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# A Measure of School Racial Socialization and Quality of Intergroup Interactions

Christy M. Byrd  
University of California, Santa Cruz

**Objectives:** The current study presents a comprehensive framework of campus racial climate and tests the validity and reliability of a new measure, the School Climate for Diversity Scale—College, in three independent samples. The scale measures 10 dimensions of campus racial climate in the two domains of intergroup interactions (frequency of interaction, quality of interaction, equal status, support for positive interaction, and stereotyping) and campus racial socialization (cultural socialization, mainstream socialization, promotion of cultural competence, colorblind socialization, and critical consciousness socialization). **Method:** Participants were college students drawn from an online task system and a public university on the West Coast. **Results and Conclusions:** Study 1 provided evidence of reliability and validity with existing measures of college climate, whereas Study 2 provided evidence of factor stability through exploratory factor analysis as well as additional evidence of discriminant and concurrent validity. Finally, Study 3 replicated the factor structure of Study 2 and provided further evidence of validity.

**Keywords:** campus climate, diversity climate, intergroup relations, racial socialization, school racial climate

As campuses become more racially diverse, educators need to be able to understand how well they are promoting the success of traditionally underserved groups of students and the cultural competence of all students. One way to understand student outcomes is through the examination of campus climate, that is, the norms, values, interactions, relationships, and organizational structures within a campus (Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). Campus *racial* climate, also known as school climate for diversity, focuses on perceptions of the climate as it relates to race, ethnicity, and culture. The study of the role of race and culture in education has been stymied by a lack of coherence in the many conceptualizations and operationalizations in the educational and psychological literatures. The goal of the current study is to validate a measure of a new framework that comprehensively outlines the many ways that students perceive their campus racial climates. The framework in the current paper addresses the limitations of existing research by considering not only how individuals interact across race within a campus (i.e., intergroup interactions) but also how the explicit and hidden curriculum addresses race and culture (i.e., campus racial socialization).

## Definitions and Assumptions

The dimensions of the framework are described below, but first I will explain the definitions and assumptions guiding the work. First, race is defined as a category based on physical appearance,

cultural difference, and social and historical conventions (Markus, 2008; Omi & Winant, 1994). The current framework uses the term “race” to refer to racial and ethnic categories as race is the preferred term for adolescents and adults to describe their backgrounds (Perez & Hirschman, 2009; Smith, Woo, & Austin, 2010) and is more commonly used in the literature and everyday speech (Helms & Talleyrand, 1997) than the term ethnicity. One assumption of the current framework is that processes associated with interracial interactions are analogous to those of interethnic and intercultural interactions. Another assumption is that the dimensions and processes proposed are relevant to U.S. campuses, without any statement about their applicability in other countries with different histories. The framework is also only concerned with individual students’ perceptions, with the recognition that perceptions are influenced by previous experiences and preexisting beliefs in addition to experiences within the campus context. Other features such as campus composition or the perspectives of others are valuable constructs but not included within the current framework.

Furthermore, all the dimensions described are expected to exist across school contexts, from early childhood education to graduate education, because schools exist as organizations with similar structures across grade level, for example: structured and unstructured interactions between members of different racial groups, a formal curriculum, and norms about the nature of interracial interactions. Research findings for campus racial climate (e.g., Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999; Mattison & Aber, 2007; for reviews see: Aldana & Byrd, 2015; Bennett, 2001; Denson, 2009; Hurtado, Griffin, Arellano, & Cuellar, 2008; Thapa et al., 2013) and racial discrimination (e.g., Fisher, Wallace, & Fenton, 2000; Pascoe & Smart Richman, 2009) are highly consistent across K–12 and higher education.

The final assumption is that campus racial climate is multidimensional. A multidimensional perspective acknowledges the

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Correspondence concerning this article should be addressed to Christy M. Byrd, Department of Psychology, University of California, Santa Cruz, Psychology Faculty Services, 1156 High Street, Santa Cruz, CA 95064. E-mail: [cmbbyrd@ucsc.edu](mailto:cmbbyrd@ucsc.edu)

complexity of the campus environment and the competing processes that affect individuals. A multidimensional approach also moves away from simply labeling climate as “positive” or “negative.” A multidimensional approach is more appropriate from a person-environment fit perspective because different features of the environment may be more salient to individuals depending on their characteristics. Finally, from a practice perspective, acknowledging multiple aspects of climate and understanding how they operate to affect campus members allows educators and policymakers to target specific areas for improvement.

### The Need for a Comprehensive Measure of Campus Racial Climate

Although the constructs outlined below have been theorized about in the educational and psychological literatures, few validated measures exist at the college level (Aldana & Byrd, 2015). Existing measures tend to conflate frequency with quality of interaction (Hurtado et al., 2008) or to conflate perceived discrimination with perceptions of campus climate (e.g., Dotterer, McHale, & Crouter, 2009; Hurtado & Carter, 1997; Kotori & Malaney, 2003; Mattison & Aber, 2007; Pewewardy & Frey, 2002). Furthermore, my research team has found no measures of campus racial socialization that exist beyond those that count participation in diversity activities (i.e., Astin, 1992; Hurtado & Ponjuan, 2005). Additionally, none of the existing measures have been shown to be reliable and valid in multiple diverse samples.

Last, the majority of measures of campus racial climate used in the extant literature are unidimensional. The only multidimensional measure is the Campus Interracial Climate Scale by Chavous (2005), which is based on Allport’s (1954) intergroup contact theory and has not been widely adopted. A unified and comprehensive measure is needed so that researchers are aware that multiple aspects of campus racial climate exist and they thus must consider potential interactions when assessing racial climate. For example, some may assume that opportunities to learn about other cultures is always positive; however, multicultural education theorists emphasize that curricula that preserve negative stereotypes of marginalized groups or take a “tourist” approach to diversity without acknowledging societal inequities may actually be detrimental to student attitudes and understandings (Sleeter & Grant, 2011). A multidimensional approach is necessary for acknowledging and exploring these multiple influences.

### Dimensions of Campus Racial Climate

There are 10 dimensions of campus racial climate in two domains (Byrd, 2015, 2017). The first domain draws primarily from psychology to examine interactions across racial/cultural groups, whereas the second domain is based primarily in educational research. Because both domains characterize some aspects of students’ experiences on campus, it was important to integrate them into a more comprehensive framework.

### Intergroup Interactions

The first domain draws on the intergroup relations literature (Allport, 1954; Chavous, 2005; Pettigrew, 2008) and considers the nature of interactions across racial and cultural groups within a

campus. Interactions can be described in terms of how frequently they occur (frequency of interaction) and by how meaningful or positive/negative those interactions are (quality of interaction). Though most studies conflate frequency and quality, more frequent interactions does not necessarily mean higher quality (Hurtado et al., 2008). In fact, frequent negative interactions may be associated with worse student outcomes than infrequent positive interactions.

An additional dimension is equal status, which refers to how fairly different groups are treated and whether students from different groups have similar opportunities for recognition and participation. Though individuals’ perceptions of fair treatment on campus can be informed by their own experiences of discrimination, it is important to distinguish between the two constructs (Byrd, 2015). For example, a Latino student may recognize that Latinos at their campus are given fewer leadership opportunities than White students, even though the student has never been a target of such treatment themselves. Thus, equal status is more general than perceived discrimination.

