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# Potential Moderation Across Racial Groups in Perceptions of Authoritative School Climate and Peer Victimization and Student Engagement

Ying-Ruey Chuang, Francis Huang , Keith Herman , and Bixi Zhang

University of Missouri

## ABSTRACT

Positive perceptions of school climate are associated with improved academic and behavioral outcomes, such as lower bullying victimization experience and higher student engagement. The present study evaluated the consistency of these relations across racial/ethnic student groups using the Authoritative School Climate (ASC) model which defines school climate as a 3-factor model including disciplinary structure, student support, and academic expectations. Data were collected from 5,878 middle/high school students from Missouri and Oklahoma. School-level fixed effects model revealed more negative perception of school climate and higher peer victimization experiences (i.e., general or bullying) amongst racially minoritized groups. Minoritized Racial Identity also negatively moderated the effect between perception of school climate and the selected outcomes with a small to medium effect. These findings may provide further evidence in utilizing Authoritative School Climate Theory in evaluating school climate and implications for educators to establish better teacher–student connections in creating a positive school climate.

## IMPACT STATEMENT

Student perceptions of school climate have been shown to be related with the quality of student schooling experience and their respective academic and perception of behavior outcomes. This study evaluated school climate perceptions and found minoritized racial/ethnic status negatively moderated the associations between school climate and bullying victimization experiences with a small to medium effect. These results further help inform educators how establishing positive academic and behavior expectations in school may help mitigate student bullying/victimization experiences in school.

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## INTRODUCTION

School climate has been defined as, “quality and character of school life” and is “based on patterns of people’s experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures” (Cohen et al., 2009; p. 182). Providing students with a safe and prosocial learning environment to increase student academic and behavior outcomes has long been a foci of school improvement and policy reform effort. Previous literature has shown that positive perceptions of school climate are associated with increased student engagement and academic outcomes, higher school safety, and decreased rates of risky and antisocial behavior, absenteeism, and suspension rate (Bradshaw & Johnson, 2011; Cohen et al., 2009; Konold et al., 2017; Thapa et al., 2013). Despite the known importance of school climate, it was not until the past three

decades that researchers have attempted to systematically define and assess perceptions of school climate to make data-driven informed decisions (Cohen et al., 2009; Thapa et al., 2013). Various school climate measurement tools were created to capture specific focused domains within school climate, such as school safety, academic performance, environmental structures detailed in the California School Climate and Safety Survey (Furlong et al., 2005) or the School Development Program, and the San Diego Effective Schools Student Survey (Haynes et al., 2001). However, very few comprehensive frameworks were proposed due to the conceptual and definitional differences and potential confounding of similar school constructs such as school engagement, school belongingness, teacher–student relationship, or school climate (Rudasill et al., 2018). In the present study, an Authoritative School Climate Model is proposed.

## Authoritative School Climate Model

Though school climate research has varied in its approach and definition, one influential review identified four major dimensions of school climate: (1) Safety, (2) Teaching and Learning, (3) Relationships, and (4) Environmental-Structural (Cohen et al., 2009). A student's perception of the quality of these four dimensions defines the focus of school climate research discussion. While most school climate research has capitalized on physical, observable aspects of schools, recent research has highlighted the need to evaluate socio-emotional dimensions of school climate to increase efforts in risk prevention and academic outcomes (Cohen et al., 2009).

Specifically, building upon prior research in parenting styles, the Authoritative School Climate (ASC) model is unique in its emphasis on the adult's role in creating positive climate in schools, with student outcomes differing as a response to their specific perceptions of such adult/child interactions. Baumrind (1966) proposed a parenting model that categorized parental authority/control into 3 distinct typologies, which was further expanded by Maccoby and Martin (1983) into 4 types: permissive, uninvolved, authoritarian, and authoritative parenting. Each parenting style is examined through the balance of parental demand and responsiveness. Permissive parents, characterized by lower demand and higher responsiveness, allow for more opportunities of self-regulation and child autonomy. Uninvolved parents are characterized by low levels of demand and responsiveness. Authoritarian parents engage in close supervision and have high demand and increased levels of control over their children. Children of permissive parents were shown to have increased levels of nonconforming rule-breaking behavior, including higher levels of aggression and disregard to their environmental demands. In contrast, children of authoritarian parents displayed higher levels of rebelliousness, dependency, and passivity, and lower levels of self-assertiveness and buoyancy (Baumrind, 1966). The Authoritative style consists of a balance of demand and responsiveness. Authoritative parenting control directs children activity through a directive, assertive approach while taking into consideration the child's present quality and interest. This in turn leads to child behavior that responds appropriately to environmental demands such as rules and norms yet does not disallow their individual autonomous exploration (Baumrind, 1966).

Resembling authoritative parents, authoritative schools characterized by high levels of demand and support from adults and overall structure may very well contribute to better behavior and academic outcomes as students respond to their environments which are established in structured yet supportive ways. Gregory and Cornell

(2009) assessed school climate using this approach and evaluated student's perceptions of two constructs: school structure and support. School structure is identified as the school's disciplinary structure and academic expectation, such as establishing school rules, the disciplinary responses from administration, and the teacher's expectations for students to achieve academically. Student support encompasses socio-emotional components of the school environment including the responsiveness of administration and teachers to give appropriate academic and behavior support, the quality of teacher-student relationships, and a general interest and concern for the student by teachers (Gregory et al., 2011; Thapa et al., 2013).

The development of the ASC model also led to the creation of the ASC survey which assesses school structure and support using three separate constructs: disciplinary structure, academic expectations, and student support (Cornell et al., 2016; Konold et al., 2017). Resembling the two dimensions of school climate (structure and support), validation of the ASC survey further separated school structure into two separate domains related to academic and behaviors in schools. According to this model, a positive school climate is characterized by high levels of student support alongside high levels of academic expectations and strict yet fair disciplinary practices which in turn leads to higher levels of student engagement and lower levels of victimization experiences (Gregory et al., 2010; Gregory & Cornell, 2009; Konold et al., 2014).

Previous literature also provides support for the use of ASC Model and the psychometric properties of the ASC survey. In several studies using the ASC model, measures of student support and structure were associated with lower levels of student aggression and victimization experience, and higher levels of student engagement (Gregory et al., 2010, 2011; Konold et al., 2014, 2017). Konold et al. (2014) further evaluated the internal consistency and construct validity of the ASC survey as it pertained to student outcomes of student engagement and the prevalence of teasing and bullying using multilevel factor structures. The report demonstrated acceptable psychometric reliability (Cronbach's alpha ranged from .70 to .92) and validity (correlations ranged from .60 to .90) for the use of the ASC survey for both school and student level assessment of school climate (Konold et al., 2014).

## Authoritative School Climate and Associated Outcomes

A basic contention of the ASC model is that effective school structure, expectations, and support lead to better student outcomes. That is, when students experience their school discipline practices as strict but fair and adults in

the building as warm and respectful, they are more likely to be engaged in school and compliant with school expectations (Gregory & Cornell, 2009). When adults create positive school climates, students have higher levels of engagement and decreased levels of peer aggression and victimization experiences (Baly et al., 2014; Sawyer et al., 2008). In line with this theory, multiple ASC validation studies have examined student engagement and victimization experiences as outcomes of perceptions of school structure and support (Konold & Cornell, 2015; Konold et al., 2017). Gregory et al. (2010) not only found that authoritative school discipline led to less victimization experience and more student engagement, but also advocated for the need to consider school structure and support in tandem when evaluating school practices pertaining to establishing positive climates. Furthermore, Cornell et al. (2015) also found that the interaction between school structure and support directly influenced student perceptions of peer victimization and the prevalence of teasing and bullying in schools.

