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Discrimination, Diversity, and Sense of Belonging: Experiences of Students of Color

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Experiences of discrimination and bias are detrimental to the sense of belonging of students of color in higher education. Research has shown the positive benefits of interacting with diverse peers on sense of belonging for students of color attending a primarily White institution (PWI). Additionally, some research has indicated that when students of color perceive their institution to be unsupportive of them, they have a diminished sense of belonging. Therefore, this study examined the buffering effects of diverse peer interactions and institutional commitment to diversity on the relationship between discrimination–bias and sense of belonging for students of color at a 4-year PWI. Moderated regressions were conducted on the Diverse Learning Environments Survey ($n = 626$). Findings show that more diverse peer interactions and positive perceptions of institutional commitment to diversity buffer against the negative effects of discrimination and bias on sense of belonging for students of color attending a PWI. Implications for future research and practice are discussed.

Keywords: ethnic diversity, discrimination and bias, sense of belonging, diverse peers, institutional commitment to diversity

It is estimated that 20% of Black students and 15% of Latino students report experiencing some form of discrimination or bias at campuses at primarily White institutions (PWIs; Hurtado & Ruiz Alvarado, 2015). Experiences and perceptions of discrimination have been linked to reduced rates of college persistence and success (Nora & Cabrera, 1996), lower academic motivation and grades (Alfaro, Umaña-Taylor, Gonzales-Backen, Bámaca, & Zeiders, 2009), and stress and poor psychological well-being (Berke et al., 2010; Clark, Anderson, Clark, & Williams, 1999; Lee & Ahn, 2012). This research highlights the need to create campus environments that reduce the effects of discrimination and help students of color to feel more connected to their institutions of learning.

One major consequence of discrimination experiences is a reduced sense of belonging for students of color on college campuses (e.g., Hurtado & Carter, 1997; Levin, Van Laar, & Foote, 2006; Nuñez, 2009; Walton & Cohen, 2011). Reduced sense of belonging often results in isolation and alienation, further reducing participation in campus activities and interactions across racial–

ethnic boundaries (Tatum, 1999). Although the experiences of discrimination most frequently result from individual encounters with other students, faculty, or staff, the net effect is to hold the university responsible for failing to create a positive and accepting campus climate. Understanding the interplay of these associations is the focus of the present study. Specifically, we examine how diverse peer interactions and perceptions of institutional commitment to diversity play a role in the link between discrimination and sense of belonging. Short of eliminating discrimination on campuses, which is virtually impossible to do, is it possible to mitigate the effects by creating opportunities for positive peer interactions and visible and forceful demonstrations of a university's commitment to diversity? Our general approach examines the degree to which having more positive peer interactions and positively perceiving the university's commitment to diversity moderate the adverse effects that experiencing discrimination has on the sense of belonging to the university community for students of color.

Discrimination and Sense of Belonging

Sense of belonging, defined in current higher education literature as individuals' psychological sense of connection to or integration into their community (Hurtado & Carter, 1997; Maestas, Vaquera, & Zehr, 2007), is important for well-being and academic success (Hausmann, Schofield, & Woods, 2007; Walton & Cohen, 2011). Extant literature reveals that students from different racial groups experience their campus environments and sense of belonging to the campus in divergent ways, and a growing body of scholarship has demonstrated several factors that undermine students' sense of belonging in college (e.g., Freeman, Anderman, & Jensen, 2007; Hoffman, Richmond, Morrow, & Salomone, 2002; Hurtado & Carter, 1997; Johnson et al., 2007; Levin et al., 2006; Locks, Hurtado,

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Bowman, & Oseguera, 2008; Museus & Maramba, 2011; Nuñez, 2009; Schussler & Fierros, 2008).

For example, an early study found that after controlling for demographics, academic ability, and institutional selectivity, Latino students who reported perceptions of more hostile climates (i.e., discriminatory) exhibited lower levels of sense of belonging in college (Hurtado & Carter, 1997). In a longitudinal study, after controlling for Year 1 sense of belonging and same ethnicity friends in Years 2 and 3, students who perceived more discrimination during Years 2 and 3 of college had diminished sense of belonging at the end of their Year 4 (Levin et al., 2006). Findings from the Diverse Democracy Project Study, which aims to understand the connections between diversity and college learning, showed that perceptions of a hostile climate (i.e., exclusionary and discriminatory) were negatively associated with Latino students' sense of belonging in college (Nuñez, 2009).

This research provides some indication that discriminatory elements of campus environments might be associated with the extent to which college students of color feel like they belong to the community on their respective campuses.

