcher*, 39(1), 59–68. doi:10.3102/0013189x09357621.
- Hanson, T., & Voight, A. (2014). *The appropriateness of a California student and staff survey for measuring middle school climate*. Washington, DC: U.S. Department of Education, Institute for Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory West.
- Hanushek, E. A., & Rivkin, S. G. (2006). *School quality and the Black-White achievement gap: National Bureau of Economic Research*, Working paper No. 12651.
- Henry, D. (in press). More than metaphor: Conceptualization and measurement of social setting characteristics. In M. A. Bond, C. Keys & I. Serrano-Garcia (Eds.), *Handbook of Community Psychology*. Washington, DC: American Psychological Association.
- Hill, D. D. (1993). Afrocentric movements in education: Examining quality, culture, and power relations in the public schools. *Hastings Constitutional Law Quarterly*, 20, 681–724.
- Johnson, S. L., Burke, J. G., & Gielen, A. C. (2012). Urban students' perceptions of the school environment's influence on school violence. *Children and Schools*, 34(2), 92–102.
- Katz, R., & Kahn, D. (1978). *The social psychology of organizations*. New York: Wiley.
- Khoury-Kassabri, M., Benbenishty, R., Astor, R. A., & Zeira, A. (2004). The contributions of community, family, and school variables to student victimization. *American Journal of Community Psychology*, 34(3/4), 187–204.
- 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. doi:10.1007/s10464-014-9659-x.
- Koth, C. W., Bradshaw, C. P., & Leaf, P. J. (2008). A multilevel study of predictors of student perceptions of school climate: The effect of classroom-level factors. *Journal of Educational Psychology*, 100(1), 96–104. doi:10.1037/0022-0663.100.1.96.
- Kuperminc, G. P., Leadbeater, B. J., Emmons, C., & Blatt, S. J. (1997). Perceived school climate difficulties in the social adjustment of middle school students. *Applied Developmental Science*, 1(2), 76–88.
- Lewis, K. M., Sullivan, C. M., & Bybee, D. (2006). An experimental evaluation of a school-based emancipatory intervention to promote African American well-being and youth leadership. *Journal of Black Psychology*, 32(1), 3–28. doi:10.1177/0095798405283229.
- Losen, D. J. (Ed.). (2015). *Closing the school discipline gap: Equitable remedies for excessive exclusion*. New York: Teachers College Press.
- 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(1/2), 1–12. doi:10.1007/s10464-007-9128-x.
- McCoy, D. C., Roy, A. L., & Sirkman, G. M. (2013). Neighborhood crime and school climate as predictors of elementary school academic quality: A cross-lagged panel analysis. *American Journal of Community Psychology*, 52(1/2), 128–140. doi:10.1007/s10464-013-9583-5.
- Meier, K. J., Wrinkle, R. D., & Polinard, J. L. (1999). Representative bureaucracy and distributional equity: Addressing the hard question. *Journal of Politics*, 61(4), 1025–1039.
- Mitchell, M. M., Bradshaw, C. P., & Leaf, P. J. (2010). Student and teacher perceptions of school climate: A multilevel exploration of patterns of discrepancy. *Journal of School Health*, 80(6), 271–279.
- Moos, R. H. (1973). Conceptualizations of human environments. *American Psychologist*, 28, 652–665.
- Moos, R. H. (1987). Person-environment congruence in work, school, and health care settings. *Journal of Vocational Behavior*, 31, 231–247.
- Noguera, P. A. (2003). *City schools and the American dream: Reclaiming the promise of public education*. New York: Teachers College Press.
- Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.
- Osher, D., Bear, G. G., Sprague, J. R., & Doyle, W. (2010). How can we improve school discipline? *Educational Researcher*, 39(1), 48–58. doi:10.3102/0013189x09357618.