### Racial Differences in School Climate Perceptions

Per Cohen et al. (2009) definition of school climate, a student's perception and experience of support, teacher relationship, and discipline may be dependent on dispositional characteristics such as gender, age, race, and social class. Though previous literature has focused on evaluating school climate and identifying a way to create positive school environments for all students regardless of student demographics, (Gregory et al., 2010; Lee, 2012; Thapa et al., 2013) more emphasis could be placed on examining the perception disparities that may exist due to these dispositional characteristics to better inform school improvement efforts using a comprehensive Authoritative School Climate model. Moreover, these differences in school climate perception may be related to the observable differences in academic and disciplinary school-related outcomes found in racially minoritized groups (Gregory et al., 2010; Voight et al., 2015). Specifically, racially minoritized students perceived school climate more negatively compared to their White peers, a discrepancy which studies have shown associated with less school engagement and positive student-teacher relationships and increased suicidal thought and negative behaviors in schools (Konold et al., 2017; La Salle et al., 2017; Lee, 2012; Skiba et al., 2002).

In addition to the observed differences found in behavior outcomes, multiple studies have reported racial differences in specific authoritative school climate constructs of academic expectations and student support. Diamond et al. (2004) found that teacher's academic expectations

and, in turn their responsibility to teach the student, differed depending on the school's demographic distribution of race and social class status. Teacher-student racial mismatch has been shown to increase the discrepant perception of school climate among minoritized groups. Specifically, while White students reported more connectedness when having White instructors, the same effect was not found amongst other racial/ethnic groups, which may be problematic as the diversity of the student population steadily increases yet teaching positions are regularly filled with White individuals (La Salle et al., 2020). Qualitative findings from Pringle et al. (2010) indicated that Black high school students reported a common theme of an expectation for them to graduate yet little to no support from teachers to help them achieve that goal. Black and Hispanic students have also reported having poorer connectedness in adult-student relationship and less opportunities to participate than their White peers, even more so when the teacher is of a different racial background (Shirley & Cornell, 2012; Voight et al., 2015).

Konold et al. (2017) evaluated differences in perceptions of school climate across Black, Hispanic, and White student subgroups from a sample of 48,027 high school students from 323 high schools through the Virginia Annual School Safety Audit Program. The study defined school climate using the ASC Model and not only found racial perceptive differences in school climate factors but also a moderating effect by race when evaluating school climate factors with student engagement and peer victimization experiences, which encompassed general and bullying victimization experiences. Unlike Konold et al. (2017), most studies on racial/ethnic differences in perception of authoritative school climate have not evaluated how these perceptive differences in school academic and social outcomes are related to racial ethnic identity (c.f. Gregory et al., 2010; Cornell et al., 2016; Cornell & Huang, 2016). Additionally, when evaluating racial/ethnic perceptive differences in school climate, the focus has regularly been on Black and Hispanic subgroups without capturing an overall Nonwhite experience among other substantially less represented racial groups (c.f. Diamond et al., 2004; Gregory & Weinstein, 2008; Konold et al., 2017; Skiba et al., 2011). Combining students across subgroups too small for analysis affords the opportunity to describe a generalized student of color experience of school climate.

### Influencing Factors

Although race and ethnicity were the primary predictors of interest in the present study, prior research suggests

the need to account for other potential confounds in analyses to account for potential confounding of these demographic variables with student race and ethnicity. In particular, student demographic such as gender, social economic status, and age are important influencing factors to include as covariates given the literature showing their links to school climate perceptions. For instance, females are more likely to report negative perceptions of school climate due to institutional gender biases and higher rates of peer victimization in the form of sexual harassment that can lead to a perception of a hostile environment (Way et al., 2007). SES also is related to lower levels of engagement and higher frequency of bullying victimization experiences (Lee, 2012). Additionally, prior studies on school climate racial disparities focused solely on a high school sample (Konold et al. 2017). However, middle schoolers' progression in grade levels has been found to negatively predict perceptions of school climate. As a student transitions through grade levels, teacher-student relationships and level of support and connectedness have all been shown to decrease (Wang et al., 2010; Way et al., 2007). Therefore, examining disparities in perceptions of middle school is a critical extension given the precipitous decline in student engagement during the middle school years. Hence, consistent with research conducted using the ASC model, these specific secondary student-level covariates were considered (Gregory et al., 2011; Konold et al., 2017).

### The Present Study

The present study evaluated differences among Nonwhite and White middle school/high school students in their perception of school climate using the ASC model. The study extends Konold et al. (2017) study through the inclusion of middle schoolers in the sample and data collection in Missouri and Oklahoma and hopes to generalize the findings to a sample of students in the Midwest. Additionally, analysis of a Nonwhite racial group (which included the remaining participants) to encapsulate the experiences of other racially minoritized groups beyond the previously studied Black and Hispanic student population was included. The following research questions were proposed:

1. To what extent do Nonwhite and White students differ in their perceptions of Authoritative School Climate? It is hypothesized that White students' perceptions of school structure, support, and academic expectations will be more positive compared to their Nonwhite peers.
2. To what extent do the associations between Authoritative School Climate and student engagement as well as peer victimization experiences (bullying victimization, prevalence of teasing, and general victimization experience) differ between Nonwhite and White students? It is hypothesized that Nonwhite student race status will negatively moderate the association between students' perceptions of school structure, support, and academic expectations and the selected outcomes.

## METHOD

### Sample

All participating study schools were recruited as part of two ongoing grant funded randomized control trials (RCT). The first RCT funded by the Institute of Education Sciences (IES) focused on the implementation and evaluation of the Safe and Civil School Leadership (SCSL) professional development program. The intervention supports the development of specific leadership skills for promoting safe and positive school climate. The second RCT is funded by the National Institute of Justice (NIJ) and examined the implementation of the SCSL program, and its companion START. START is designed to aid school leadership in developing a unified school-wide hallway management strategy. Recruitment occurred at the state level and targeted any K–12 school in Missouri and 5–12 schools in Oklahoma. Schools were randomly assigned to either the intervention condition (i.e., SCSL or START) or control group. After obtaining parent and student consent, data were collected twice a year via online surveys with school personnel monitoring completion during the start of corresponding semesters to obtain baseline data and evaluate the effectiveness of the assigned interventions (SCSL baseline in fall; START baseline in spring). A total of 57 schools were recruited during the data collection periods utilized for the present study with an average survey response rate of 73% ( $n = 15,479$  of  $N = 21,180$ ).

For the present study, only schools with 6–12th graders in the control group were included as the intervention was designed to improve school climate and surveys for younger students had abbreviated versions of the survey scales. Furthermore, schools with less than 10 participants and no racially minoritized students (i.e., homogenous schools) were removed from the analysis leading to a total of 6,376 students from 17 schools completing the surveys. On average, participants completed the surveys in 19.77 min (*SD* of participants completing survey within

1-hour = 6.58). To improve data quality, a multistage screening procedure was conducted to eliminate participants who answered the survey too quickly (i.e., less than 6 minutes,  $N=116$ , 1.8% of total sample) and via two validity questions (e.g., “How many questions on this survey did you answer truthfully” & “I am telling the truth on this survey,”  $N=382$ , 6% of sample analyzed for time). The resulting analytic sample consisted of  $N=5,878$  student participants (47.3% male) with 27.4% in 6th grade, 19.6% in 7th grade, 19.6% in 8th grade, 11.1% in 9th grade, 11% in 10th grade, 6.4% in 11th grade, and 5.1% in 12th grade. Racial/ethnic breakdown was 58.8% White, 17.7% Hispanic, 3.7% Black, 11.9% identifying as having more than one race, 1.9% Asian American or Pacific Islander, and 5.9% other minoritized racial ethnic groups. The distribution of parental education (used as a proxy for SES) was 21.4% completed postgraduate studies, 25.6% completed a four-year college degree, 14.4% completed a two-year college or technical degree, 29.8% graduated high school, and 8.9% did not graduate from high school. Furthermore, 34.7% of participants identified as being eligible for free-reduced lunch meals (FRPL; also a proxy of SES).

