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EDITED BY

Sipho Dlamini,
University of Johannesburg, South Africa

REVIEWED BY

Hassan Ahdi,
Global Institute for Research Education &
Scholarship, Netherlands
Thandokazi Maseti,
University of Johannesburg, South Africa

*CORRESPONDENCE

Sandra Graham
✉ graham@gseis.ucla.edu

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Context matters: how relative representation shapes Black and Latiné adolescents' perceptions of school ethnic climate and discrimination

Amirah Saafir¹, Jessica Morales-Chicas², Kara Kogachi³ and
Sandra Graham^{4*}

¹Department of Child and Adolescent Studies, California State University, Fullerton, CA, United States,

²Department of Child and Family Studies, California State University, Los Angeles, CA, United States,

³Department of Child Development, California State University, Dominguez Hills, CA, United States,

⁴Department of Education, University of California, Los Angeles, Los Angeles, CA, United States

Introduction: The current study used path analysis to examine Black and Latiné students' experiences with discrimination at school as a function of relative representation and perceptions of the school ethnic climate.

Method: Participants included 2,063 United States eighth graders (51% female; $M = 13.33$ years) who self-identified as Black (24%) or Latiné (76%).

Results: Results indicated that relative representation significantly predicted perceptions of the school ethnic climate such that, overrepresentation in class compared to the broader school context was associated with less favorable perceptions of the school ethnic climate, as measured by teacher support norms around diversity ($b = -0.42$, $p < 0.001$). In turn, less positive perceptions of teacher support norms predicted greater perceived discrimination from both adults ($b = -0.78$, $p < 0.001$) and peers ($b = -0.35$, $p < 0.001$).

Discussion: These findings highlight the importance of considering relative representation and underscore the critical role of teachers in fostering classroom environments that support ethnic and racial diversity and reduce discriminatory experiences for Black and Latiné youth.

KEYWORDS

school ethnic climate, relative representation, discrimination, teachers, classroom representation

1 Introduction

Amid ongoing sociopolitical debates over race and equity in education, understanding the factors that shape students' experiences of discrimination in schools is more critical than ever. Students spend the majority of their waking days at school, yet the school environment can be a site where discrimination manifests itself through both systemic bias and negative interactions with peers or teachers. Racial and ethnic discrimination refers to events or situations where minoritized youth experience differential and negative treatment because of their racial and ethnic background (e.g., unfair treatment or bias) (Civitillo et al., 2024). Prior research on racial and ethnic discrimination shows a multitude of negative outcomes for youth across psychological, academic, and social domains (Benner et al., 2018). For Black and Latiné youth, experiences of discrimination may be compounded by systemic biases (e.g., biased curriculum and academic racialized tracking)

in educational settings (Benner, 2017; Bottiani et al., 2017; McWhirter et al., 2018), making it imperative to examine the ways both classroom and school contexts contribute to perceptions of racial and ethnic discrimination.

The racial and ethnic composition of schools and classrooms plays a pivotal role in shaping students' experiences of discrimination (Wright and Harper, 2020). Prior research suggests that elements of the school's racial and ethnic composition—such as overall diversity, the proportion of minoritized peers, and the availability of same-race and same-ethnic peers—also influence perceptions of racial and ethnic discrimination at school (e.g., Baysu et al., 2024; Benner and Graham, 2013; Seaton and Douglass, 2014). Similarly, perceptions of the school's racial and ethnic climate (i.e., students' perceptions of inclusion, fairness, and racial and ethnic dynamics) can influence how frequently students report experiencing racial discrimination (Baysu et al., 2024; Benner and Graham, 2013). Important, but less understood, is the way relative representation between the racial and ethnic composition of individual classrooms and the broader school context impacts perceptions of the school's ethnic climate and racial and ethnic discrimination. Given that systemic factors, such as academic tracking, can contribute to mismatches between these contexts (Graham, 2018), discrepancies between an adolescents' relative representation in their classrooms and schools have important implications for heightening the salience of racialized experiences in schools, and in turn, perceptions of discrimination.

To further unpack this phenomenon, we were specifically interested in how the relative representation at the school compared to the classroom level (i.e., degree of mismatch) might influence Black and Latiné students' perceived racial and ethnic climate and their subsequent perceptions of discrimination from teachers and peers. Understanding how the racial and ethnic composition of schools and classrooms affects experiences of discrimination is critical to creating school ethnic climates that support all students' wellbeing and success.

1.1 Literature review

Racial and ethnic discrimination remains a pervasive social issue that negatively affects youth of color academically (Benner et al., 2018; Brown and Tam, 2019; Civitillo et al., 2024; D'hondt et al., 2016; Huynh and Fuligni, 2010; Wong et al., 2003), psychologically (e.g., worse depressive symptoms and lower self-esteem), and even physically (e.g., somatic complaints and sleep disturbances) (Benner et al., 2018; Benner and Graham, 2013; Davis et al., 2016; Greene et al., 2006; Huynh and Fuligni, 2010; Schafer, 2023; Seaton and Douglass, 2014; Wang and Yip, 2020). This issue is especially urgent for Black and Latiné youth, who face disproportionate levels of racial and ethnic discrimination in U.S. schools. As a result, it is critical to prioritize efforts that address its harmful effects on their development.

1.1.1 Teacher discrimination

Teachers are often at the helm of the discrimination experienced by students at school (Bennett et al., 2020; English

et al., 2020). In fact, Black and Latiné adolescents, in particular, have been found to report higher levels of teacher and adult discrimination compared to other groups (Greene et al., 2006; Huynh and Fuligni, 2010; Schafer, 2023). These discriminatory experiences can look like teacher grading bias, unfair discipline practices, negative stereotypes, and discouragement from joining more advanced courses because of students' race and ethnicity (Bottiani et al., 2017; Lambert et al., 2024; Rosenbloom and Way, 2004; Wong et al., 2003; Wegmann and Smith, 2019; Zanga and De Gioannis, 2023) and they are linked to negative school outcomes, such as less persistence, negative attitudes about school, weaker school bonding, and lower academic performance (Assari and Caldwell, 2018; Bryan et al., 2022; Stone and Han, 2005; McWhirter et al., 2018; Wayman, 2002). Taken together, the extant literature provides robust evidence of the ways teacher-based discrimination negatively affects Black and Latiné youth.