Diverse Peer Interactions and Sense of Belonging

Despite the substantial body of research that illustrates the detrimental impact on their sense of belonging, other research has shown that engaging in meaningful experiences with diverse others can have a positive effect on sense of belonging for students of color. For example, scholars have found that positive cross-racial relationships, perceived faculty interest in students, and more supportive residence halls are positively associated with greater sense of belonging in college (Johnson et al., 2007; Maestas et al., 2007; Nuñez, 2009). We focus on the positive peer interactions that students have as it relates to sense of belonging.

Findings from the Diverse Democracy Project Study found that measures of positive diversity experiences and engagement in the campus community were positively associated with sense of belonging for Latino students (Nuñez, 2009). Hurtado and Ponjuan (2005) suggested that interacting with peers outside of the classroom contributes to a greater sense of belonging. In a longitudinal study that surveyed nine college campuses, the authors found that Latino students who reported more instances of positive interaction with diverse peers were also more likely to have a higher score on the sense of belonging measure. Similarly, an earlier longitudinal study of 370 four-year higher education institutions found that students who socialize with diverse peers and discuss racial and ethnic issues outside of class with their peers report higher levels of college satisfaction and social self-concept (Chang, 1999).

Mendoza-Denton, Downey, Purdie, Davis, and Pietrzak (2002) proposed that experiencing race-based discrimination can lead to sensitivity to being rejected because of one's race, resulting in poor academic and identity outcomes. They developed a measure of *sensitivity to race-based rejection* (RS-race) for students attending a PWI and found that African American students high in RS-race experienced greater discomfort during the college transition, less trust in the university, and relative declines in grades over a 2- to 3-year period than did White or Asian American students. However, positive race-related experiences increased feelings of belonging at the institution among African American students high in

RS-race. Thus, the benefits of positive cross-racial interactions may be most notable among those students who are most likely to experience discrimination (i.e., Black students attending a PWI). As current statistics show, Black students are most likely to report experiencing discrimination and bias (Hurtado & Ruiz Alvarado, 2015). Students' positive peer interactions have the possibility of mitigating the negative effects of discrimination on sense of belonging, especially for Black students. Interacting and connecting with diverse peers in positive ways, such as by sharing a meal or engaging in meaningful conversations with a person of a different racial-ethnic background, can help students of color feel more connected to their institution even in the face of adverse campus experiences (Locks et al., 2008).

Institutional Commitment to Diversity and Sense of Belonging

Students of minoritized backgrounds often perceive predominantly White institutions to be unsupportive (Loo & Rolison, 1986; Nora & Cabrera, 1996; Sedlacek, 1987). For example, one study found that whereas over two thirds of White students felt that their institution was supportive of students of color, less than one third of Black and Latino students perceived their institution to be supportive (Loo & Rolison, 1986). This perception of not being supported can have detrimental effects on sense of belonging at PWIs (Rodriguez, Myers, Morris, & Cardoza, 2000).

Current literature indicates that members of historically and socially stigmatized groups, such as African Americans, may be relatively more uncertain about belonging in mainstream institutions, such as universities (Walton & Cohen, 2007). Because their ethnic group is often negatively stereotyped and marginalized, they may be unsure of whether they will be fully included or supported in these settings (Steele, Spencer, & Aronson, 2002). One study found that the most salient measure of campus climate for Black students is their perception of the institutional administrator's discriminatory or nondiscriminatory practices (Gilliard, 1996). Hurtado, Clayton-Pedersen, Allen, and Milem (1998) suggested 20 years ago that institutions should create policies that support racial diversity and practice commitment to those policies through subverting stereotypes and discrimination. These forms of supportive campus climate and institutional engagement in diversity efforts will be reflected in the students' positive perceptions of institutional commitment to diversity, especially for those students who have historically been systematically excluded from PWIs.

Students who feel more assured of their belonging through a supportive institution may also initiate more social interactions and form better relationships on campus, facilitating their social integration and further benefiting their well-being, performance, and health (Wilson, 2006). The study by Hurtado and colleagues (2015) found that validation from faculty and staff mediated the relationship between discrimination and sense of belonging. We posit that when students of colors perceive the institution is actively engaged in diversity efforts, it can diminish the negative effects of discrimination on sense of belonging.

Purpose of the Study

Therefore, the purpose of our study was to better understand how, for students of color, positive experiences with diversity in

the form of peer interactions and institutional commitment can mitigate the adverse effects of experiencing discrimination and bias on one's sense of belonging.

We tested the following hypotheses:

Hypothesis 1: Higher levels of discrimination will predict lower levels of sense of belonging for all students of color.

Hypothesis 2: More diverse peer interactions will buffer against the adverse effects of discrimination on sense of belonging.

Hypothesis 3: More positive perceptions of institutional commitment to diversity will buffer against the adverse effects of discrimination on sense of belonging.

Hypothesis 4: The buffering effect of diverse peer interactions and institutional commitment to diversity will be moderated by ethnicity, in that the buffering effect will be particularly large for Black students, given their unique historical association with PWIs.