## Measures

Data were collected using anonymous online surveys during classroom time under the supervision of teachers that followed a set of standardized instructions. The completed survey consisted of measures for the three ASC survey variables of academic expectations, disciplinary structure, and student support; and four other measures for the outcome variables of interest of student engagement, victimization experience, bullying victimization experience, and prevalence of teasing and bullying. For every scale, a measure of reliability is provided using omega coefficients (McNeish, 2018).

### Student Support

This 8-item scale ( $\omega = .87$ ; 95% CI [.87–.88]) was developed to measure the supportive nature of teacher–student relationships and is included in the ASC survey. Items asked questions regarding topics of respect for student and student’s willingness to seek help (e.g., “I am comfortable asking my teachers for help with my schoolwork” and “Most teachers and other adults at this school care about all students”). The 4-point likert scale items, 1 being “strongly disagree” to 4 being “strongly agree,” were derived from the Willingness to Seek Help scale (Bandyopadhyay et al., 2009) and the School Climate Module of the California Healthy Kids Survey.

### Disciplinary Structure

This 7-item scale ( $\omega = .57$ ; 95% CI [.74–.76]) measures the perceived fairness and consistency of school disciplinary actions with items on a 4-point likert scale, 1 being “strongly disagree” to 4 being “strongly agree” such as, “The Schools rules are fair” and “Students are treated fairly regardless of their race and ethnicity.” The scale was derived from the Experience of School Rules scale from the School Crime Supplement to the National Crime Victimization Survey (NCES, 2005).

### Academic Expectations

The 5-item scale ( $\omega = .70$ ; 95% CI [.69–.72]) was derived from The ASC Survey (Konold et al., 2017). The scale included items on a 4-point likert scale, 1 being “strongly disagree” to 4 being “strongly agree” regarding teacher’s expectations of academic outcomes such as, “My teachers expect me to work hard” and “My teachers really want me to learn a lot.”

### Student Engagement

This 3-item scale ( $\omega = .92$ ; 95% CI [.92–.93]) is a subscale measure of affective student engagement derived from a 6-item scale from the Commitment to School Scale using a 4-point likert scale, 1 being “strongly disagree” to 4 being “strongly agree” (Cornell et al., 2016). Questions included items regarding student’s perception of their belongingness to school, such as “I like this school” and “I am proud to be a part of this school.”

### Victimization Experience

This 5-item scale ( $\omega = .81$ ; 95% CI [.80–.82]) was derived from The School Climate Bullying Survey and consists of questions regarding student’s general victimization experiences in school (0 = “No,” 1 = “One time,” 2 = “More than Once”). Items included questions such as “A student stole my personal property” and “A student threatened me with a weapon” (Cornell et al., 2015; Konold et al., 2017).

### Prevalence of Teasing and Bullying

This is a 5-item scale ( $\omega = .86$ ; 95% CI [.86–.87]) that measured student observations of prevalence of teasing and bullying in school amongst other students on a 4-point Likert scale, 1 being “strongly disagree” to 4 being “strongly agree” (e.g., “Students in this school are teased or put down because of their race or ethnicity” and “Bullying is a problem at this school.”). Support for internal and external validity had been shown across multiple samples (e.g., Bandyopadhyay et al., 2009).

### **Bullying Victimization Experience**

This 7-item scale ( $\omega = .87$ ; 95% CI [.86–.88]) was derived from The School Climate Bullying Survey and consists of questions that measured student bullying victimization experiences in school. The survey provided an operational definition of bullying (i.e., “Bullying is the repeated use of one’s strength or popularity to injure, threaten, or embarrass another person on purpose”) and each item had four response options (0 = never, 1 = once or twice, 2 = about once per week, and 3 = more than once per week). Items included questions such as “I have been bullied at school this school year.” And “I have been socially bullied at school this year.” (Cornell et al., 2015; Konold et al., 2017). Baly et al. (2014) found that results from the measure offered good stability and were predictive of negative student outcomes such as feelings of sadness and suicide, and perceptions of school climate and safety.

### **Data Analysis Plan**

To address the research questions, students identifying as Black, Hispanic, and Other Nonwhite group were compared with students identified as being White through two sets of analyses. The first set of analysis addressed the research question, “To what extent do Nonwhite and White students differ in their perceptions of school climate?” by examining the differences among the four identified racial groups of participants on within school construct measures in the ASC Survey using a school-level fixed effects model. The analysis also controlled for student covariates of gender, grade-level, parental education, and free-reduced price lunch status (both as proxies for SES).

To address the research question of “To what extent do the associations between Authoritative School Climate and student engagement as well as peer victimization experiences (bullying victimization, prevalence of teasing, & general victimization experience) differ between Nonwhite and White students?” a four-step hierarchical fixed-effects model that accounted for students nested within schools was used to evaluate the relationship among ASC variables and the four outcome variables across the three racial groups. Step one added the student racial groups with White being the reference group (i.e., White = 0 vs. Black = 1, White = 0 vs. Hispanic = 1, White = 0 vs. Other = 1) to evaluate differences in perceptions of outcomes across racial groups. Step two added the four student-level covariates. Step three added the three school climate variables. Step four included interaction terms to evaluate potential moderation of the relationship among ASC variables and the outcomes by race membership. All the analysis utilized standardized predictors and outcomes which enables

interpretation of results as effect sizes using standardized group mean differences. Finally, simple slopes analyses using a pick-a-point approach at  $\pm$  standard deviation from the standardized predictor means were conducted to interpret the potential interaction effects of the analysis conducted in step 4 (Hayes & Montoya, 2017).

The use of fixed effects models for the analysis of clustered data, such as the one used in the present study, has been showed to be an effective alternative to using multilevel modeling approaches when the study design is solely interested in level-1 variables (i.e., student level outcomes) (Allison, 2005; Huang, 2016). In such models, cluster variables (i.e., schools) are included as dummy variables in an OLS model. Therefore, models for the present study included predictors and 16 dummy coded school variables. By doing so, average mean scores of each school for the outcome variables are compared to a reference school, clustering effects are accounted for, and only student-level predictors are interpreted. Since all clustering effects are accounted by this approach, bias resulting from both observed and unobserved school-level predictors and is eliminated (Huang, 2016). Cluster robust standard errors were also used to account for heteroskedasticity on student-level outcomes.

## **RESULTS**

Descriptive statistics for the overall sample are shown in [Table 1](#). Preliminary descriptive statistics for all seven variables of interest indicate an overall higher average score in ASC factors and Student Engagement and lower victimization experience, bullying victimization experience, and prevalence of teasing and bullying among White student participants when compared to all 3 other subgroups and are shown in [Table 2](#). Initial correlational descriptive analysis also retained assumptions of the theoretical relationship between ASC factors and the 4 selected outcomes of interest. Specifically, all 3 ASC factors were significantly negatively correlated with Victimization Experience, Bullying Victimization Experience, and Prevalence of Teasing and Bullying, and positively correlated with Student Engagement (results are shown in [Table 3](#)). Skewness calculations revealed generally acceptable results for the assumption of normality for all 7 variables of interest. Kurtosis calculations revealed potential deviation from normality for the bullying victimization experience variable (kurtosis = 7.95), while all other variables fell within the acceptable range.