1.1.2 Peer discrimination

Peer discrimination also negatively impacts the academic and psychosocial outcomes of Black and Latiné adolescents. Peer discrimination appears in many forms, ranging from social exclusion, slurs, hitting, and teasing that are based on the victims' racial or ethnic group membership (Montoro et al., 2021). Unlike racial and ethnic teacher-based discrimination, which tends to affect the educational outcomes of youth, peer-based discrimination has a stronger link to the social-emotional wellbeing of youth (Benner and Graham, 2013; Benner and Wang, 2017; Benner et al., 2022; D'hondt et al., 2021; Greene et al., 2006). Peer discrimination is also associated with students' self-identities in relation to how they view their ethnic group (Rivas-Drake et al., 2009). Given the influence of both teacher and peer discrimination on academic and psychosocial wellbeing, it is important that we understand the role that school and classroom ethnic and racial composition may play in shaping these experiences for Black and Latiné youth.

1.1.3 School racial and ethnic composition

Ecological systems theory underscores the role of schools and their context in shaping youth development (Bronfenbrenner and Ceci, 1994). One key aspect of the school environment is its racial and ethnic composition, which includes both diversity (i.e., the overall presence of different racial and ethnic groups and their relative representation) and racial and ethnic representation, or the extent to which specific groups are proportionally reflected in students' classrooms (Conway-Turner et al., 2023). Past research shows that discrimination varies as a function of the racial and ethnic diversity of schools. For example, higher racial and ethnic diversity in schools has been linked to greater perceptions of discrimination among adolescents in the numerical ethnic minority (Seaton and Yip, 2009), possibly due to increased cross-group interactions and heightened awareness of racialized experiences (Diehl and Fick, 2016; Seaton and Yip, 2009). Alternatively, other studies found that greater diversity is associated with lower perceptions of racial and ethnic discrimination, suggesting that a more heterogeneous environment may reduce overt bias and exclusion (Bellmore et al., 2012). Thus, the role of school

diversity on perceived discrimination remains mixed, as greater exposure to different outgroup peers can both foster intergroup contact that reduces bias and expose students to more negative racialized experiences.

Building on research about how racial and ethnic diversity shapes experiences of discrimination, it is important to consider the specific role of representation, especially in schools where one racial or ethnic group is in the clear majority. Some studies suggest that having more same-race peers is associated with perceiving more discrimination from teachers and peers (Juvonen et al., 2006; Seaton and Yip, 2009). One possible explanation is that due to school resegregation trends along racial and socioeconomic lines, Black and Latiné youth in majority-minority schools are more likely to attend under-resourced institutions where stereotypes about Black and Brown students may be more prevalent. However, more recent research points in the opposite direction: greater representation of minoritized peers at school is associated with consistently lower reports of discrimination over time (Baysu et al., 2024), while increases in the proportion of outgroup members at school is associated with more reported discrimination of students (D'hondt et al., 2021). Additionally, perceiving more same-race peers in school can actually buffer the negative impact of discrimination on ethnic-racial identity (ERI) (Saafir and Graham, 2024). This may be due to the protective role that same-race and same-ethnic peers play in reinforcing positive feelings about one's racial and ethnic group and offering a supportive environment to process racialized experiences (Tatum, 2017). Together, it is clear that there is indeed a relationship between school racial and ethnic composition and experiences with perceived discrimination for Black and Latiné youth, albeit complex.

1.1.4 Mismatch between school and classroom racial and ethnic composition

Mixed findings on the impact of school racial and ethnic context on racial and ethnic discrimination may be due to the differences in representation within adolescents' academic classes. When school-wide diversity is not equitably reflected in classroom settings, the protective benefits of diversity and representation may be undermined. For example, Black students who were overrepresented in their academic classes (compared to the school) had lower achievement over time (Kogachi and Graham, 2020). One reason for this finding may be that the overrepresentation of students of color in certain academic classes is, in part, a result of historically segregated academic tracking systems rooted in institutional racism and racial inequality (Benner, 2017). As a result, Black and Latiné students are often overrepresented in lower academic tracks compared to their White and Asian peers, while significantly underrepresented in higher-level courses such as honors classes (McCardle, 2020). Experiencing these disparate contexts not only impacts student achievement but also their perception of the overall school environment and their place within it.

While no studies to date have examined the relative representation between the school and classroom racial and ethnic contexts on perceived racial and ethnic discrimination, prior studies suggest that relative representation both supports

and hinders developmental outcomes. Students in the numerical minority who were overrepresented within their classrooms compared to the broader school context reported lower school belonging over time, while those in more integrated classrooms did not experience this decline (Kogachi and Graham, 2020). Research on middle school diversity further supports this idea: greater school-wide diversity was linked to increased feelings of safety, perceptions of teacher fairness, and lower levels of peer victimization, loneliness, and outgroup distance (Juvonen et al., 2018). However, these benefits were magnified when classroom diversity mirrored school-wide diversity. Collectively, these findings suggest that alignment between the school and classroom composition may be important for supporting psychosocial wellbeing for Black and Latiné youth.