Support for positive interaction describes the norms that govern intergroup interactions. Intergroup contact theory highlights the importance of authority support for contact (Allport, 1954; Pettigrew, 2008) and other work in psychology also highlights the nature of campus norms that can promote segregation or integration (Tyson, Darity, & Castellino, 2005). Campuses can convey support for positive interaction in formal and informal ways, from sponsoring intergroup dialogues to multicultural festivals. At the same time, high support for positive interaction does not necessarily preclude supportive and identity-affirming spaces (e.g., Black Student Unions; Tatum, 2003).

The final dimension in this domain is stereotyping, which refers to the stereotypes and prejudices that students perceive their peers and instructors having. It also includes stereotypical representations in textbooks, displays, and other materials. Stereotypes are cognitive schemas about social groups and shape expectations about individual members of each group (Hamilton & Sherman, 1994). Stereotypes and prejudice (negative attitudes about certain groups) differ from discrimination or quality of interaction, which both describe behavior (Dovidio, Brigham, Johnson, & Gaertner, 1996). Both positive and negative stereotypes can be harmful to student success as they limit the degree to which a student is seen as an individual and can unconsciously impair performance (e.g., Steele, 1997).

### Campus Racial Socialization

The second domain of the framework, campus racial socialization, describes explicit and implicit ways campuses teach about race and culture. K–12 schools and colleges have a predetermined curriculum and can convey explicit messages, but a “hidden curriculum” is also conveyed through norms, structures, and policies. The hidden curriculum refers to the implicit values and perspectives students are taught. K–12 researchers have examined how damaging messages about race and culture are conveyed through the lack of multicultural content or less critical forms (Wills, Lintz, & Mehan, 2004). Examples of less critical forms include those that merely highlight “food and fun” without attending to issues of privilege and inequality between groups (Sleeter & Grant, 2011). Studies have investigated how school structures and policies en-

force norms (e.g., Perry, 2001), but few studies have attempted to quantify students' perceptions of the hidden curriculum.

The domain of campus racial socialization also draws on the parental racial socialization and multicultural education literatures (e.g., Bennett, 2001; D. L. Hughes et al., 2006). Some of the proposed dimensions (i.e., cultural socialization and critical consciousness socialization) have been found to be associated with the outcomes of African American youth in particular (Aldana & Byrd, 2015) but have less often been studied for youth of different racial backgrounds. Other dimensions (i.e., colorblind socialization and mainstream socialization) have not been measured from students' perspectives in previous work. Importantly, these socialization constructs have not been systematically studied at the college level. Thus, the citations below are generally from the K–12 or workplace literature.

The first dimension is cultural socialization, that is, what youth learn about their own racial and cultural background. Theories of culturally relevant teaching (e.g., G. Ladson-Billings, 1995; Morrison, Robbins, & Rose, 2008) and home–campus dissonance (Arunkumar, Midgley, & Urdu, 1999; Tyler et al., 2008; Warzon & Ginsburg-Block, 2008) emphasize the importance of students' cultures being acknowledged and used as resources in classrooms for student success. Similarly, Afrocentric education and other forms of ethnic studies intentionally provide youth with opportunities to learn about their groups' traditions and histories (e.g., Asante, 1991; Godina, 2003).

The alternative to cultural socialization is mainstream socialization, which refers to learning about mainstream U.S. norms, values, and traditions, in particular notions of individualism, competition, and Western exceptionalism. This dimension also draws on home–campus dissonance frameworks (Arunkumar et al., 1999; Tyler et al., 2008) that highlight how Western values sometimes clash with values of minority groups such as communalism and familism (Schwartz et al., 2010). Mainstream norms are observable in schools (e.g., Perry, 2001); however, no studies have measured the extent to which students perceive mainstream values, as existing home–school dissonance research focuses primarily on conflict between cultures rather than the presence of particular values. This dimension also draws on the individualism dimension of parental racial socialization, which is defined as encouragement to focus on individual traits over racial group membership (D. L. Hughes et al., 2006). Items in Study 1 focus on individualism as an aspect of mainstream socialization.

Third is promotion of cultural competence: learning about the histories and traditions of other groups. Cultural competence includes skills such as comfort with outgroup members, knowledge about outgroups, and an ability to interact positively with a wide range of people (Chang, 2002; Ponterotto, 2010). Learning about different racial and cultural groups can range from limited exposure during multicultural fairs and holidays to in-depth study of a particular group.

Colorblind socialization refers to messages that encourage youth to ignore the importance of race. Qualitative and ethnographic research has considered the various ways that colorblind ideology is manifested in schools (e.g., Perry, 2001; Pollock, 2005). A colorblind ideology can be expressed explicitly or implicitly through school practices such as tracking or multicultural programming that focuses on only on “other” cultures (Perry, 2001; Sleeter & Grant, 2011). Some researchers have long recognized

the disadvantages of overlooking the real-life significance of race in favor of minimizing it or pretending that racial inequalities do not exist (Apfelbaum, Pauker, Sommers, & Ambady, 2010; Pollock, 2005). In individuals, colorblind ideologies are associated with higher racial prejudice (Atwater, 2008). Colorblindness in workplaces is associated with alienation and lower engagement for people of color whose color is “not seen” (Plaut, Thomas, & Goren, 2009) and can be counterproductive in school settings, for instance by increasing White students' racial bias and limiting their ability to understand racial inequality (Apfelbaum et al., 2010; J. M. Hughes, Bigler, & Levy, 2007; Richeson & Nussbaum, 2004; Schofield, 2006). When considering colorblind ideology as an aspect of school or campus racial climate, few studies have measured students' perceptions of the degree to which those around them and the curriculum have colorblind views (see Byrd, 2015 and Lewis, Chesler, & Forman, 2000 for exceptions in the secondary and postsecondary literature, respectively). Perceiving a colorblind message and recognizing it as such may have even stronger implications for students than simply being exposed to them.

As opposed to colorblind socialization, critical consciousness socialization teaches youth to recognize and address differences between racial groups in power and privilege. Such teaching is less common in mainstream K–12 schools but is a foundation for social justice pedagogy and prejudice reduction work (Aldana & Byrd, 2015; Aldana, Rowley, Checkoway, & Richards-Schuster, 2012). This dimension is referred to as “preparation for bias” in the parental racial socialization literature (D. L. Hughes et al., 2006) but is expanded in the current framework to consider how both White students and students of color can learn about oppression.

### Scale Development

The current study explores evidence for the reliability and validity of a survey scale to measure the constructs discussed above. The first version of the School Climate for Diversity scale was developed for dissertation research with secondary students (Byrd, 2012) based on existing scales of discrimination, racial climate, and racial attitudes (Aber & University of Illinois School Climate Research Team, n.d.; Brand, Felner, Shim, Seitsinger, & Dumas, 2003; Denson & Chang, 2009; Green, Adams, & Turner, 1988; D. Hughes & Chen, 1999; Neville, Lilly, Duran, Lee, & Browne, 2000; Sellers, Rowley, Chavous, Shelton, & Smith, 1997) and in consultation with school officials and experts in the field. The scale measured the dimensions using a 1 (*not at all true*) to 5 (*completely true*) scale for the intergroup interactions items and stereotyping, and a 1 (*never*) to 3 (*more than twice*) scale for the racial socialization items. Exploratory and confirmatory factor analyses in a sample of 99 middle and high school students at a predominantly Black school provided marginal support for the model. Cronbach's alphas ranged from .57 to .85, with several scales having lower than desirable alphas. In addition to being limited by sample size, the study was limited in that frequency of interaction was composed of only two items and stereotyping assessed stereotypes against specific groups (i.e., Blacks and immigrants) rather than stereotypes more generally. See Byrd (2017) for the validated secondary version of the scale.