First, to examine the differences between the three racial groups and their White peers on the three factors of the ASC model, a school level fixed effects model using White students as the reference group was conducted. The

**Table 1.** Descriptive Statistics for Overall Sample

	N = 5878	%	M	SD	$\omega$ [95% CI]
Race/Ethnicity					
White	3455	58.8			
Black	220	3.7			
Hispanic	1042	17.7			
Asian/Pacific Islander	112	1.9			
Multiracial	701	11.9			
Other	348	5.9			
Female	3097	52.7			
Eligible for FRPL	2037	34.7			
Parental education			3.21	1.3	
Grade			7.99	1.8	
ASC factors					
Academic expectations			15.6	2.3	.70 [.69–.72]
Disciplinary structure			19.2	3.6	.75 [.74–.76]
Student support			23.8	4.5	.87 [.87–.88]
Student outcomes					
Victimization experience			3.1	2.7	.81 [.80–.82]
Prevalence of teasing & bullying			12.2	3.7	.86 [.86–.87]
Bullying victimization experience			2.5	3.7	.87 [.86–.88]
Student engagement			8.3	2.6	.92 [.92–.93]

Note. FRPL = Student is eligible for free-reduced-price lunch.

**Table 2.** Descriptive Statistics Across Student Racial Groups

	Black (n = 220)		Hispanic (n = 1042)		White (n = 3455)		Other (n = 1161)		Group differences
	M	SD	M	SD	M	SD	M	SD	
ASC predictors									
Academic expectations	15.5	2.73	15.3	2.47	15.7	2.24	15.6	2.42	A, B, E
Disciplinary structure	18.4	3.51	18.5	3.58	19.6	3.55	18.7	3.78	A, B, D
Student support	23.6	4.72	23.2	4.59	24.1	4.41	23.4	4.61	A, B, D
Student outcomes									
Victimization experience	3.13	2.74	3.04	2.88	3.03	2.68	3.48	2.80	D, E
Prevalence of teasing & bullying	12.8	3.91	12.6	3.73	12.0	3.65	12.5	3.79	A, C, D
Bullying victimization experience	2.3	3.97	2.47	3.94	2.35	3.46	2.95	3.93	D, E
Student engagement	7.84	2.81	8.16	2.6	8.5	2.52	7.96	2.72	A, C, D, E

Note. A—Significant differences between White & Black participants, B—Significant differences between White & Hispanic participants, C—Significant differences between Black & Hispanic participants, D—Significant difference between White & Other participants, E—Significant differences between Hispanic & Other participants. All significant differences utilized an alpha level of .05.

**Table 3.** Correlation Matrix of Key Measures of Overall Sample Using Pearson's  $r$  (N = 5878)

Variable	1	2	3	4	5	6
1. Academic expectations						
2. Disciplinary structure	.42*					
3. Student support	.58*	.70*				
4. Victimization experience	-.14*	-.36*	-.33*			
5. Bullying victimization experience	-.16*	-.33*	-.32*	.62*		
6. Prevalence of teasing & bullying	-.25*	-.48*	-.43*	.47*	.45*	
7. Student engagement	.38*	.55*	.61*	-.34*	-.33*	-.45*

Note. \* $p < .001$ .

model also controlled for student-level covariates of gender, grade level, free/reduced price lunch status, and parental education. Results (see Table 4) indicate that Black students reported lower academic expectations ( $B = -.11$ ,  $p < .05$ ), disciplinary structure ( $B = -.31$ ,  $p < .001$ ), and student support ( $B = -.17$ ,  $p < .001$ ) when compared to their White peers. Hispanic students also reported lower academic expectations ( $B = -.14$ ,  $p < .001$ ), disciplinary structure ( $B = -.21$ ,  $p < .001$ ), and student support ( $B = -.13$ ,  $p < .001$ ) when compared to White students. Finally, the Other Nonwhite student group reported lower

disciplinary structure ( $B = -.22$ ,  $p < .001$ ) and student support ( $B = -.16$ ,  $p < .001$ ).

The association between the ASC factors and the four selected outcomes of victimization experience, prevalence of teasing and bullying, bullying victimization experience, and student engagement were examined using a 4-step hierarchical school level fixed effects model (see Table 5).

For the first step, race/ethnicity was entered to compare differences across racial groups along the four outcomes. Results indicated that race/ethnicity predicted differences across racial groups with a negligible to small

**Table 4.** Perceptions of Authoritative School Climate Across Racial Groups Using School-Level Fixed Effects

	Dependent variable:		
	Academic expectations <i>B</i> (Std. error)	Disciplinary structure <i>B</i> (Std. error)	Student support <i>B</i> (Std. error)
Black <sup>1</sup>	-.11* (.07)	-.31*** (.08)	-.17*** (.05)
Hispanic <sup>1</sup>	-.14*** (.03)	-.21*** (.04)	-.13*** (.05)
Other <sup>1</sup>	-.03 (.03)	-.22*** (.04)	-.16*** (.04)
Grade	-.07* (.04)	-.11** (.05)	-.06 (.05)
FRPL <sup>2</sup>	.10*** (.04)	.06** (.03)	.13*** (.04)
Female	.02 (.05)	.02 (.04)	-.06* (.03)
Parent education	.03*** (.01)	.03* (.02)	.04** (.02)

Note. 1—White was the reference group, 2—Not eligible for FRPL (Free-reduced-price lunch status) was the reference group. School as a factor was included in the model but not shown in the table.

Model utilized standardized outcome measures.

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

**Table 5.** 4-Step Hierarchical Fixed Effects Model (Steps 1–3)

	Dependent variables											
	Victimization experience			Prevalence of teasing & bullying			Bullying victimization experience			Student engagement		
	<i>B</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>B</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>B</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>B</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$
Step 1:		.048			.085			.015			.065	
Black <sup>1</sup>	.01			.21***			-.02			-.20**		
Hispanic <sup>1</sup>	-.05			.07*			.00			-.04		
Other <sup>1</sup>	.11**			.09**			.14***			-.16***		
Step 2:		.068	.02		.094	.009		.017	.002		.079	.014
Black <sup>1</sup>	.00			.23***			-.04			-.20***		
Hispanic <sup>1</sup>	-.05			.07			-.02			-.03		
Other <sup>1</sup>	.10***			.10**			.12***			.18***		
Grade	-.02			.01			-.02			-.08***		
FRPL <sup>2</sup>	.00			-.04			.05			.03		
Female	-.29***			.19***			-.01			-.16***		
Parent Education	.00			-.02**			-.02			.04***		
Step 3:		.218	.15		.292	.198		.15	.133		.419	.354
AE <sup>3</sup>	.04**			.00			.02			.04***		
DS <sup>3</sup>	-.28***			-.34***			-.23***			.23***		
SS <sup>3</sup>	-.17***			-.16***			-.19***			.40***		
Black <sup>1</sup>	-.11			.09			-.14			-.06		
Hispanic <sup>1</sup>	-.13***			.02			-.09**			.08***		
Other <sup>1</sup>	.01			.00			.04			-.06*		
Grade	-.06***			-.04**			-.06***			-.03		
FRPL <sup>2</sup>	.04			.01			.09***			-.05***		
Female	-.30***			.18***			-.03			-.13***		
Parent Education	.01			-.00			-.00			.01*		

Note. 1—White was the reference group, 2—Not eligible for FRPL (Free-reduced-price lunch status) was the reference group, 3—AE=Academic Expectations, DS=Disciplinary Structure, SS=Student Support. School as a factor was included in the model but not shown in the table.