1.1.5 The role of ethnic climate

In addition to the racial and ethnic school and classroom composition, the school's ethnic climate also plays a critical role in shaping the racialized and discriminatory events experienced in school. School ethnic climate is defined by the frequency of cross-group interactions among students (peer association) and the perceived fairness of teacher treatment across racial and ethnic groups (teacher supportive norms) (Green et al., 1988). Past research indicates that perceptions of the school ethnic climate, as measured by both peer association and teacher supportive norms, serve as a more proximal influence on students' perceptions of discrimination from adults and peers than structural characteristics like school composition. For example, Benner and Graham (2013) found that perceptions of the school ethnic climate, assessed through teacher supportive norms and peer association, directly predicted perceptions of both adult and peer discrimination based on race and ethnicity. Although it might be expected that teacher supportive norms would predict adult discrimination and peer association would primarily shape peer-related discrimination, these findings suggest that students' perceptions of the broader school ethnic climate can generalize across relational domains and that the behaviors and norms established by teachers and peers are mutually influential. This is consistent with the conceptualization of school ethnic climate, which emphasizes that a school's ethnic climate is shaped by both adult behaviors and peer interactions (Green et al., 1988). For example, if a student perceives that adults fail to uphold inclusive norms or that peers do not associate along racial and ethnic lines, this can lead to intergroup tensions, which may in turn affect behaviors and interactions that can lead to greater experiences of discrimination. A school's racial and ethnic composition can shape how adolescents perceive that climate. For example, it has been found that greater school diversity is associated with less favorable perceptions of school ethnic climate, whereas having a higher proportion of same-race or same-ethnic peers predicts more positive perceptions of the school's racial and ethnic climate (Benner and Graham, 2013; Parris et al., 2018). Therefore, it is important to examine how both school ethnic climate and racial and ethnic composition predict perceptions of discrimination.

Perceptions of school ethnic climate are particularly important because they are closely tied to students' experiences of discrimination, and school racial and ethnic composition

plays a role in shaping both. Baysu et al. (2024) found that students attending schools with more minoritized peers and a climate that promoted diversity and equality were more likely to consistently report low discrimination; this suggests not only an association between school composition and climate, but also that a positive racial and ethnic climate can be protective. Similarly, Brown and Chu (2012) found that Latiné students reported less perceived racial and ethnic discrimination when attending predominantly Latiné schools that also valued a multicultural climate. Thus, these findings suggest that both school ethnic climate and its relationship with racial and ethnic composition are critical to understanding students' experiences of discrimination. However, no studies to date have examined how the classroom and school racial and ethnic context together shape the racial and ethnic climate, and in turn, perceptions of discrimination.

1.1.6 The current study

While past research has examined the effect of school composition on ethnic climate and experiences of discrimination, the role of relative representation in academic classes remains underexplored. The current study takes a novel approach to examining the role of school racial and ethnic contextual factors in shaping discriminatory experiences for Black and Latiné adolescents. Specifically, we were interested in the ways the relative racial and ethnic composition of the school and classroom work in tandem to influence perceptions of the school ethnic climate and, in turn, discrimination. In the current study, we examined how the effect of both school composition and relative representation in academic classes predicted perceived school ethnic climate (i.e., teacher supportive norms and peer association) and, in turn, predicted perceptions of discrimination from teachers and peers for Black and Latiné middle schoolers (see Figure 1 for a conceptual model). Based on previous empirical evidence, we hypothesized that when Black and Latiné students are overrepresented in their academic classes relative to school, they would perceive poorer school ethnic climate (i.e., less teacher supportive norms and less peer association), and in turn, greater perceived discrimination from peers and adults.

2 Materials and methods

2.1 Participants

Participants were drawn from the UCLA Middle School Diversity project, an ongoing longitudinal study of 5,991 adolescents recruited in the fall of 6th grade from 26 urban middle schools in California and followed during the 3 years of middle school. The schools were selected to represent a variety of racial and ethnic compositions, where the size of each racial and ethnic group varied systematically across schools. Six schools were considered racially and ethnically diverse such that no single racial and ethnic group represented a numerical majority, and members of each of the four major groups (i.e., Black, Asian, Latiné, and White) were present; 9 were balanced schools, with two large and relatively equal-sized racial and ethnic groups (e.g., Black and Latiné) and very few members of other racial and ethnic groups;

and 11 were majority schools with a clear numerical majority racial/ethnic group (either Black, Asian, Latiné, or White) that was at least 50% of the population and twice as large as any other racial and ethnic groups. To avoid confounding race and ethnicity and socioeconomic status (SES), the sample was restricted to lower-middle and lower-SES communities based on the percentage of students receiving free or reduced lunch and census data (e.g., median income, number of people in the workforce) for neighborhoods in which schools were located. Schools with average enrollments of 900–1,200 students and reading and math achievement (40th–60th percentile on standardized tests) were included. The final analytic sample consisted of 2,063 participants in 8th grade (51% females; $M_{\text{age}} = 13.33$ years). The racial and ethnic breakdown of the sample was 76% Latiné and 24% African American and Black.