Revisions to the scale focused on developing more test items for each scale, revising the socialization items so that they would use

the same scale as the other items, and broadening the stereotyping scale. These changes were imported to the development of a college version of the scale (School Climate for Diversity–College [SCD-C]). Minor wording changes made the scale appropriate for college (i.e., changing “teachers” to “faculty”). Additionally, items addressing opportunities for college coursework and organizational involvement were added to the cultural socialization, critical consciousness, and promotion of cultural competence scales. The first college version is tested in Study 1, where the goals were to (a) establish the reliability of the subscales and (b) provide evidence of validity by exploring correlations with existing measures of discrimination and campus racial climate. First, in recognition of the multidimensionality of the framework and that different constructs are assessed by different dimensions, I expected discrimination to be weakly or moderately related to quality of interaction and stereotyping but not significantly related to other subscales.

Second, I examine correlations with a validated and commonly used scale of racial climate in studies of secondary students, the Support for Cultural Pluralism Scale (Brand et al., 2003). The scale consists of four items measuring perceptions of fair treatment, positive interactions, learning about other cultures, and teacher encouragement of positive interactions. The measure is limited because it combines multiple aspects of school racial climate into one subscale. The Support for Cultural Pluralism scale is expected to be highly correlated with multiple SCD-C subscales as an indicator that it does not distinguish between the multiple dimensions.

Third, I examine correlations between subscales adapted from intergroup contact theory (Allport, 1954) that measure association across race, equal status, and institutional support for contact. These scales are expected to be strongly correlated to frequency of interaction, quality of interaction, equal status, and support for positive interaction.

The final two validating measures were used to provide evidence of convergent validity for the campus racial socialization subscales. The Astin (1992) Student Diversity Experiences and the Hurtado (Hurtado & Ponjuan, 2005) Participation in Diversity Programs scale count participation in diversity-related activities and have been used in multiple studies and show consistent relations to outcomes (e.g., Astin, 1992; Cole & Ahmadi, 2010; Denson & Chang, 2009; Engberg, 2007; Hurtado & Ponjuan, 2005; Park, 2009; Park, Denson, & Bowman, 2013). They are expected to be strongly correlated with cultural socialization, promotion of cultural competence, and critical consciousness socialization.

## Study 1

### Method

**Participants.** Participants were recruited through Amazon.com’s Mechanical Turk in fall 2013. Mechanical Turk is an online marketplace where requesters post tasks that workers can complete for small payments. It has been used as an effective and reliable subject pool for survey studies (Paolacci, Chandler, & Ipeirotis, 2010). However, given that the payments are small, it was necessary to limit the number of items each participant responded to. Additionally, the validating measures were highly similar to the

SCD-C subscales, so it was important to minimize participant fatigue. Therefore, a planned missing data approach (Graham, Taylor, Olchowski, & Cumsille, 2006) was used such that each participant responded to a portion of the items instead of all the items. Specifically, each participant was presented with one page of items consisting of one or two subscales from the SCD-C and one or two validation measures. Items were randomized within page.

The participants were 491 individuals who reported that they were enrolled in at least one course at a college or university in an in-person (rather than online) program. Half of the participants were women and full-time students (70%) in public institutions (77%). The average age was 29.30 ( $SD = 10.33$ ). Most identified as White (71%); the rest were 11.4% Asian/Asian American, 7.9% African American/Black, 4.8% Hispanic/Latino, 2.5% biracial/multiracial, and 2.3% other.

**Procedure.** Participants were told that they would complete a random subset of items for a validation study. Participants self-identified their enrollment status, age, gender, and race/ethnicity, then completed one page of items. The participants received \$0.10 as payment.

**Measures.** The Study 1 version of the SCD-C was composed of 46 items: three for equal status, three for frequency of interaction, three for quality of interaction, three for support for positive interaction, nine for stereotyping, five for cultural socialization, five for promotion of cultural competence, four for critical consciousness socialization, five for colorblind socialization, and six for mainstream socialization-individualism.

**Validating measures.** The Perceived Discrimination Scale (Kessler, Mickelson, & Williams, 1999) has 18 items measuring individual experiences of being harassed, ignored, or otherwise mistreated because of race. The current study included 8 items chosen from the strongest items in another college student sample ( $\alpha = .91$ ). Support for Cultural Pluralism Scale is a subscale of the Inventory of School Climate-Student, which has been validated in a sample of over 105,000 middle school students (Brand et al., 2003). It consists of four items ( $\alpha$  in the current sample = .83) measuring general racial climate. The College Interracial Interaction Scale (CISC) was developed by Chavous (2005) and is based on Green and colleagues’ (Green et al., 1988) adaptation of intergroup contact theory (Allport, 1954). Association includes three items ( $\alpha = .76$ ) on the lack of positive interaction across race; equal status includes seven items ( $\alpha = .81$ ) on fair treatment and equal opportunities; supportive norms includes four items ( $\alpha = .77$ ) on institutional support for positive contact and friendships; and interdependence includes eight items ( $\alpha = .86$ ) on whether Black and White students have common goals and think it is important to work together on campus. The Astin (1992) Student Diversity Experiences scale asked participants to indicate if they had participated in any of the following: ethnic studies courses, women’s studies courses, racial/cultural awareness workshops, discussion of racial or ethnic issues, and socializing with someone from another racial/ethnic group. The Hurtado (Hurtado & Ponjuan, 2005) Participation in Diversity Programs scale was a measure asking participants to check whether they had participated in diversity awareness workshops, campus-organized discussions of racial/ethnic issues, and events sponsored by cultural groups. For both the Astin and Hurtado scales, participants received one point for each activity they had participated in, with a maximum score of

five points for the Astin scale and three points for the Hurtado scale. All of the validating measures have been studied extensively with racial minorities.

**Results and Discussion**

The first question concerned the reliability of the SCD-C subscales. Each subscale had moderate to high reliability, with alphas ranging from .65 to .91, as listed in Table 1. The SCD-C was also associated with the validating scales in expected ways. As expected, the discrimination scale was only significantly associated with two SCD-C subscales, those indicating the quality of interracial interactions,  $r = -.257, p < .001$  and the level of stereotyping on campus,  $r = .462, p < .001$ . The scale was not significantly associated with subscales unrelated to interactions, such as those indicating cultural socialization,  $r = .014, p = .903$  or colorblind socialization,  $r = -.001, p = .994$ . These findings support the understanding that discrimination may inform perceptions of some parts of racial climate but that other aspects are also salient.

Additionally, my expectation that the Support for Cultural Pluralism scale would be significantly correlated with multiple SCD-C subscales was confirmed, with the average correlation being .390. For the College Interracial Climate Scale, association was moderately related to frequency of interaction,  $r = -.328, p < .001$  and quality of interaction,  $r = -.396, p < .001$  as expected. Furthermore, interdependence had moderate to strong correlations with most SCD-C subscales. The two equal status subscales were strongly correlated,  $r = .818, p < .001$ . Finally, supportive norms did have a strong correlation with support for positive interaction,  $r = .760, p < .001$ . Thus, the second hypothesis that the CICS would be strongly correlated to frequency of interaction, quality of interaction, equal status, and support for positive interaction was partially supported.