Model utilized standardized predictors and outcome measures.

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

effect with  $R^2$  ranging from 0.015 to 0.085 (Cohen, 1988). Black students reported higher prevalence of teasing and bullying ( $B = .21, p < .001$ ) and lower student engagement ( $B = -.20, p < .01$ ). Hispanic student only reported higher prevalence of teasing and bullying ( $B = .07, p < .05$ ) and students in the Other Nonwhite group reported higher perceptions of victimization experience ( $B = .11, p < .01$ ),

prevalence of teasing and bullying ( $B = .09, p < .01$ ), bullying victimization experience ( $B = .14, p < .001$ ), and lower student engagement ( $B = -.16, p < .001$ ).

Step two introduced selected covariate variables of gender, parental education, and FRPL status. Results based on race/ethnicity remained consistent with exceptions in the perception of prevalence of teasing and bullying in the

White-Hispanic comparison ( $B=0.07, p>.05$ ) and school engagement in the Other Nonwhite group ( $B=.18, p<.001$ ).

Results in step 3 indicate that victimization experience was statistically associated with all three ASC factors ( $B_{AE}=.04, p<.001, B_{DS}=-.28, p<.001, B_{SS}=-.17, p<.001$ ), while the prevalence of teasing and bullying was statistically associated with disciplinary structure ( $B=-.34, p<.001$ ) and student support ( $B=-.16, p<.001$ ). Bullying victimization experience was associated with disciplinary structure ( $B=-.23, p<.001$ ) and student support ( $B=-.19, p<.001$ ). Lastly, student engagement was associated with all three factors of the ASC model ( $B_{AE}=.04, p<.001, B_{DS}=.23, p<.001, B_{SS}=.4, p<.001$ ). Model results indicated additional variance explained for all 4 selected outcomes with  $\Delta R^2$  of 0.13 to 0.35, resulting in models with medium to large effects,  $R^2=[0.15-0.42]$  (Cohen, 1988).

In the final step 4, statistically significant interaction terms were found for two of the three ASC factors (AE and DS) when examined with race, therefore the interaction term  $SS \times Race$  was not included in the final model (see Table 6). Results did not indicate significant additional variance explained, with models of medium to large effect being retained from Step 3. With regards to Black and White student comparisons, interaction effects indicate race moderated the effects of academic expectations on the outcomes of victimization experience ( $B=-.18, p<.001$ ), prevalence of teasing and bullying ( $B=-.13, p<.001$ ), and bullying victimization experience ( $B=-.28, p<.001$ ). Black racial status also moderated the effects of disciplinary structure on victimization experience

( $B=.24, p<.01$ ) and bullying victimization experience ( $B=.17, p<.01$ ) while no statistically significant interaction effects were found in Hispanic-White and Other Nonwhite-White student comparisons.

Follow-up simple slopes analysis using a pick-a-point approach at  $+/-1$  standard deviations from the standardized means of the two ASC predictors were conducted to examine moderation effects and evaluate standardized mean differences (using Cohen's  $d$ ) in outcomes across the 4 racial groups (see Table 7). When reporting higher levels (+1 SD) of academic expectations, Hispanic students reported .118 SD less victimization experience, .099 SD less bullying victimization experience and .095 SD higher student engagement while Blacks students reported .244 SD less victimization experience and .381 less bullying victimization experience. Amongst students reporting lesser (-1 SD) academic expectations, Black students reported .242 SD more prevalence of teasing and bullying, and .173 SD more bullying victimization and Hispanic students reported .135 SD less victimization experience. Furthermore, among students reporting less favorable school disciplinary structure (-1 SD), lower levels of victimization experiences (Black =  $-.302$ ; Hispanic =  $-.126$ ) and bullying victimization experiences of small effect were reported in Black and Hispanic student groups. Hispanic students also reported higher levels of student engagement (.086) compared to their White peers, while the opposite was reported in the Other Nonwhite group ( $-.082$ ) though the effects were negligible. Finally Hispanic students continued to report lower victimization experience ( $-.127$ ) and Black students reported higher prevalence of teasing

**Table 6.** 4-Step Hierarchical Fixed Effects Model Continued

	Victimization experience			Prevalence of teasing & bullying			Bullying victimization experience			Student engagement		
	<i>B</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>B</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>B</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$	<i>B</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$
Step 4:		.219	.001		.292	.000		.152	.002		.418	-.001
AE <sup>3</sup>	.05**			.01			.04*			.04*		
DS <sup>3</sup>	-.30***			-.35***			-.23***			.22***		
SS <sup>3</sup>	-.17***			-.16***			-.19***			.4***		
Black <sup>1</sup>	-.06			.11			-.10			-.05		
Hispanic <sup>1</sup>	-.13***			.03			-.09**			.08***		
Other <sup>1</sup>	.01			-.00			.04			-.06*		
Grade	-.06***			-.04*			-.06***			-.03		
FRPL <sup>2</sup>	.04			.01			.09***			-.05***		
Female	-.30***			-.18***			-.03			-.13***		
Parent education	.01			-.00			-.00			.01*		
AE $\times$ Black	-.18***			-.13***			-.28***			.05		
AE $\times$ HispanicHispa	.01			-.03			-.01			.02		
AE $\times$ Other	-.01			.02			.01			-.03		
DS $\pm$ Black	.24***			.12			.17**			.03		
DS $\pm$ Hispanic	-.00			.02			.00			-.01		
DS $\pm$ Other	.03			.01			-.04			.03		

Note. 1—White was the reference group, 2—Not eligible for FRPL (Free-reduced-price lunch status) was the reference group, 3—AE = Academic Expectations, DS = Disciplinary Structure, SS = Student Support. School as a factor was included in the model but not shown in the table.

Model utilized standardized predictors and outcome measures.

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

**Table 7.** Standardized Mean Differences Using Cohen's *d* Across Race Using Simple Slopes Analyses Using Pick-a-Point Approach

	Victimization experiences		Prevalence of teasing & bullying		Bullying victimization experience		Student engagement	
	-1 SD	+1 SD	-1 SD	+1 SD	-1 SD	+1 SD	-1 SD	+1 SD
<b>Academic expectations</b>								
Black <sup>1</sup>	0.115	-0.244***	0.242***	-0.016	0.173***	-0.381***	-0.105	0.000
Hispanic <sup>1</sup>	-0.135***	-0.118***	0.007	-0.056	-0.071	-0.099*	0.055	0.095**
Other <sup>1</sup>	0.013	0.003	-0.018	0.017	0.027	0.046	-0.027	-0.088
<b>Disciplinary structure</b>								
Black <sup>1</sup>	-0.302***	0.173	-0.002	0.229**	-0.275***	0.067	-0.084	-0.021
Hispanic <sup>1</sup>	-0.126*	-0.127**	-0.048	-0.002	-0.086*	-0.084	0.086**	0.064
Other <sup>1</sup>	-0.019	0.036	-0.015	0.013	0.074*	-0.002	-0.082**	-0.033

Note. 1—White was the reference group.

Results utilized standardized predictors and outcome measures and include all covariates of interest and school fixed effects.

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

and bullying (.229) with small effects when they reported a more positive perceptions of disciplinary structure. Visualization of the simple slopes analyses are presented in Figures 1 and 2.