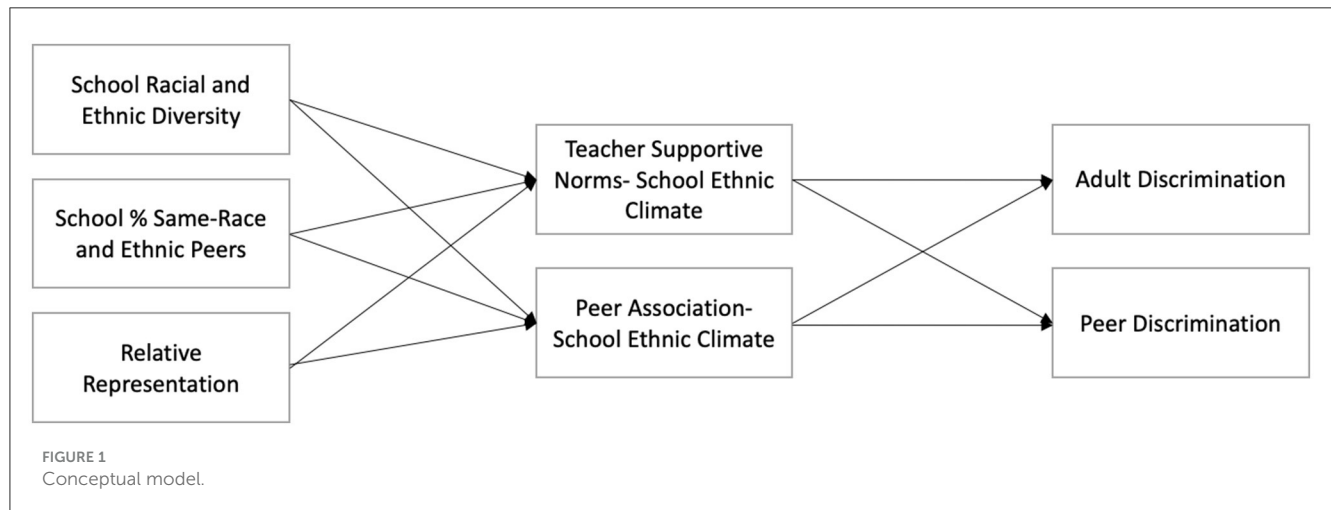
2.2 Procedure

Institutional Review Board (IRB) approval was obtained for the UCLA Middle School Diversity study. Participants were recruited in three cohorts in the fall of 6th grade and were surveyed in the fall and spring of 6th grade, and in the spring of 7th and 8th grade. To increase the return rates of parental consent forms, two iPods were raffled in each school for students who returned the form. Across the 26 schools, 84% of the consent forms were returned with parents granting permission to participate and student assent at each wave. Surveys were group administered and read aloud by a trained graduate student researcher as a second research assistant circulated around the classroom to help individual students as needed. Students received honoraria of \$10 for participating in the survey during the 8th grade.

2.3 Measures

2.3.1 Classroom relative racial and ethnic representation

To calculate classroom relative representation in 8th grade, an index of individual students' racial and ethnic ingroup exposure in academic classes was computed. Using each student's class roster, first we computed the average proportion of same-race and same-ethnic classmates (I) in each academic course (English, math, science, social studies). Each student's index then consisted of the summed proportions across academic courses divided by the number of academic courses. Because there were high rates of participation within schools ($M = 84\%$), this is a good estimate of students' actual exposure to ingroup peers. Additionally, because there were few differences in the average proportion of same-race and same-ethnic classmates represented across the classes at any of the four waves in the larger longitudinal study, ingroup representation was averaged across the academic classes in 8th grade. Participants ($n = 168$) who were in more than one class that had <7 students in the sample (2 SDs below the mean of 21 students) were removed from the analyses. The proportion of same-race and same-ethnic peers in the school was calculated based on data from the California Department of Education



(CDE). To compute relative representation for each participant, the school proportion of same-race and same-ethnic peers was subtracted from the average classroom proportion of same-race and same-ethnic peers. Positive scores indicated more same-race and same-ethnic peers in academic classes relative to school (i.e., overrepresentation), while negative scores indicated fewer same-race and ethnic peers in one's classes relative to school (i.e., underrepresentation), and a 0 indicated no differences between the two. Average scores for relative representation included a wide range of scores around the mean for both African American and Black youth ($M = -0.01$, $SD = 0.07$, range = -0.24 to 0.21) and Latiné youth ($M = 0.01$, $SD = 0.08$, range = -0.35 to 0.38).

2.3.2 School ethnic climate

Perceptions of school ethnic climate were measured using the teacher supportive norms and peer association subscales from the School Interracial Climate Scale (Green et al., 1988). Perceptions of teacher supportive norms were assessed using three items that captured the extent to which youth felt that the teachers in their school treated students of different ethnic groups equitably (e.g., “teachers are fair to students of all ethnic groups”). Peer ethnic climate was assessed using four items that captured the degree to which students of different ethnic groups associated with each other in school (e.g., “Students are able to make friends with kids from different ethnic groups”). Ratings ranged from 1 (no way) to 5 (for sure yes!), with higher scores denoting more positive perceptions of teacher and peer ethnic climate. Both teacher ethnic climate (Black: $\alpha = 0.82$; Latiné: $\alpha = 0.82$) and peer ethnic climate measures (Black: $\alpha = 0.70$; Latiné: $\alpha = 0.70$) had high internal consistency.

2.3.3 Perceived peer and teacher racial and ethnic discrimination

Adolescents' perceptions of discrimination were assessed using two subscales of peer and adult discrimination adapted from the

Adolescent Discrimination Distress Index (ADDI; Fisher et al., 2000). A total of 4 items asked participants whether they had experienced exclusion, disrespectful treatment, threats, or name-calling by their peers because of their race and ethnicity (e.g., “How often did kids exclude you from their activities because of your race/ethnic group?”). Four additional items asked participants whether they had experienced unfair discipline, receiving a lower grade, being treated as though they were not smart, or disrespectful treatment by adults due to their race and ethnicity (e.g., “How often were you disciplined unfairly at school because of your ethnicity?”). Responses were rated on a 5-point scale (0 = never, 1 = once or twice, 2 = a few times, 3 = a lot, and 4 = a whole lot). Given the positively skewed distribution of ratings, with very few students reporting “A lot” and “A whole lot,” responses in both categories were collapsed with “A few times” to create a 3-point scale, consistent with previous studies (Benner and Graham, 2013). Both measures of peer discrimination (Black: $\alpha = 0.77$; Latiné: $\alpha = 0.82$) and adult discrimination (Black: $\alpha = 0.82$; Latiné: $\alpha = 0.84$) had high internal consistency.