In terms of the Astin (1992) Student Diversity Experiences scale and the Hurtado (Hurtado & Ponjuan, 2005) Participation in Diversity Programs scale, both were moderately related to promotion of cultural competence ( $r = .428, p < .001; r = .369, p < .001$ , respectively), cultural socialization ( $r = .386, p < .001; r = .416, p < .001$ ), and critical consciousness socialization ( $r = .397, p < .001; r = .350, p = .001$ ) and were not significantly correlated with the other subscales. These correlations suggest that the SCD-C subscales do tap into curricular diversity experiences.

In conclusion, Study 1 provided evidence that the subscales of the SCD-C are reliable and relate in expected ways to existing measures. The planned missing data approach allowed me to take advantage of the sample but foreclosed the possibility of more complex analyses. I made some revisions to the scale and conducted Study 2. The first revision was removing the six items from the stereotyping scale that referenced specific groups (e.g., “Faculty think Black students are not as smart as other students”) to accurately capture stereotyping even if those specific groups are not present. Second, I added a second negatively worded item to the quality of interaction scale to balance the two positively worded items. Third, two items about peer norms were added to the support for positive interaction scale, an item was added to the colorblind socialization scale to capture the negative consequences of discussing race, and two additional items were added to the critical consciousness socialization scale to increase reliability.

Table 1  
Subscale Cronbach's Alphas and Correlations With Validating Measures (Study 1)

Subscale	Number of items	Alpha	Support for Cultural Pluralism	Perceived Discrimination	CICS Equal Status	CICS Association	CICS Supportive Norms	CICS Interdependence	Astin Student Diversity Experiences	Hurtado Participation in Diversity Programs
Frequency of interaction	3	.80	.519	-.187	.628	-.328	.499	.645	.118	.101
Quality of interaction	3	.74	.307	-.257	.574	-.396	.409	.492	.010	-.117
Equal status	3	.89	.490	-.166	.818	-.146	.612	.591	-.081	-.017
Support for positive interaction	5	.82	.750	-.226	.484	-.124	.760	.550	.040	-.044
Stereotyping	9	.91	-.339	.462	-.431	.497	-.323	-.142	.097	.207
Cultural socialization	4	.83	.624	.014	.179	.003	.492	.361	.386	.416
Mainstream-Individualism	5	.81	.421	.011	.661	-.240	.603	.424	.091	-.091
Promotion of cultural competence	6	.89	.732	-.081	.199	-.093	.566	.391	.428	.369
Colorblind socialization	4	.78	.104	-.001	.424	-.007	.288	.354	.011	-.046
Critical consciousness socialization	4	.65	.296	.200	-.163	.324	.398	.172	.397	.350

Note.  $n = 62-187$ . Correlations above |.230| are statistically significant ( $p < .05$ ).

## Study 2

The goals of the second study were to determine whether the items reflected the underlying framework, the subscales were reliable, and the subscales had expected relations with racial background and further validating measures. The hypotheses were that (a) the factor structure would correspond to the framework; (b) each factor would have acceptable reliability (i.e., above .70); (c) perceived discrimination would have moderate correlations with the intergroup interactions dimensions and stereotyping but smaller correlations with the racial socialization dimensions; (d) the subscales would be related to academic and psychological outcomes such that more positive quality, higher frequency, greater equal status, greater support for positive interactions, more positive socialization, less colorblind socialization, and less stereotyping would be associated with better outcomes; and (e) mean scores would differ by race but not by gender, as studies generally find that racial minorities perceive more negative racial climates than White students but do not find gender differences (e.g., Cabrera et al., 1999).

## Method

**Participants.** Participants were 339 students from two sources at a single West Coast university. The first was the psychology participant pool ( $n = 281$ ) in spring and summer 2015. The second set of participants were enrolled in a pilot study of microaggressions on campus ( $n = 58$ ) who were recruited through flyers and announcements at meetings of student organizations. The criteria for inclusion in the second study was self-identification as a member of minority group (i.e., women, racial/ethnic minorities, sexual minorities, transgender individuals, immigrants). Data in the current study were taken from the pretest survey in winter 2015. Three individuals participated in both studies, so one set of their data was removed. The samples were combined because they completed identical measures at the same university around the same time.

There were no differences between the samples on gender or age. The microaggressions sample was less likely self-identify as White (14% to 38%) and more likely to self-identify as Asian/Asian American (32% to 22%), multiracial (14% to 4%) or Black/African American (11% to 2%). The total sample was on average 20.50 years old ( $SD = 2.24$ ), 79% women, 33.6% White/Caucasian, 29.8% Hispanic/Latino, 23.2% Asian/Asian American, 6.3% multiracial, 3.6% Black/African American, 2.1% Middle Eastern, 0.3% Native American/Alaskan Native, and 1.2% other. As reported by the university, the undergraduate student body as a whole was in 2013–2014 39% White, 28% Latino, 21% Asian, 6% multiracial, 3.4% unknown, 2% African American, 0.3% American Indian, and 0.3% international. Thus, the sample generally represented the student population, with a slight overrepresentation of Black/African American students.

**Measures.** The Study 2 version of the SCD-C had 46 items, three for equal status, four for quality of interaction, three for frequency of interaction, six for support for positive interaction, five for colorblind socialization, six for mainstream socialization-individualism, three for stereotyping, five for promotion of cultural competence, five for cultural socialization, and six for critical consciousness socialization. Participants self-identified their age, gender, and race/ethnicity from a set of eight choices.

The validating measures provide evidence of criterion validity and included a shortened version (seven items,  $\alpha = .88$ ) of the Schedule of Racist Events (Landrine & Klonoff, 1996), the relatedness and competence subscales of the Basic Needs Satisfaction Scale (Gagné, 2003; Kashdan, Julian, Merritt, & Uswatte, 2006; eight items,  $\alpha = .79$  and six items,  $\alpha = .79$ ), and the Rosenberg Self-Esteem Scale (10 items,  $\alpha = .91$ ). Additionally, participants completed a scale of college satisfaction ( $\alpha = .78$ ) that included 14 items on satisfaction with the academic and social experiences at college (Chavous, 2005).

**Procedure.** Students in the participant pool took the survey online at their convenience for course credit. Those in the microaggressions study took the survey online in a research lab and received \$10. For both samples, the climate items were presented together on one page in randomized order with a 5-point Likert-type response scale ranging from *not at all true* to *completely true*.

## Results

Missing data on each item ranged from 0% to 1%. I conducted an exploratory factor analysis (EFA) to explore the research question about the scale's structure. The EFA used principal axis factoring specifying eigenvalues higher than 1 and an oblique rotation. All available data were used with pairwise deletion. The six items measuring the mainstream socialization-individualism dimension did not load together and had low loadings ( $<.40$ ) on other factors, so I removed them. Six additional items were removed for low loadings on any factor. The remaining items loaded onto eight factors, as seen in Table 2. The factors corresponded to the framework except that quality and frequency of interaction were one factor. Thus, the first hypothesis in which factor structure would correspond to the framework was partially confirmed. Loadings for the model are shown in Table 2.

The second hypothesis that each factor would have acceptable reliability was also partially supported: Cronbach's alphas (see Table 2) ranged from .67 to .87, with only colorblind socialization below .70. The correlation between the two stereotyping items was .65. The subscales were computed as the average of the composite items. Means and standard deviations for the subscales and correlations among them are shown in Table 3.

For evidence of discriminant validity, I examined the correlations of the computed scales with the Schedule of Racist Events. The correlations were weak to moderate, with the strongest for equal status,  $r = -.514$ ,  $p < .001$  and stereotyping,  $r = .413$ ,  $p < .001$ . The correlations were weaker for the racial socialization dimensions compared with the intergroup interactions dimensions. This supported the third hypothesis that perceived discrimination would have moderate correlations with intergroup interactions and stereotyping but smaller correlations with the racial socialization dimensions.