## DISCUSSION

The focus of the current study was to evaluate potential racial and ethnic differences in perception of school climate using the ASC model. Building upon Konold et al. (2017), the study sought to expand the evaluation of the consistency in perception of school climate across racial/ethnic groups to include a middle school sample of students. Konold et al. (2017) was the first study to examine potential moderation by different racial group membership in the relationship between authoritative school climate, bullying victimization experience, victimization experiences, and student engagement using a high school sample. Consistent with its study design, the present study adopted similar methods and research questions while expanding the data collection across two states, including a middle school sample, and by including a 3rd comparison group of Other Nonwhite minoritized students to encapsulate a generalized student of color school climate experience differing from the previously evaluated Black and Hispanic groups.

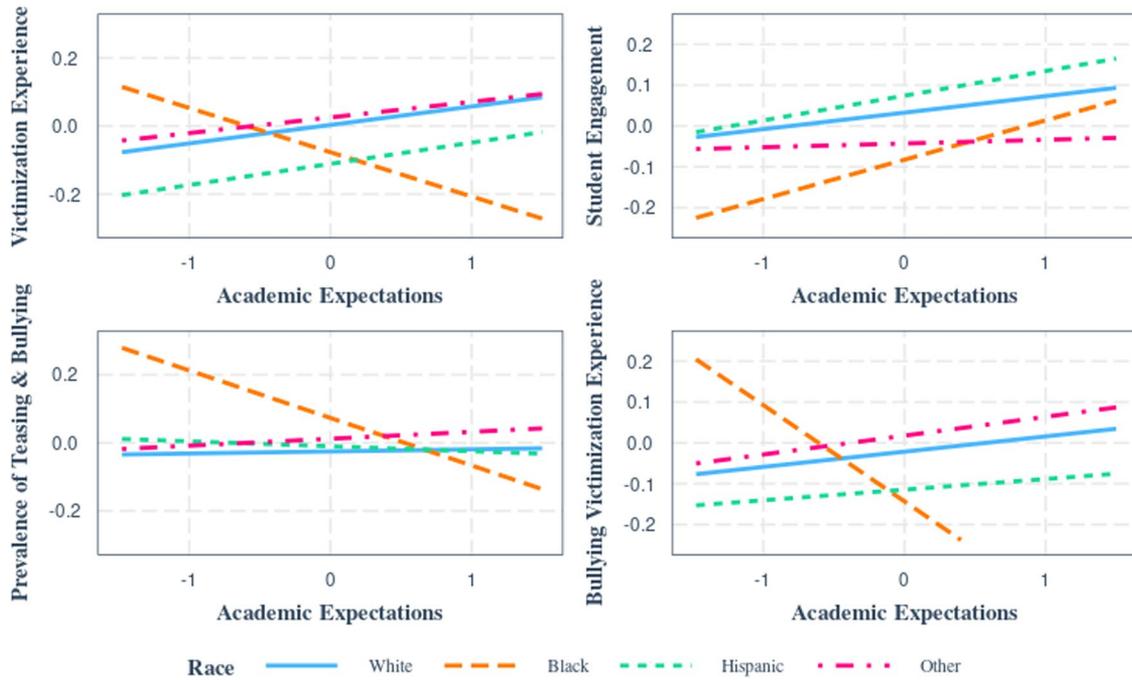
According to the ASC model, more positive school climate in the three corresponding theoretical predictors should be associated with better student engagement and less bullying victimization and victimization experience (Bradshaw & Johnson, 2011; Cohen et al., 2009; Konold et al., 2017; Thapa et al., 2013). Results were consistent with prior literature, with higher levels of disciplinary structure and student support both associated with lower levels of victimization and bullying victimization experience and higher levels of student engagement. Results also showed that a positive perception of authoritative school climate characteristics of a school may contribute to an environment that actively mitigates the effects of bullying,

while promoting student engagement practices (Gregory et al., 2010; Konold et al., 2017; Konold & Cornell, 2015). Not only does a positive perception of school climate indicate a more positive overall perception of the school and its in-placed structures, but this positive perception may contribute to students further initiating preventative strategies for bullying and aggression with their trust of the disciplinary structures available. Consistent with ASC theory, students will more likely stand up against these negative behaviors and have trust that disciplinary action will be fair and continue to promote a beneficial school environment. The current study also found such consistencies with previous literature when adding a middle school sample and collecting data in a different geographic region, further providing evidence for continued use of the theoretical framework in future studies across secondary school settings.

Addressing the two presented research questions, results were consistent with those of Konold et al. (2017). Confirming the study's first hypothesis, racially minoritized students differed in their perception of school climate when compared to their White peers. This is consistent with previous literature which found that racial disproportionalities exist when individually examining student perceptions of academic expectations, disciplinary structure, and support (Diamond et al., 2004; Gregory et al., 2011; Konold et al., 2014, 2017; Lee, 2012; Skiba et al., 2002). Black and Hispanic student groups in the sample reported a more negative view on all three factors of authoritative school climate, while the Other Nonwhite student group reported lower levels of disciplinary structure and support. These perceptive differences were also considerable, results revealing standardized differences ranging from .1 to .3 standard deviations below the mean across different racial groups when compared to their White students (See Table 4).

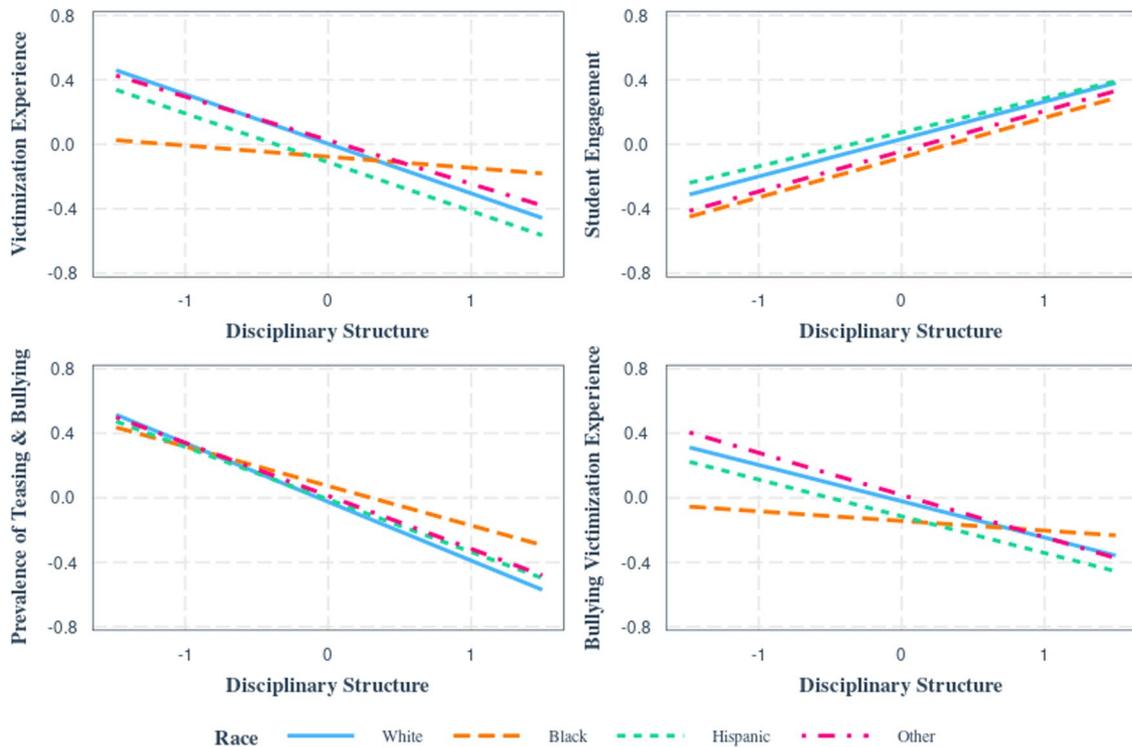
Voight et al. (2015) found race to influence student perceptions of school climate within a particular school. This was also evident in the present study regardless of

**Figure 1.** Association Between Academic Expectations and Outcomes of Interest Across Race



*Note.* All models illustrated utilized standardized predictors and outcomes and included selected covariates; X-axis represent  $\pm 1$  SD from the standardized mean of the predictor (see Table 7).