2.3.4 Covariates

2.3.4.1 Race and ethnicity

Self-reported race and ethnicity was binary-coded, with Latiné youth as the reference group.

2.3.4.2 Gender

Self-reported gender was binary-coded, with boys as the reference group.

2.3.4.3 Parent education

The parent or guardian with whom the student lived was asked to complete a questionnaire about their highest level of education. This measure ranged from 0 to 5 (0 = elementary or junior high school to 5 = graduate degree), with higher values indicating higher educational attainment (African American and Black: $M = 3.23$, $SD = 1.10$; Latiné: $M = 1.87$, $SD = 1.51$).

2.3.4.4 Generational status

Generational status was determined by asking three questions about whether the student and his or her mother and father were born in the U.S. Students born abroad were considered first-generation (e.g., “*Were you born in the United States?*”). Second-generation (i.e., U.S. born students with one foreign-born parent) and third-generation students (i.e., U.S. born students with both U.S.-born parents) were dummy coded, with first-generation students (i.e., student was born abroad) as the reference group. Among African American and Black youth, 2.8% were first generation, 17.6% were second-generation, and 79.6% were third generation. Among Latiné youth, 12% were first-generation, 71.8% were second-generation, and 16.2% were third-generation.

2.3.4.5 Academic honors

To measure academic honors designation, each student’s 4 academic core courses based on school transcripts were coded such that honors courses were given a 1 and all other courses were given a 0. Students who took 3 or more honors courses were re-coded as 1 to indicate academic honors designation. Students in accelerated academic programs (e.g., magnet, gifted) were automatically coded as 1 to indicate academic honors. All other courses were coded as 0. Among African American and Black youth, 24.3% were designated in academic honors, and among Latiné youth, 22.3% were designated in academic honors.

2.3.4.6 Proportion same-race and same ethnic peers at school

The proportion of same-race and same-ethnic peers in school represented the percentage of same-race and same-ethnic students within a student’s grade at each school, relative to the total number of students in that grade. This value was computed separately for each school and racial and ethnic group using publicly available data from the California Department of Education (CDE). In this sample, Latiné youth on average attended schools with a higher proportion of same-race and same-ethnic peers in school ($M = 0.45$, $SD = 0.16$, range = 0.11–0.68) compared to African American and Black students ($M = 0.31$, $SD = 0.21$, range = 0.01–0.67).

2.3.4.7 School racial and ethnic diversity

Objective school racial and ethnic diversity was measured based on data collected from the CDE and using Simpson’s (1949) diversity index: where P is the proportion of students in the school who are in racial and ethnic group i . This proportion is squared (P_i^2), summed across g groups, and then subtracted from 1. D_s gives the probability that any two students randomly selected from a school will be from different racial and ethnic groups. Values can range from 0 to ~ 1 , where higher values indicate greater diversity (i.e., more groups that are relatively evenly represented). Schools in this sample for both groups ranged from 0.48 to 0.77 ($M = 0.64$, $SD = 0.08$) indicating moderate to high diversity.

2.3.4.8 Proportion Free or Reduced Priced Meals (FRPM)

The proportion of students receiving FRPMs was included as a school-level covariate. FRPM served as a proxy for school SES. Schools in this sample for both groups ranged from 18% to 86% of students receiving FRPMs ($M = 0.54$, $SD = 0.17$).

2.4 Analytic plan

The data were analyzed using a series of path models. All analyses were conducted using Mplus (Muthén and Muthén, 1998–2017, version 8.1). Given that students were nested within middle schools, the CLUSTER function was used to correctly adjust standard errors. Full-information maximum likelihood (FIML) was used to handle missing data, given that it allows the use of all available data and for the generalization of results (Enders, 2001). To evaluate overall model fit, the adjusted χ^2 test, comparative fit index (CFI; Bentler, 1990), and root mean squared error of approximation (RMSEA; Steiger, 1998) were used (Hu and Bentler, 1998). A nonsignificant χ^2 , a CFI above 0.95 (Bentler, 1990), and the RMSEA below 0.05 with relatively small standard errors (MacCallum et al., 1997) indicate models adequately describe the relationships observed in the data. All c^2 model difference testing used the scaling correction factor.

3 Results

First, we examined descriptive statistics by race and ethnicity to assess any differences in study constructs (see Table 1). Independent samples t -tests revealed differences between Black and Latiné students on the proportion of same-race and same-ethnic peers in schools $t_{(1,893)} = 16.44$, $p < 0.001$, with Latiné students attending schools with a higher proportion of same-race and same-ethnic peers ($M = 0.45$, $SD = 0.16$) compared to Black students ($M = 0.31$, $SD = 0.21$). Latiné students were also more likely to be overrepresented in their academic classes ($M = 0.01$, $SD = 0.09$) compared to Black students ($M = -0.01$, $SD = 0.07$), $t_{(2,063)} = 3.42$, $p < 0.001$. No other racial and ethnic differences emerged for school structural, ethnic climate, or discrimination variables.

To test the full hypothesized model of the effects of school composition and relative representation in academic classes on school ethnic climate (teacher supportive norms and peer association) and subsequent perceptions of adult and peer discrimination (see Figure 1 for a conceptual model), a series of path models in a structural equation modeling (SEM) framework were estimated. The full model resulted in poor model fit $\chi^2_{(7, N=2)} = 190.04$, $p < 0.001$; CFI = 0.83; RMSEA = 0.13. Classroom relative representation, specifically overrepresentation in academic classes compared to school, predicted more negative peer ethnic climate ($b = -0.38$, $p < 0.001$) and teacher ethnic climate ($b = -0.42$, $p < 0.01$). Teacher ethnic climate significantly predicted both perceived peer discrimination ($b = -0.35$, $p < 0.001$) and adult discrimination based on race and ethnicity ($b = -0.78$, $p < 0.001$). However, peer ethnic climate did not predict perceived peer discrimination ($b = -0.01$, $p = 0.91$) or adult discrimination based on race and ethnicity ($b = 0.01$, $p = 0.74$). Therefore, peer ethnic climate was removed.