Next, I compared correlations between the subscales and four academic and psychological outcomes to establish concurrent validity: belonging, competence, self-esteem, and satisfaction. Almost all of the correlations were in the expected directions, with more positive interactions and racially aware socialization relating to more positive outcomes: The exception was colorblind socialization, which had positive signs but was not significantly associated with any of the outcomes. Frequency of interaction, quality of interaction, and cultural socialization were significantly associated

Table 2  
*Exploratory Factor Loadings and Cronbach's Alphas (Study 2)*

Item	Loading
Frequency and quality of interaction ( $\alpha = .87$ )	
Students of different races study together.	.787
Students of different races hang out together.	.707
Students of different races work together in class.	.608
Students here like to have friends of different races.	.619
People of different races get along well.	.481
Students of different races trust each other.	.398
Equal status ( $\alpha = .86$ )	
The administration treats students of all races fairly.	.618
At [university name], faculty are fair to students of all races.	.612
Students of all races are treated equally at [university name].	.544
Faculty are prejudiced against certain racial groups.	-.546
Support for positive interaction ( $\alpha = .76$ )	
[university name] faculty encourage students to make friends with students of different races.	.634
The administration likes for students to have friends of different races.	.541
Students here think it's good to study with people of different races.	.500
[university name] faculty and administrators say it's good to be a diverse campus.	.349
Stereotyping ( $r = .65$ )	
Your racial or ethnic group is seen in stereotypical ways here.	.864
Students here have a lot of stereotypes about your racial or ethnic group.	.742
Promotion of Cultural Competence ( $\alpha = .86$ )	
You have been exposed to new cultures and traditions here.	.720
You have had opportunities to learn about the culture of others.	.672
You have opportunities to learn about people of different races and cultures.	.669
Your coursework exposes you to diverse cultures and traditions.	.495
At [university name], they encourage you to learn about different cultures.	.460
Cultural socialization ( $\alpha = .74$ )	
At [university name], you have opportunities to learn about the history and traditions of a cultural, ethnic, or racial group that you identify with.	.702
At [university name], you have the opportunity to participate in activities that teach you more about your cultural background.	.634
In your coursework you've learned new things about your culture.	.678
Critical consciousness socialization ( $\alpha = .78$ )	
The faculty teach about racial inequality in the United States.	.607
In your coursework you have learned about how race plays a role in who is successful in society.	.600
People here believe that society is not fair for people who are not White.	.525
At [university name] you've had opportunities to discuss institutional racism.	.489
You have opportunities to learn about social justice.	.356
At [university name], most people think that White people have advantages because of their skin color.	.348
Colorblind socialization ( $\alpha = .67$ )	
People here think it's better to not pay attention to race.	.693
At [university name], people think race is not an important factor in how people are treated.	.553
The university has a colorblind perspective.	.544
[university name] encourages you to ignore racial difference.	.513

with all four outcomes. The fourth hypothesis was partially confirmed.

Finally, I compared mean scores by race, gender, and study using *t* tests and MANOVA. Means and standard deviations by race are shown in Table 4. Native American and Other race individuals were excluded from the MANOVA because of small cell sizes ( $n = 4$  and  $1$ ). There were significant differences by race for every dimension except colorblind socialization. For example, Black/African American students tended to perceive more negative frequency/quality of interaction, more stereotyping, and less promotion of cultural competence than White/Caucasian students. Men and women did not significantly differ in their perceptions, which supported the fifth hypothesis. With the exception of col-

orblind socialization, participants in the microaggressions study perceived a more negative climate for interactions and fewer positive messages than those in the participant pool. The fifth hypothesis—mean scores would refer by race but not by gender—was confirmed.

## Discussion

The results of Study 2 showed that the dimensions demonstrated high reliability and were correlated with validating measures in expected ways. The findings for positive quality of interaction being associated with more feelings of relatedness, competence, self-esteem, and satisfaction support existing research on the im-



Table 3  
*Computed Subscale Means and Standard Deviations, and Scale Correlations (Study 2)*

Subscale	Mean	SD	1	2	3	4	5	6	7	SRE	Relatedness	Competence	RSE	Satisfaction
1. Quality and frequency of interaction	3.62	.77								-.341	.235	.195	.181	.272
2. Equal status	3.69	.93	.615							-.514	.088	.061	.093	.180
3. Support for positive interaction	3.25	.85	.628	.589						-.290	.085	.115	.123	.174
4. Stereotyping	2.70	1.10	-.266	-.414	-.244					.413	-.043	-.048	-.073	-.119
5. Promotion of cultural competence	3.70	.83	.600	.464	.555	-.169				-.306	.052	.093	.029	.273
6. Cultural socialization	3.16	1.01	.465	.384	.422	-.193	.555			-.187	.136	.144	.117	.316
7. Critical consciousness socialization	3.64	.92	.375	.251	.375	-.112	.605	.443		-.213	.083	.089	-.024	.240
8. Colorblind socialization	2.75	.89	.317	.315	.322	-.131	.201	.195	.018	.007	.060	.090	.100	.076

Note. SRE = Schedule of Racist Events; RSE = Rosenberg Self-Esteem scale. Correlations above |.114| are statistically significant ( $p < .05$ ).

portance of positive racial interactions and lack of a hostile climate (e.g., Cabrera et al., 1999; Hurtado & Ponjuan, 2005; Dawn R. Johnson, Wasserman, Yildirim, & Yonai, 2014). Although previous studies have not investigated school racial socialization in college samples, the findings for cultural socialization being positively related to feelings of relatedness and college satisfaction support the theoretical expectations of culturally relevant teaching, multicultural education, and college diversity work (Aronson & Laughter, 2015; Bennett, 2001; Denson & Chang, 2009; Gurin, Dey, Hurtado, & Gurin, 2002). Additionally, group mean differences aligned with existing research suggesting that minority students tend to have a more negative view of the climate compared with White students (e.g., Cabrera et al., 1999; Mattison & Aber, 2007). Finally, although colorblind socialization was expected to relate negatively to relatedness, competence, self-esteem, and satisfaction, none of the correlations were significant. Because previous research suggests that colorblind socialization is particularly hurtful for people of color (Plaut et al., 2009), it may be that significant correlations would only be seen in some racial groups in the sample.

**Mainstream socialization.** Some questions remain about the mainstream socialization-individualism subscale, as the items did not load together and were removed completely. These items were based on parental racial socialization scales; examples are “At this college, people say that everyone who works hard can be successful, regardless of race” and “Students here believe that skin color does not define who you are.” Given their general nature, the items may have failed to accurately capture an individualism ideology

separately from other messages. Thus, I reevaluated the measurement of the dimension. In parental socialization work, individualism is framed as socialization that focuses more on fitting into mainstream society than holding to the unique values of minority culture (D. L. Hughes et al., 2006). Additional work that has addressed this distinction includes cultural styles work as well as work on cultural dissonance (Arunkumar et al., 1999; Boykin, Tyler, Watkins-Lewis, & Kizzie, 2006; Roulund, Matthews, Byrd, Meyer, & Rowley, 2014; Tyler et al., 2008; Warzon & Ginsburg-Block, 2008) that highlight how Western/U.S. values of individualism and competition sometimes clash with values of minority groups (Schwartz et al., 2010). Therefore, mainstream socialization may be conceptualized more broadly than individualism by asking about perceptions of teaching U.S. values. Thus three items were added to Study 3 to assess this new construct as shown in Table 5.