**Figure 2.** Association Between Disciplinary Structure and Outcomes of Interest Across Race



*Note.* All models illustrated utilized standardized predictors and outcomes and included selected covariates; X-axis represent  $\pm 1$  SD from the standardized mean of the predictor (see Table 7).

specific racial/ethnic group identity. A negative perception of school climate amongst minoritized groups may inform a student's response to the expectations and structures in-place in their school. Specifically, a student's continued negative perception of their school environment may contribute to their behaviors in the classroom. Racially minoritized students may be less proactive in seeking help if they perceive their teachers as less responsive and having lower expectations of them. Without the same level of expectations and perceived help from instructors compared to their White peers, minoritized students' performance may be impacted negatively. Furthermore, they may be less prone to follow disciplinary structures in place due to a negative perception of the rules, which may potentially contribute to a continuous cycle of mistrust toward the disciplinary practices and further breaking of the rules. These differences hence inform the disciplinary and achievement gap between racial groups that is present in previous literature.

The second proposed hypotheses confirmed racial differences were present between White and Nonwhite students in the perception of the four outcomes of interest. Results in the Other Nonwhite student group indicated higher perceived victimization, bullying victimization, and prevalence of teasing and bullying, and lower student engagement with a small effect. This suggests that students of color report negative school experiences, even those who do not identify as Black or Hispanic, relative to White majority students.

Additionally, Black and Hispanic comparisons with White students also yielded significant results. Specifically, Black students reported higher levels of bullying victimization experience and lower levels of student engagement when compared to their White peers with a small effect and standardized differences of .2. Moreover, a statistically significant effect was found when evaluating the potential moderation of race in the relationship between ASC factors and the four outcomes of interest between Black and White students.

Consistent with prior Authoritative School Climate literature (Konold et al., 2017), analysis of effect size also revealed encouraging results. Specifically, inclusion of ASC variables accounted for considerably higher amounts of variance across the 4 specific outcomes of interest with small to medium effects, with the most in student engagement ( $\Delta R^2 = 0.354$ ), followed by the prevalence of teasing and bullying ( $\Delta R^2 = 0.198$ ), victimization experience ( $\Delta R^2 = 0.15$ ), and finally bullying victimization experience ( $\pm 0.133$ ). This increase in variance accounted for may indicate continued utility of these school climate factors when examining results of peer victimization experiences (i.e., general or bullying) and student engagement in schools.

Furthermore, though the inclusion of interaction terms only accounted for a negligible amount of increased variance explained in 2 of the 4 outcomes (victimization experience and bullying victimization experience) and the results generalized for the remaining 2 outcomes, the findings were consistent with Konold et al. (2017) results for White versus Hispanic samples. A hypothesized negative moderation effect by race membership in the overall sample could not be confirmed in the present study. However, a more negative perception of school climate and higher perceptions of peer victimization persists amongst racially minoritized student groups. This may indicate a need to evaluate other student (other than racial status) or school-level factors (school-level demographics, urbanicity, diversity, culture of equity) when examining the association between school climate and peer victimization experiences.

Though results of final step in the overall model did not account for significantly more variance, pick-a-point analyses of the significant interaction effects analyzing racial differences using standardized differences (Cohen's *d*) at  $\omega 1$  standard deviation from the standardized mean provide further nuance when looking specific differences between the student groups. Specifically, an inverse relationship between academic expectations and bullying victimization, victimization experience, and the prevalence of teasing and bullying was found amongst Black students. The results shed light on the highly racially discrepant outcomes when evaluating perceptions of school climate between Black and White students on a spectrum. In the present study, Black students reporting more favorable academic expectations (+1 standard deviation) reported up to .24 SD less victimization experience and up to .38 SD less bullying victimization experience compared to White peers while students with less favorable views of their academic environment reported up to .2 SD higher prevalence of teasing and bullying and bullying victimization with the gap between the two groups widening as student perceptions become even more or less favorable (see Figures 1 and 2). This may indicate that, specifically for Black students, higher teacher responsiveness and connection with students in academic situations effectively contribute to lower levels of bullying and victimization experiences and students more consistently following the teacher or school's behavior expectations.

The results also suggest the power of academic expectations for influencing Black student outcomes. Consistent evidence over the past 50 years has shown the power of educator expectations in influencing student achievement (Rosenthal & Jacobson, 1968); corresponding evidence suggests that teachers have generally lower academic expectations of Black students. Thus, this pattern of low expectations may interfere with Black student success. Results in the present study suggest one pathway between

expectations and achievement may be through engagement and compliance. That is, high academic expectations were particularly associated with higher levels of engagement and lower levels of victimization experiences which in turn may lead to improved academic performance. Helping educators examine their assumptions and biases about Black students and preparing them to enact intentionally high expectations for them in their interactions may be a promising strategy for improving Black student educational outcomes. We did not find evidence that excessively high expectations were harmful for students (i.e., these were linear associations where increasing academic expectations predicted better outcomes). However, it is likely that high expectations will be most impactful in the presence of other aspects of a positive school climate characterized by structure and support.

Furthermore, consistent with the ASC model, Black students who perceived their school climate as fairer (+1 standard deviation above mean) led to lower perceptions of victimization experiences (Cornell & Huang, 2016; Konold et al., 2014, 2017). These students may place more trust in the disciplinary system in place and follow the in-placed rules themselves knowing that they will be enforced correctly and justly. However, when compared to their White peers, increased levels of disciplinary structure did not indicate significantly lower levels of victimization experience and bullying victimization experience. This may mean that though a universally perceived discipline system that is fairer may lead to lowered perceptions of peer victimization experiences, it would not be as effective in mitigating effects of victimization and bullying victimization experiences for Black students.

With regards to the Hispanic and White student comparisons, no statistically significant differences were found in the perceptions of outcomes and moderation on associations between the ASC predictors with the outcomes of interest also generalized. Though Hispanic students did not report differences in their perception of bullying victimization and general victimization experiences, their perception of school climate was still more negative compared to their White peers. Stand-alone analysis using only the Hispanic sample revealed that the ASC model predictors operated as theorized, with perceptions of negative outcomes inversely related to the ASC model predictors. This may well be an encouraging result, indicating that the association between the ASC predictors and the outcomes investigated did not show significant racial disparities. However, an overall significantly less favorable view of school climate among Hispanic students when compared to their White peers is still problematic. Further analysis that contributes to this racial divide, including an evaluation of the survey constructs may help

educators understand the specific areas of school climate in which Hispanic students rated schools as a more negative experience.