The final path model with peer ethnic climate removed is depicted in Figure 2 and fit the data well $\chi^2_{(5, N=2,604)} = 30.45$, $p < 0.001$; CFI = 0.97; RMSEA = 0.05. Findings indicated that the effect of relative classroom representation significantly predicted teacher supportive norms. Specifically, overrepresentation in academic classes compared to school predicted fewer positive perceptions

TABLE 1 Descriptive statistics for study constructs for overall sample and by adolescent race and ethnicity.

Variable	Overall sample			Black		Latiné	
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Structural characteristics							
School diversity	2,063	0.62	0.09	0.62	0.09	0.62	0.09
Proportion same-race and ethnicity peers	2,063	0.42	0.18	0.31	0.21	0.45	0.16
Classroom relative representation	1,895	0.00	0.08	−0.01	0.07	0.01	0.09
Proportion free/reduced lunch	2,063	0.54	0.17	0.54	0.17	0.54	0.17
Ethnic climate							
Teacher supportive norms	2,036	3.91	0.87	3.90	0.88	3.92	0.87
Peer association	2,040	4.25	0.71	4.32	0.80	4.23	0.68
Racial and ethnic discrimination							
By peers	2,047	1.05	1.31	1.16	1.30	1.01	1.32
By adults	2,028	0.98	1.33	1.14	1.38	0.93	1.30

of school ethnic climate as measured by teacher supportive norms ($b = -0.42$, $p < 0.001$). Less positive perceptions of teacher supportive norms, in turn, predicted greater perceived discrimination based on race and ethnicity from both peers ($b = -0.35$, $p < 0.001$) and adults ($b = -0.78$, $p < 0.001$). School diversity ($b = 1.00$, $p = 0.06$) and the proportion same-ethnic peers in school ($b = 0.13$, $p = 0.26$) did not significantly predict school ethnic climate.

3.1 Alternative models

Although theory and past research guided the path model tested, the effects of the constructs could be bidirectional. Relative classroom representation could impact perceptions of discrimination based on race and ethnicity, which could in turn influence perceptions of the school's ethnic climate. We tested this alternative model, which resulted in poor model fit [$\chi^2_{(1, N = 2,604)} = 213.97$, $p < 0.001$; CFI = 0.75; RMSEA = 0.36], thus providing additional support for the hypothesized path model (school and classroom representation to school ethnic climate to perceived discrimination).

3.2 Multigroup analyses

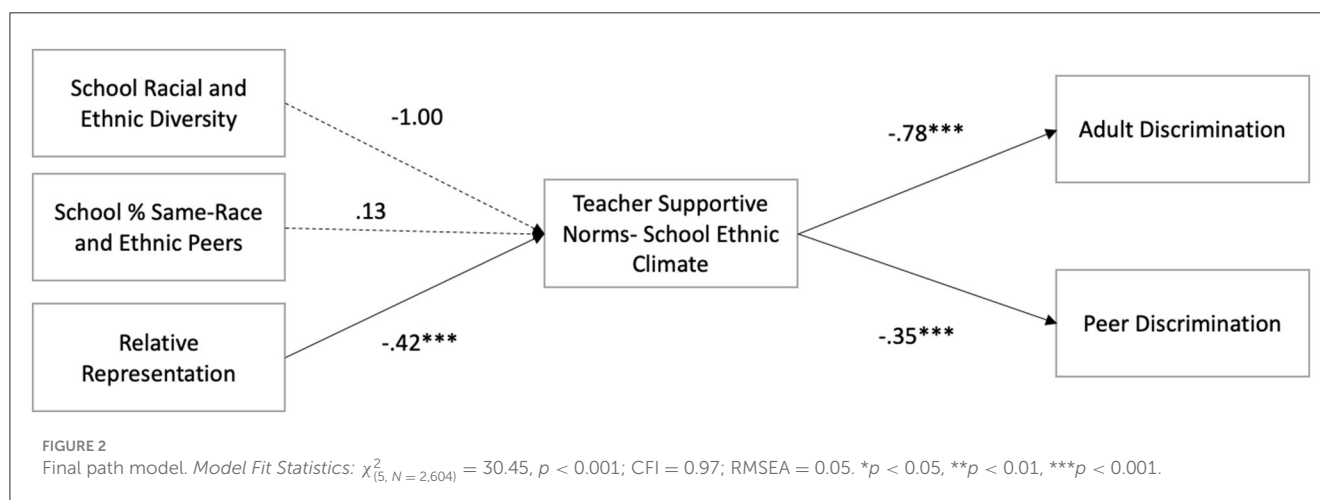
Finally, multigroup analyses were conducted to examine whether associations in the final path model varied by academic honors designation or by race and ethnicity using a series of Wald tests. The effect of classroom relative representation on teacher supportive norms did not vary by honors designation ($b = 0.33$, $p = 0.54$) or by race and ethnicity ($b = 0.54$, $p = 0.21$). The three-way interaction between classroom relative representation, honors, and race and ethnicity was also non-significant ($b = 0.90$, $p = 0.08$).