**Additional revisions.** Items that used “races” were revised to say “races and ethnicities” or “races/ethnicities.” In some cases, the word “culture” was also added. These changes were made because, although the majority of individuals use the term race and the scale was designed with assumptions that racial, ethnic, and cultural differences have similar implications, the wording of items needed to be as broad as possible. Finally, new items were added to the stereotyping, quality of interaction, cultural socialization, and critical consciousness subscales to test whether additional items would strengthen the reliability. The revised scale was tested in Study 3.

Table 4  
*Means (and Standard Deviations) for Each Racial Group (Study 2)*

Subscale	Asian/Asian American	Black/African American	Hispanic/Latino	Middle Eastern	White/Caucasian	Multiracial	$F(df = 5)$
Frequency and quality of interaction	3.56 (.74) <sub>B</sub>	2.78 (.89) <sub>AHW</sub>	3.63 (.76) <sub>B</sub>	3.71 (.72)	3.78 (.73) <sub>B</sub>	3.38 (.79)	4.612 ( $p < .001$ )
Equal status	3.56 (.97) <sub>BWM</sub>	2.62 (1.15) <sub>AHM<sub>c</sub>W</sub>	3.69 (.88) <sub>B</sub>	3.96 (.89) <sub>B</sub>	3.95 (.76) <sub>AB</sub>	3.41 (1.13)	6.201 ( $p < .001$ )
Support for positive interaction	3.12 (.80) <sub>W</sub>	2.81 (.94)	3.22 (.93)	3.33 (.41)	3.48 (.76) <sub>A</sub>	2.96 (.71)	3.363 ( $p = .006$ )
Stereotyping	2.88 (1.12) <sub>B</sub>	3.96 (1.01) <sub>AHM<sub>c</sub>WM</sub>	2.64 (.98) <sub>B</sub>	2.00 (.45)	2.61 (1.16) <sub>B</sub>	2.60 (1.07) <sub>B</sub>	4.422 ( $p = .001$ )
Cultural socialization	3.02 (.88) <sub>H</sub>	2.39 (.91) <sub>H</sub>	3.45 (.97) <sub>AB</sub>	2.39 (1.14)	3.19 (1.06)	2.95 (.81)	4.517 ( $p = .001$ )
Promotion of cultural competence	3.55 (.70) <sub>BW</sub>	2.78 (1.00) <sub>AHW</sub>	3.67 (.81) <sub>BW</sub>	3.53 (.91)	4.03 (.75) <sub>ABHM</sub>	3.35 (1.02) <sub>W</sub>	8.552 ( $p < .001$ )
Critical consciousness	3.33 (.94) <sub>W</sub>	3.13 (1.07) <sub>W</sub>	3.56 (.93) <sub>W</sub>	3.46 (1.02)	4.00 (.82) <sub>ABH</sub>	3.61 (.73)	6.492 ( $p < .001$ )
Colorblind socialization	2.73 (.91)	3.12 (.84)	2.83 (.86)	2.71 (1.04)	2.70 (.92)	2.60 (.94)	.782 ( $p = .563$ )

Note. Different subscripts indicate significant ( $p < .05$ ) differences.

Table 5  
Cronbach's Alphas and CFA Standardized Factor Loadings (Study 3)

Item text	Loading	Standard error
Quality and Frequency of Interaction ( $\alpha = .85$ )		
Students of different races/ethnicities hang out together.	.708	.035
Students of different races/ethnicities study together.	.742	.032
Students of different races/ethnicities trust each other.	.683	.036
People of different races/ethnicities have trouble getting along with each other.	-.478	.05
People of different races/ethnicities get along well.	.787	.029
Students of different races/ethnicities work together in class.	.746	.031
Equal Status ( $\alpha = .86$ )		
The administration treats students of all races and ethnicities fairly.	.89	.018
Students of all races and ethnicities are treated equally at [university name].	.767	.028
At [university name], faculty are fair to students of all races/ethnicities.	.841	.022
Stereotyping ( $\alpha = .65$ )		
Your racial or ethnic group is seen in stereotypical ways here.	.509	.051
Faculty are prejudiced against certain racial groups.	.768	.045
Your racial or cultural group is represented in stereotypical ways in textbooks and lectures.	.425	.057
Support for Positive Interaction ( $\alpha = .79$ )		
Faculty encourage students to make friends with students of different races.	.604	.044
Students here like to have friends from different racial and cultural backgrounds.	.733	.035
Faculty and administrators say it's good to be a diverse campus.	.583	.045
The administration likes for students to have friends of different races/ethnicities.	.676	.04
Students here think it's good to study with people of different races.	.692	.037
Cultural Socialization ( $\alpha = .72$ )		
At [university name], you have opportunities to learn about the history and traditions of a cultural, ethnic, or racial group that you identify with.	.613	.049
At [university name], you have the opportunity to participate in activities that teach you more about your cultural background.	.56	.051
In your coursework you've learned new things about your culture.	.539	.053
[university name] encourages you to think about what it means to be a member of your racial/ethnic group.	.641	.045
Mainstream Socialization ( $\alpha = .58$ )		
Your campus teaches you core American values.	.677	.064
At [university name] you've learned more about what it means to be an American.	.502	.063
A [university name], they encourage you to be proud of what people in the U.S. have accomplished.	.525	.064
Promotion of Cultural Competence ( $\alpha = .75$ )		
You have opportunities to learn about people of different races and cultures.	.71	.038
You have been exposed to new cultures and traditions here.	.614	.044
You have had opportunities to learn about the culture of others.	.713	.037
Your coursework exposes you to diverse cultures and traditions.	.641	.042
Colorblind Socialization ( $\alpha = .75$ )		
[university name] encourages you to ignore racial difference.	.744	.043
People here think it's better to not pay attention to race.	.733	.043
The university has a colorblind perspective.	.662	.045
Critical Consciousness Socialization ( $\alpha = .76$ )		
Your instructors encourage your political and social awareness of issues affecting your culture.	.703	.042
You have opportunities to learn about social justice.	.633	.045
The faculty teach about inequality in the United States based on race and culture.	.629	.045
At [university name] you've had opportunities to discuss institutional racism.	.628	.046

Note. All  $ps < .001$ .

### Study 3

Given the stability of the measure in Study 2, Study 3 explored the SCD-C using confirmatory factor analysis only. The analysis was expected to result in nine factors with excellent fit, considered as a CFI greater than .90 and a RMSEA less than .05 (Browne & Cudeck, 1992; Hu & Bentler, 1995; Hypothesis 1). Second, I expected each subscale to have a Cronbach's alpha equal to or above .70 (Hypothesis 2). Finally, as in Study 2, I expected that more positive quality, higher frequency, greater equal status,

greater support for positive interactions, more positive socialization, less colorblind socialization, and less stereotyping would be associated with better outcomes: stress, happiness, and college satisfaction.

### Method

The participants were 294 college students (71% women,  $M_{age} = 19.82$ ,  $SD = 2.21$ ) participating in a longitudinal study on microaggressions at the same university as Study 2 in fall 2015.