## POTENTIAL IMPLICATIONS FOR PRACTICE

Finally, results of the current study may shed light for school psychology practitioners as it pertains to the practices of consultation and the implementation of a multitiered systems of support. First, knowing that an increase in academic expectations effectively contributes to lower perceptions of negative outcomes amongst Black students, school psychologists may consider the provision of additional consultative supports to educators by focusing on establishing positive academic and behavior expectations in the classroom. For example, the Classroom Checkup (CCU) model is a coaching model which empowers educators in increasing positive classroom climate while establishing equitable behavior expectations in teaching (Reinke et al., 2008). The Double-Check model was also created to provide teachers with similar strategies using a cultural responsiveness framework to aid teachers establish universal classroom supports when teaching in a racially diverse classroom (Bradshaw et al., 2018; Hershfeldt et al., 2009). Specifically, this consultative model offers strategies and supports targeted to examine personal values and biases in teaching and increasing intentionality in establishing high expectations in the classroom. Future applied research evaluating these consultative models may also consider highlighting the effects of school climate within a consultative relationship; for example, collecting student perception of school climate data and utilizing them to identify consultation goals or to distinguish specific classroom practices that may lead to improved classroom climate by incorporating both teacher and student perspectives.

Consequently, the results of the current study may also suggest potential considerations to school-level systems change efforts focused on the already widely implemented multitiered systems of support framework. The current study found significant racial disparities in perceptions of peer victimization and student engagement when evaluating target student groups with either more favorable or less favorable perceptions of authoritative school climate. Specifically, the racial discrepancies in perceptions of peer victimization experiences increased drastically as the perceptions of school climate worsened amongst Black students. Adopting a multitiered systems of support framework that focuses on “bridging gap” by identifying students along a spectrum of need (Sugai & Horner, 2006), school educators and practitioners may consider focusing targeted and intensive academic and behavior interventions

specific to improving student–teacher relationship and further exploration of student perception of the equity of disciplinary practices amongst Black students.

## LIMITATIONS & DIRECTIONS FOR FUTURE RESEARCH

Several limitations should be acknowledged from the current study in addition to potential directions for future research. First, though results provide support for the continued use of the ASC model in measuring school climate and evidence for its association to important student outcomes, causal conclusions cannot be drawn from the present study due to the cross-sectional nature of the design. A likely bidirectional relationship may exist between ASC constructs and outcomes. Students who have experienced overly harsh disciplinary punishment in a previous academic setting may naturally have more negative views of school disciplinary structures regardless of current school setting. Moreover, students who are proactive and engaging in school may simply find school to have a more positive climate regardless of the structures in place to increase engagement among student groups. Nevertheless, results for the association between ASC and the selected outcomes indicate the need for continued focus on climate research to further inform schoolwide decision-making. Future studies could explore employing an experimental design focused on increasing student engagement or decreasing bullying through programs by modifying elements directly related to the ASC model. For instance, interventions that promote positive school climate and the school and/or classroom levels could be evaluated in a randomized design to determine how any changes in climate can lead to improvements in student outcomes. Specifically, student and school-level factors pertaining to school climate such as student retention/dropout, bullying incident rates, and student classroom engagement may also be targeted as further outcomes of interest when adapting this theoretical model in applied research endeavors.

The current study also relied on student self-reported measures of Authoritative School Climate, Victimization Experience, Bullying Victimization Experience, and the Prevalence of Teasing and Bullying. Though a multistep screening procedure eliminated potential outliers of student responses, single informants provide only one perspective of school climate and outcomes and may be influenced by source bias. Future studies may want to evaluate teacher or administrator perceptions and use direct observations of these identified variables of interest to further inform educators of practical ways in bettering their school environment. Potential educators and

students' differences may also inform educators about the disconnect between student perception of climate and the imposed school policies.

Third, the current study focused on identifying racial/ethnic differences in student perceptions of school climate by comparing Black, Hispanic, and Nonwhite students (which included various racial/ethnic statuses) with their White peers. With less favorable views of school climate found in all 3 minoritized racial/ethnic groups and higher perceptions of victimization experiences in the Black and Other Nonwhite group, more in-depth consideration could be given to within-group differences in these racial groups to identify how the association between ASC variables and victimization could be influenced by factors such as acculturation, in-school representation, extent of racial ethnic identity of specific students. A student racial status, the actual representation of the student's own racial group in their school, the extent to which the student feels a need to represent their minoritized status, and racial mismatch with educators could all be evaluated in future studies to continue to extend the current study on racial perceptiveness differences in school climate literature.

Finally, the study adopted the ASC model as the primary theoretical framework in which school climate was defined. The association between the three school climate predictors and measures of bullying victimization, victimization, and engagement provide a foundation to informing school reform processes specifically pertaining to issues of discipline and feelings of belongingness. However, according to Cohen et al. (2009), school climate can be defined simply as the “quality and character of school life” (p. 182). This definition allows for other ways of measurement and interpretation that are not limited to measures of discipline, support, and expectations. Further studies may consider exploring (1) utilizing school climate definitional frameworks which include considerations for school safety, physical school layout/structure, and achievement or (2) further exploring the effects of Authoritative School Climate with other variables of interest pertaining to student school experience (e.g., safety, disciplinary outcomes, achievement) to provide a more comprehensive understanding of school climate (Cohen et al., 2009).

## CONCLUSION

The present study found that, consistent with ASC theory, students with a more positive perception of school climate reported lower levels of peer victimization experiences, and higher levels of student engagement with a medium to large effect (Cornell & Huang, 2016; Konold et al., 2017). The addition of middle schoolers in the

sample also provides a worthwhile direction of future research in addressing a found progressively negative perception of school climate. The present study not only found significantly more unfavorable perceptions of school climate were found across all racially minoritized student groups when compared to their White peers but also identified significant moderating effects of race when examining associations between authoritative school climate and perceptions of victimization experience and student engagement. (Girvan et al., 2017; Gregory et al., 2011; Konold et al., 2017). This provides further evidence for the need to address racial/ethnic disproportionality in school practices as they relate to school climate due to minoritized students reporting less favorable perceptions of school experience when compared to their White peers. Nevertheless, it is important to acknowledge the use of the ASC model in understanding student perception of school experience and how they impact these behavioral perceptible differences. It seems that interventions and school-based decisions focused on areas identified by this theoretical framework may be beneficial across student racial groups in lowering perceived bullying and victimization while also improving student engagement in schools.

## DISCLOSURE

The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.

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## ORCID

Francis Huang  <http://orcid.org/0000-0002-5900-7763>

Keith Herman  <http://orcid.org/0000-0003-2246-5792>

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## AUTHOR BIOGRAPHICAL STATEMENTS

*Ying-Ruey Chuang* is a school psychology doctoral candidate at the University of Missouri and a graduate research assistant at the Missouri Prevention Science Institute. His research focuses on bridging the research to practice gap, primarily focusing on school climate, culturally responsive teaching practices, and universal strategies in the classroom.

*Francis Huang* is an associate professor in the Statistics, Measurement, and Evaluation in Education program in the College of Education at the University of Missouri and the Methodology Co-Director of the Missouri Prevention Science Institute. His research focuses on both methodological (e.g., analysis of clustered data) and substantive (e.g., school climate, disparities in disciplinary sanctions) areas of interest.

*Keith Herman* is a Curator's Distinguished Professor in Department of Education, School, & Counseling Psychology at the University of Missouri. He is the Co-Founder and Co-Director of the Missouri Prevention Science Institute. He has an extensive grant and publication record including over 150 peer-reviewed publications in the areas of prevention and early intervention of child emotional and behavior disturbances and culturally sensitive education interventions.

*Bixi Zhang* is a postdoctoral fellow in the Missouri Prevention Science Institute at the University of Missouri. Her research interests include causal inference, multilevel modeling, large-scale assessment, and their applications in the associations between learning-related behaviors and academic achievement in childhood.