- Page, L. C., Murnane, R. J., & Willett, J. B. (2008). *Trends in the Black–White achievement gap: Clarifying the meaning of within- and between-school achievement gaps*, NBER Working Paper (Vol. 14213). Cambridge, MA: National Bureau of Economic Research.
- Rabe-Hesketh, S., & Skrondal, A. (2012). *Multilevel and longitudinal modeling using Stata: Continuous responses* (3rd ed.). College Station, TX: Stata Press.
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: Sage.
- Sarason, S. B. (1996). *Revisiting: "The culture of the school and the problem of change"*. New York: Teachers College Press.
- Schultz, L. H., Barr, D. J., & Selman, R. L. (2001). The value of a developmental approach to evaluating character development programmes: An outcome study of Facing History and Ourselves. *Journal of Moral Education*, 30(1), 3–27. doi:10.1080/03057240120033785.
- Seidman, E. (1988). Back to the future, community psychology: Unfolding a theory of social intervention. *American Journal of Community Psychology*, 16(1), 3–24.
- Seidman, E., & Cappella, E. (in press). Setting-based interventions. In M. A. Bond, C. Keys & I. Serrano-Garcia (Eds.), *Handbook of Community Psychology*. Washington, DC: American Psychological Institute.
- Shirley, E. L. M., & Cornell, D. G. (2012). The contribution of student perceptions of school climate to understanding the disproportionate punishment of African American students in a middle school. *School Psychology International*, 33(2), 115–134.
- 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.
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69(5), 797–811.
- Tan, G. (1999). Perceptions of multiculturalism and intent to stay in school among Mexican American students. *Journal of Research and Development in Education*, 33(1), 1–14.
- Tebes, J. K. (2005). Community science, philosophy of science, and the practice of research. *American Journal of Community Psychology*, 35(3/4), 213–230. doi:10.1007/s10464-005-3399-x.
- Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, 83(3), 357–385. doi:10.3102/0034654313483907.

- Trickett, E. J., & Moos, R. H. (1974). Social environment of junior high and high school classrooms. *Journal of Educational Psychology, 85*, 93–102.
- Tseng, V., & Seidman, E. (2007). A systems framework for understanding social settings. *American Journal of Community Psychology, 39*(3/4), 217–228. doi:[10.1007/s10464-007-9101-8](https://doi.org/10.1007/s10464-007-9101-8).
- U.S. Department of Education. (2014). *Guiding principles: A resource guide for improving school climate and discipline*. Washington, DC: Author.
- Voight, A., Austin, G., & Hanson, T. (2013). *A climate for academic success: How school climate distinguishes schools that are beating the achievement odds*. San Francisco: WestEd.
- Voight, A., Geller, J. D., & Nation, M. (2014). Contextualizing the “behavior gap”: Student prosocial behavior and racial composition in urban middle schools. *Journal of Early Adolescence, 34*(2), 157–177.
- Warikoo, N., & Carter, P. (2009). Cultural explanations for racial and ethnic stratification in academic achievement: A call for a new and improved theory. *Review of Educational Research, 79*(1), 366–394. doi:[10.3102/0034654308326162](https://doi.org/10.3102/0034654308326162).
- Waters, S., Cross, D., & Shaw, T. (2010). Does the nature of schools matter? An exploration of selected school ecology factors on adolescent perceptions of school connectedness. *British Journal of Educational Psychology, 80*(3), 381–402. doi:[10.1348/000709909X484479](https://doi.org/10.1348/000709909X484479).
- Way, N., Reddy, R., & Rhodes, J. (2007). Students’ perceptions of school climate during the middle school years: Associations with trajectories of psychological and behavioral adjustment. *American Journal of Community Psychology, 40*(3–4), 194–213. doi:[10.1007/s10464-007-9143-y](https://doi.org/10.1007/s10464-007-9143-y).
- Weinstein, R. S. (2002). Overcoming inequality in schooling: A call to action for community psychology. *American Journal of Community Psychology, 30*(1), 21–42.