4 Discussion

The purpose of this study was to examine how relative representation between the racial and ethnic composition of academic classes and the overall school impacts Black and Latiné adolescents' perceptions of school ethnic climate, and in turn, their perceptions of racial and ethnic discrimination from teachers and peers. We found that when there was a mismatch in relative representation, with more same-race and same-ethnic peers in their academic classes relative to the broader school context (over-representation) Black and Latiné youth reported more negative perceptions of the school ethnic climate as measured by lower teacher supportive norms. School racial and ethnic diversity and the proportion of same-race and same-ethnic peers in school did not significantly predict perceptions of teacher supportive norms. Furthermore, negative perceptions of teacher supportive norms were associated with higher reported discrimination from both teachers and peers. In contrast, measures of school ethnic climate based on perceptions of peers were not significantly related to perceptions of discrimination. These findings underscore the complex ways in which features of both the school and classroom racial and ethnic context intersect to impact students' experiences at school.

4.1 Relative representation and perceptions of the school environment

A key contribution of this study is its exploration of the mismatch between the relative representation between classroom and school environments. Findings suggest that a mismatch with greater representation of one's racial and ethnic group in academic classes than in their school may be a risk factor for Black and Latiné students. But how do we make sense of this, given prior studies highlighting the benefits of racial and ethnic representation for



these groups? An important distinction is that representation and overrepresentation are not the same.

Overrepresentation refers to being in classes with more peers from the same racial and ethnic group than would be expected based on school-wide racial and ethnic representation. This may be detrimental due to its connection with academic tracking, which often places Black and Latiné youth in lower-level courses and underrepresents them in advanced tracks (McCardle, 2020). Black and Latiné students who get higher grades tend to be in classes with fewer same-ethnic peers, while White and Asian youth who get high grades are in classes with more same-ethnic peers (Chen et al., 2020). As a result, overrepresentation in class is not simply an opportunity to engage with same-race and same-ethnic peers; it may also reinforce negative attitudes about the academic capabilities of Black and Latiné students, especially if teachers and peers hold such attitudes. Our findings provide some support for this interpretation: students who were overrepresented in class relative to their school reported weaker teacher supportive norms and peer associations. Weaker teacher supportive norms, in turn, were associated with higher levels of racial discrimination. However, course level did not moderate the link between relative representation and perceptions of school ethnic climate. This could mean that overrepresentation functions similarly regardless of honors designation, or that the mechanism connecting classroom composition to school ethnic climate extends beyond the rigor of the class itself. Gaining a deeper understanding of this association may require examining how classroom relative representation interacts with other aspects of the school's racial and ethnic context.

4.2 Complexities of the school racial and ethnic context

The literature on school racial and ethnic context reflects a wide range of ways to define context. Some studies focus on school racial and ethnic composition, such as diversity and representation, while others examine attitudes like school ethnic climate, and still others consider the roles of teachers and peers or explore experiences of discrimination and intergroup relationships. Student outcomes often vary depending on how the school racial and ethnic context is

conceptualized and measured. For instance, Conway-Turner et al. (2023) found that Black and Latiné students performed better in schools with a higher concentration of same-race peers, while overall diversity was associated with lower academic achievement. In the domain of psychosocial wellbeing, Saafir and Graham (2024) found that perceived representation of same-race peers buffered the negative effects of racial discrimination on ethnic-racial identity development, even after accounting for objective measures of diversity and representation.

The current study builds on prior work by highlighting relative representation between school and classroom as a key dimension of racial and ethnic composition, examining its relationship to perceptions of school ethnic climate and discrimination. Our findings suggest that relative representation shapes students' experiences by influencing how they perceive the school's ethnic climate, which in turn relates to reports of discrimination. These findings underscore the importance of considering not just individual components of the school context but also how different aspects (i.e., structural variables and perceived climate) may be connected in ways that shape student outcomes.

Prior research supports this conceptual link between school racial and ethnic composition and climate. For example, Graham and Morales-Chicas (2015) found that a positive school ethnic climate buffered the effects of low same-race and same-ethnic representation on students' academic confidence and belonging. Similarly, other studies have shown that a positive school ethnic climate can reduce the impact of discrimination, especially in schools where minoritized students are more represented (Baysu et al., 2024; Brown and Chu, 2012). These findings point to the need for a layered understanding of school racial and ethnic contexts, as no single indicator captures the complexity of students' experiences (Syed et al., 2018; Saafir and Graham, 2024).

Adding another layer, we also examined perceptions of school ethnic climate by source, distinguishing between peer and teacher dimensions. We found that overrepresentation was associated with a negative school ethnic climate (defined by peer association and teacher supportive norms), but only teacher supportive norms significantly predicted students' perceptions of racial and ethnic discrimination. This suggests that peer and teacher dimensions of school ethnic climate may serve different functions for Black and Latiné youth, such that teacher supportive norms (i.e.,

school ethnic climate) may play a particularly influential role in shaping how students interpret and navigate experiences of discrimination. Coyle et al. (2022) found similar results when examining perceptions of safety among a diverse group of 9th graders. For students who reported experiences of victimization, those with supportive teachers felt safer, even when peer support was low. In contrast, students who had supportive peers, but not supportive teachers, did not report the same sense of protection. These findings emphasize the protective role that teacher support can play, and the harm that can result when it is absent.

One reason teacher support may be so impactful is its connection to the institutional and structural dynamics that shape student's perceptions of discrimination. When teachers fail to affirm racial and ethnic diversity or engage in biased behaviors, it may not only shape how students experience discrimination from adults, as we found, but also set the tone for peer interactions. In contrast, the peer ethnic climate reflects more informal social dynamics between students of different racial and ethnic groups, such as whether they interact with one another. We found that overrepresentation in academic classes predicted fewer interactions among diverse peers (peer association), but unlike teacher supportive norms, this alone did not predict greater perceptions of discrimination. As such, studies aiming to identify the conditions that foster positive school environments for racially and ethnically minoritized students must consider the multiple layers of these experiences and how they may vary from student to student.