Recruitment occurred at student organizations across campus and in psychology classrooms. The criterion for participating in the study was interest in learning more about microaggressions. Participants were 25% Asian American, 31% Hispanic/Latino, 27% White, 9% Multiracial, and 5.8% Black. The current data are from the first wave of the study. Participants completed the survey on computers in the research lab and were paid \$10. The validating measures provided evidence of criterion validity and were the Perceived Stress Scale (14 items,  $\alpha = .85$ ), the Oxford Happiness Scale (8 items,  $\alpha = .78$ ), and the Chavous (2005) college satisfaction scale (14 items,  $\alpha = .79$ ).

## Results and Discussion

Analyses were conducted in MPlus 6.1 specifying 9 factors with the expected indicators on each factor. The initial model fit was  $\chi^2 = (N = 294, df = 743) 1478.837, p < .001$ ; CFI = .84; RMSEA = .058. Two items were removed for low loadings (<.40). I also examined individual items for poor fit when the modification indices were high (i.e., over 15) and indicated potential loading on at least three other factors. I removed four additional items that met these criteria. Finally, item error variances were allowed between items on the same factor but not across factors if it improved model fit. The final model showed excellent fit:  $\chi^2 = (N = 294, df = 521) 863.136, p < .001$ ; CFI = .91; RMSEA = .047. Standardized factor loadings are shown in Table 5. The model was consistent with the framework described in the introduction and in Study 2.

The second research question concerned the reliability of each subscale. The Cronbach's alphas for almost every subscale, except stereotyping and the new mainstream socialization scale were above .70, as seen in Table 5. Therefore, the results primarily supported the hypotheses and showed that the subscales are reliable measures of their constructs. In terms of the stereotyping scale, two additional items had been added in an attempt to increase reliability, but one was removed because it overlapped highly with another item and modification indices indicated better fit without the item. The remaining three items have high face validity, but future testing with this scale is still desirable. Similarly, the mainstream socialization scale appears to require further testing as well.

The third research question concerned associations between the subscales and academic and psychological outcomes (stress, happiness, and college satisfaction). The intergroup interactions sub-

scales were most strongly related to the outcomes, followed by promotion of cultural competence and cultural socialization, as seen in Table 6. The findings for intergroup interactions are consistent with existing racial climate research highlighting the importance of positive interactions and institutional support for those interactions (e.g., Astin, 1992; Denson & Chang, 2009; Hurtado et al., 2008).

In terms of racial socialization, critical consciousness socialization was significantly related to college satisfaction,  $r = .17, p = .004$ , suggesting that students who perceived opportunities to learn about social inequalities were more satisfied with their college experience. Colorblind and mainstream socialization were not significantly related to the outcomes. Given the lack of studies measuring perceptions of these dimensions, it remains to be seen whether the nonsignificant findings for these subscales will be replicated in future research. Work using an earlier version of the SCD for majority Black secondary students (Byrd, 2015) found a significant negative association between colorblind socialization and academic self-concept (similar to competence in the current study). In that study, critical consciousness socialization was also not significantly related to the academic outcomes and mainstream socialization was not measured. It may be that colorblind socialization has a weaker relationship in college students. Or, as noted before, colorblind socialization may only be related to outcomes for some racial groups.

## General Discussion

The goal of the current paper was to present a framework of campus racial climate and to present evidence of reliability and validity for an associated measure, the School Climate for Diversity-College scale. Three studies used independent samples to explore the scale. In the following sections, I will review the findings for each study by dimension.

## Quality and Frequency of Interaction

The intergroup interactions domain overall, and quality of interactions in particular, is the most widely studied area of campus racial climate (Hurtado et al., 2008). The frequency of interaction domain is drawn from classic work on intergroup relations (Allport, 1954; Pettigrew, 2008) that has been extended to the study of racial climate in secondary and postsecondary education (Chavous, 2005; Green et al., 1988; Hurtado, Milem, Clayton-Pedersen, &

Table 6  
Factor Correlations Between SCD-C Subscales and Bivariate Correlations With Validating Measures (Study 3)

Subscale	1	2	3	4	5	6	7	8	9	Perceived stress	Happiness	College satisfaction
1. Quality and frequency of interaction	.734	.751	-.592	.471	.263	.348	.032	.000	-.208	.173	.343	
2. Equal status		.722	-.829	.403	.334	.315	.057	.147	-.294	.218	.281	
3. Support for positive interaction			-.603	.585	.502	.473	.006	.198	-.168	.106	.297	
4. Stereotyping				-.289	-.378	-.314	.163	.168	.123	-.159	-.299	
5. Cultural socialization					.319	.771	-.031	.774	-.060	.124	.280	
6. Mainstream socialization						.117	.362	.129	-.106	.038	.005	
7. Promotion of cultural competence							-.235	.688	-.047	.113	.234	
8. Colorblind socialization								-.167	-.042	-.019	-.060	
9. Critical consciousness socialization									.003	.021	.167	

Note. Correlations above |.122| are statistically significant ( $p < .05$ ).

Allen, 1998). Hurtado and colleagues (Hurtado et al., 1998, 2008) further elaborated on the importance of how positive or negative interactions are, not just how frequently they occur, as a necessary consideration for student outcomes. Although there are theoretical reasons to consider frequency and quality separately, results from Study 2 and Study 3 indicate that items measuring them load onto the same factor. It may be that frequency and quality are highly correlated at the university Study 2 and 3 sampled from, and therefore future work is needed to understand the relationship between the two in the student population more broadly.

Furthermore, the current studies showed that these constructs, separately and combined, had high reliability. Additionally, quality and frequency were moderately correlated with existing measures of perceived discrimination and frequency of intergroup association. Across the studies, the relations with outcomes were consistent with previous literature (e.g., Cabrera et al., 1999; Hurtado & Ponjuan, 2005; Johnson et al., 2014). For example, better quality and frequency were significantly related to feelings of relatedness and college satisfaction. Johnson and colleagues (2007) also found that perceptions of quality of interaction were associated with feelings of belonging.

I also found racial group differences in perceptions of frequency and quality that match previous findings indicating that students of color perceive their college climates more negatively than White students (Ancis, Sedlacek, & Mohr, 2000; Berryhill & Bee, 2007; Museus, Nichols, & Lambert, 2008; Park, 2009). In particular, Black students had more negative perceptions than White, Asian, and Hispanic/Latino students, which matches the findings of Johnson et al. (2007), Museus et al. (2008), and Reid and Radhakrishnan (2003). In sum, the subscale for quality and frequency of interaction is strong in conceptualization and operationalization.

### Equal Status

Equal status or fair treatment is also a common subject of existing racial climate studies. This dimension is also drawn from Allport's (1954) work as well as work on racial discrimination. A concern in the current paper was distinguishing between perceptions of fair treatment in the context more generally and perceptions of discrimination against one's self. Clearly, discrimination has detrimental effects on individuals (Kessler et al., 1999; Pachter & Coll, 2009), but it is important to remain at a consistent and appropriate level of analysis across subscales (Anderson, 1982; Van Houtte, 2005). The SCD-C is focused on individuals' perceptions of the campus overall; thus the equal status items ask about those perceptions rather than individual experiences, in contrast to some previous racial climate studies (e.g., Dotterer et al., 2009; Hurtado & Carter, 1997; Kotori & Malaney, 2003; Mattison & Aber, 2007; Pewewardy & Frey, 2002). The correlations with existing measures of perceived discrimination were low in Study 1 ( $r = -.166$ ) and strong in Study 2 ( $r = -.514$ ), which only provides partial evidence of the distinction. It is not clear why the correlations were different across the two types of discrimination measures. Nevertheless, the equal status subscale was consistently reliable and strongly associated with Chavous's (2005) measure of equal status. Surprisingly, equal status was not significantly associated with all of the outcomes in Study 2, such as belonging. Previous studies have found that equal status is significantly associated with feelings of belonging and college satisfaction (Cha-

vous, 2005). In the end, equal status was significantly related to half of the outcomes explored in Study 2 and 3.