4.3 Implications for diversity efforts and teacher training

The current study highlights the need for alignment between the racial and ethnic composition of schools and classrooms. Focusing only on school-level diversity overlooks how students experience their daily academic environments. To foster a truly inclusive and affirming school ethnic climate, diversity must be reflected equitably at the classroom level (Juvonen et al., 2018). Our findings emphasize that this alignment shapes how students perceive the school's ethnic climate. As such, school diversity efforts must go beyond enrollment numbers to ensure representation is distributed in ways that all students meaningfully experience.

Attending to the complexities of school racial and ethnic environments also has important implications for how we approach diversity, equity, and inclusion in schools. At a time when racial tensions are heightened and diversity efforts are being actively rolled back, Black and Latiné students face increased vulnerability to the harms of discrimination. It is therefore critical to identify the features of school environments that promote wellbeing for these students.

Research on the school racial and ethnic environment offers promising guidance for creating conditions that reduce both the frequency and impact of discrimination. One key area in need of attention is school ethnic climate and, particularly, the role of teacher supportive norms. Findings from the current study suggest that when teachers create a supportive racial and ethnic climate, it may reduce not only their own discriminatory behaviors but also those of their students' peers. Given teachers' influence, it is essential that they are equipped to create environments that support students from diverse backgrounds. However, while diverse schools

are often associated with more positive attitudes toward racial and ethnic differences, these attitudes do not always translate into the skills or confidence needed to address issues of diversity effectively (Sincer et al., 2021). This gap points to the need for more intentional teacher training that not only fosters inclusive mindsets but also provides concrete strategies for translating those values into daily practice.

5 Limitations and future directions

Although our study offers novel contributions by examining the relative representation in academic classes compared to school in shaping perceptions of ethnic climate and perceived discrimination, it is not without its limitations. First, we do not have a good measure of academic tracking, which is a complex and multidimensional construct that unfolds over time. Given the connection between academic tracking and the racial and ethnic diversity landscape of schools and classrooms, fine-tuning the ways this construct is measured and examined is important for future research.

Additionally, the cross-sectional design of the current study limits our ability to draw causal conclusions about the associations between relative classroom representation, ethnic climate, and perceptions of discrimination. To address this limitation, we tested an alternative model specifying the reverse direction of effects. This model demonstrated poor fit, suggesting that school ethnic climate may be a more proximal predictor of discrimination experiences than relative classroom representation. Although we acknowledge that the associations between perceptions of the school ethnic climate and discrimination could be bidirectional over time, a longitudinal design would be necessary to establish directionality of these associations.

Additionally, the study relies on self-reported student measures, which are subject to biases and social desirability. As a result, it was no surprise that students tended to report few reports of racial and ethnic discrimination. This infrequency is common in similar research on adolescents' discriminatory experiences (e.g., Benner and Graham, 2013; Umaña-Taylor and Updegraff, 2007). Furthermore, this self-reported measure relies on students' recollections of their lived experience, without considering the actual number of discriminatory incidents.

Finally, it is important to acknowledge limitations in the generalizability of this work. Our sample was drawn from California, where racial and ethnic diversity is more reflected than in other parts of the United States. This rich diversity allowed us to capture students in schools with a range of diversity compositions (e.g., diverse, a clear majority racial and ethnic group, and balanced racial and ethnic groups); however, we recognize that these contexts are still within a large, urban, and metropolitan environment that may not generalize to other states (e.g., more rural, less diverse, and more conservative socio-political spaces). With this in mind, future research should consider the ways our constructs of interest may differ as a function of the broader community context of the schools.

Even when incorporating more nationally representative samples and settings, our findings cannot generalize to the large global context, capturing the Majority World where 85 percent

of the world's population resides. We acknowledge that the phenomena we study—racial and ethnic group representation and social adaptation—are rooted in theories and frameworks from the Minority World that dominate the production of knowledge and scientific inquiry (e.g., [Abubakar et al., 2024](#); [Mignolo and Walsh, 2018](#)). These frameworks may have very little relevance to understanding the schooling or general wellbeing of youth living in Majority World communities where gaining access to life's basic necessities (i.e., food and shelter) and negotiating political upheaval are often part of their everyday life experiences. As developmental researchers, we must be modest in our claims as we acknowledge the biases in our science and the applicability of its constructs to only a narrow slice of the world's population.

6 Conclusion

Given the overwhelming negative impact of racial and ethnic discrimination on Black and Latiné adolescents in the U.S. context, the focus of the current study was to understand how features of the school and classroom racial and ethnic context shape students' experiences with discrimination. Our findings point to the significance of the relative representation between classrooms and schools and their potential mismatch, specifically, the overrepresentation of Black and Latiné youth in academic classes relative to school, as a potential marker of broader issues in the school ethnic climate, particularly related to teacher supportive norms.

Importantly, in the absence of a positive teacher school ethnic climate, Black and Latiné youth appear to face a heightened risk of experiencing discrimination from both adults and peers, leaving them more vulnerable to its well-documented academic and psychological harms. To create educational spaces that truly support the academic and socioemotional development of Black and Latiné students, we must move beyond surface-level diversity and toward intentional alignment between school values and daily classroom experiences. This includes not only diversifying schools and classrooms numerically but also cultivating school ethnic climates that actively promote equity and belonging, beginning with the adults who shape them—teachers. Without such efforts, schools risk reinforcing the very inequalities they aim to disrupt.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The studies involving humans were approved by UCLA Institutional Review Board. The studies were conducted in accordance with the local legislation and institutional

requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin. Additionally, student participants provided assent prior to participation in the study.

Author contributions

AS: Conceptualization, Project administration, Writing – original draft, Writing – review & editing. JM-C: Conceptualization, Investigation, Project administration, Writing – original draft, Writing – review & editing. KK: Conceptualization, Formal analysis, Methodology, Writing – original draft, Writing – review & editing. SG: Funding acquisition, Project administration, Supervision, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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The author(s) declare that no Gen AI was used in the creation of this manuscript.

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