### Support for Positive Interactions

Support for positive interaction is the final dimension drawn from Allport's (1954) work, particularly the area of authority support for intergroup interaction. The current framework expands the notion of supportive norms to peers in addition to faculty and administrators, who have been the focus of previous work. As measured, the support for positive interaction subscale had high reliability and corresponded strongly to Chavous's (2005) measure of supportive norms. Furthermore, the subscale had significant relations to most of the outcomes. Support for positive interaction has been less frequently studied than other dimensions but is related to academic and psychological outcomes in previous studies (Chavous, 2005; Denson & Chang, 2009).

### Stereotyping

The stereotyping dimension in the current study is unique because it acknowledges stereotypical beliefs and representations separately from perceptions of unfair treatment. Stereotype threat theory (J. L. Smith, 2004; Steele, 1997) describes how stereotypes can influence the performance of students in the stereotyped domain even when they do not themselves believe the stereotype. However, compared with studies examining discrimination or equal status, stereotypes are rarely assessed independently as a feature of racial climate. An exception is Dotterer and colleagues (2009), who used a measure of "general discrimination" that asked youth to report the extent to which they believed teachers and peers were prejudiced. Some qualitative studies also address perceptions of stereotypes (W. A. Smith, Yosso, & Solórzano, 2007; Solórzano, Ceja, & Yosso, 2000; Teranishi, 2002). These studies generally find negative effects of stereotypical beliefs on student motivation and well-being. Therefore, my findings that stereotyping is significantly related to stress, happiness, and college satisfaction is not surprising. The subscale was also moderately related to measures of perceived discrimination and had low to moderate correlations with the other subscales, which suggest that it is distinct from those constructs. However, the subscale had lower than generally accepted reliability in Study 3, so future work will be required to explore the measurement of this dimension. The low number of items may have played a role in the low reliability.

### Promotion of Cultural Competence

I now turn to the racial socialization dimensions, which are the largest contribution of the current campus racial climate framework. Little work has examined students' perceptions of constructs such as multicultural education and culturally relevant teaching (Howard, 2001), although numerous works have theorized about their impact on student outcomes (Bennett, 2001; Morrison et al., 2008). Furthermore, the majority of this theorizing has occurred at the K-12 level, with less consideration of the importance of cultural learning for college students. Thus, seeking evidence for validity in this domain was a more uncertain enterprise.

If any dimension has been clearly studied, it is promotion of cultural competence, which is also called multiculturalism, support

for diversity, or egalitarianism (Plaut, 2010; Tan, 1999). Workplace studies find that employees of color are most likely to feel comfortable in environments where their culture is acknowledged and celebrated (Plaut et al., 2009). Unfortunately, the majority of studies examining this construct are interested in racial attitudes or actual cultural competence (Denson, 2009), leaving few guideposts for the current study relating to academic or psychological outcomes. Additionally, diversity programs promoted at colleges tend to vary widely in topic and are not always focused only on race. Nevertheless, the findings in the current paper suggest that the promotion of cultural competence subscale is reliable and moderately related to indices of students' participation in diversity programs. Furthermore, perceptions of more promotion of cultural competence was associated with greater college satisfaction, which may support the idea that students believe cultural competence is a valuable skill for living in a diverse society (Chang, 2002; Ponterotto, 2010).

### Cultural Socialization

Educational researchers have emphasized the need for teachers to consider students' cultural backgrounds without the researchers themselves taking into account students' own assessments of their needs (Howard, 2001). Thus, research on culturally relevant teaching (e.g., Ladson-Billings, 1995; Morrison et al., 2008) tends to measure teacher practices without measuring students' perceptions of those practices as culturally relevant. Only recently have student measures been developed (Dickson, Chun, & Fernandez, 2015), and only for secondary students. Thus far the primary focus has been understanding cultural socialization of African American samples (Morrison et al., 2008), however there is value in extending this work to other races and ethnicities. The literature on cultural resource centers shows that college students of different racial backgrounds also value opportunities to learn about their home cultures and receive reinforcement for a positive racial identity (Bowles, 1992; Jenkins, 2008; Ladson-Billings & Patton, 2012). Thus, the cultural socialization subscale in the current paper is a useful measure for understanding what benefits students might perceive from these centers and their campuses overall. The subscale had acceptable reliability and was moderately associated with the Astin and Hurtado indices of diversity program participation, which are rough approximations of involvement in programming related to culture. Furthermore, the subscale significantly predicted feelings of relatedness, competence, college satisfaction, and happiness, which is aligned with the theoretical work on culturally relevant teaching and multicultural education (Bennett, 2001).

### Critical Consciousness Socialization, Colorblind Socialization, and Mainstream Socialization

Critical consciousness socialization and colorblind socialization have been both theorized about at the secondary level but rarely explicitly extended to the college level, despite college diversity requirements intended to provide cultural and social awareness (Denson, 2009; Denson & Chang, 2009). As with promotion of cultural competence, the diversity requirements are usually not unique to race and culture, thus making it difficult to generalize from the limited existing literature. Furthermore, measurement of

these constructs tends to focus on mere participation in a class or program without recording students' perceptions of the content. Therefore, there was little on which to base expectations about how these constructs might be related to outcomes at the college level. I did find that critical consciousness socialization was significantly related to college satisfaction, but few of the other correlations were significant. Nevertheless, the prevalence of these constructs in the educational and psychological literatures suggests they may be important to examine further. Findings from the current study provide some evidence of the reliability of these subscales but also indicate the need for further work, especially with the mainstream socialization subscale.

Future work will explore teacher practices related to these forms of socialization to uncover how these messages are presented. Interviews with students can then further elaborate on how the messages are perceived. Additionally, correlations with racial attitudes and American values can be examined to determine how the content of colorblind and mainstream messages may be aligned with perceptions of colorblind and mainstream socialization. Users of the current subscales should be aware of the psychometric issues and their limited empirical backing relative to the other subscales.

### Limitations and Strengths

Some limitations of the current paper were the relatively small sample sizes and that the samples in Study 2 and 3 were majority women, which is common in college samples, especially those drawn from participant pools and psychology courses. Study 2 and 3 also were drawn from one university, so further research should investigate the relations in other institutions.

Another limitation was that the work was cross-sectional and did not examine outcomes over time. Additionally, other important academic outcomes, such as GPA, were not measured. The strengths of the study were that the constructs were verified in independent samples and that the factors have strong theoretical support. Additionally, the samples are racially diverse compared with many psychology studies, and the samples in Study 2 and 3 were more racially diverse than the student population. Finally, as with all campus climate research, there are different levels of analysis from which to address the relationship between climate perceptions and outcomes. The current study focused on an individual differences approach, but future work may consider examining a nested hierarchical approach.

### Conclusion

In sum, the results of the analyses from three studies suggest that the SCD-C is appropriate for examining the racial climate at colleges and universities and with diverse populations. This new measure may be used to explore many features of a campus's racial climate, and researchers need not necessarily use the entire scale if they remain aware of the framework as a whole. Race works in complex ways and multidimensional scales such as this one are well-suited to represent those complexities. Future work will illuminate how the varying dimensions differ across contexts and are associated with students' cultural competence, racial attitudes, and academic success.

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