Method

Participants

The self-identified ethnic composition of the total student body at the institution where the study was conducted was as follows: Non-Hispanic White (74.8%), Black–African American (5.3%), Hispanic–Latino (7.4%), Asian (4.9%), and Other (7.6%). The category Other included Native American, Native Hawaiian, Pacific Islander, Non-Specific, Unknown, Multiracial, and International students. Although there were 3,069 respondents in the original study, the current study focused on the non-international participants ($N = 626$) who identified as Asian ($n = 299$; 47.8%), Black ($n = 234$; 37.4%), or Latino ($n = 93$; 14.9%). These participants were mainly female ($n = 425$; 67.9%) and represented all four levels of academic classification: first year ($n = 168$; 26.8%), sophomore ($n = 132$; 21.1%), junior ($n = 169$; 27.0%), and senior ($n = 127$; 20.3%). Some students were classified as academic “senior plus” ($n = 30$; 4.8%).

Measures

The Diverse Learning Environments (DLE) survey, developed by the Higher Education Research Institute (HERI, 2016), was used to capture students' perceptions of campus climate. Although the full DLE survey was administered at the institution, we selected subscales and demographic questions most pertinent to the purposes of this study. All subscales have been validated by HERI (Hurtado, Arrelano, Cuellar, & Guillermo-Wann, 2011), and validity factor scores were generated for the study institution and for comparison institutions that had previously participated in the DLE survey (HERI, 2016).

Discrimination and Bias. Discrimination and Bias measures the frequency of students' experiences with more subtle forms of racial–ethnic discrimination and bias. This eight-itemed subscale asked how often instances of racial or ethnic discrimination and bias were witnessed and experienced by the student on a 5-point scale from 1 (*Never*) to 5 (*Very Often*). One example of witnessing

discrimination and bias is “Heard insensitive or disparaging remarks from students.” An example of experiencing discrimination and bias is in the form of “Verbal or written (e.g., emails, texts, social media) comments.” This single-construct subscale had very good reliability ($\alpha = .87$).

Diverse Peer Interactions. A composite score for Diverse Peer Interactions was obtained through Z-score transformation of two separate subscales, positive cross-racial interaction and conversations across differences. Positive cross-racial interaction assessed students' level of positive interactions with students from a racial–ethnic group different from their own. An example item is “To what extent have you shared personal feelings and problems with students from a racial/ethnic group other than your own?” Conversations across differences assessed how frequently students interacted with a peer of a different background (socioeconomic status, religion, sexual orientation, country, disability, gender) from their own. Reliability of this composite score was good ($\alpha = .80$).

Institutional Commitment to Diversity. Students' perceptions of institutional commitment to diversity was measured by five items on a 4-point scale from 1 (*Strongly Disagree*) to 4 (*Strongly Agree*). An example item is “This college promotes appreciation of cultural diversity.” This subscale had very good reliability ($\alpha = .87$).

Sense of Belonging. Sense of Belonging measures the extent to which students feel a sense of academic and social integration on campus. This was measured by four items ($\alpha = .88$) that were rated on a 4-point Likert scale from 1 (*Strongly Disagree*) to 4 (*Strongly Agree*). A sample item is “I see myself as a part of the campus community.”

Procedure

The DLE survey, administered confidentially online through the Cooperative Institutional Research Program (CIRP), was distributed to all undergraduate students at a public–private state university in a mid-Atlantic state in spring 2016 ($N = 17,660$). The survey was announced through a campus newspaper story, multiple e-mailed flyers, and through e-mail reminders to students for voluntary participation in the survey. To incentivize participation, 15 \$50 Amazon gift cards were distributed by random drawing among all survey participants.

Analyses

Data analyses were conducted in four major steps. First, missing data were addressed; stochastic regression imputations were conducted due to the percentage of missing values for the measures of interest (7%–26%) and random nature of the missing data. The advantage of using this missing data imputation is that the stochastic values are centered at 0, allowing the mean to remain unchanged and allowing for unbiased variance estimation (Schlomer, Bauman, & Card, 2010). Second, we conducted descriptive and correlation analyses of the major variables in this study. No issues of multicollinearity were detected (Pearson's $r < |.80|$). Analyses of variance examined differences in the four major variables by ethnicity. Third, we established multivariate normality of the data using Q-Q plots and scatterplots. The Q-Q plots indicated the residuals were normally distributed, and the scatter-

plots showed a linear relationship between the predictor and outcome variables. Fourth, two moderation regressions (Model 1, PROCESS; Hayes, 2017) were conducted, and two moderated-moderation regressions (Model 3, PROCESS) were conducted. The first two moderated regression models (Model 1 and Model 2) separately examined diverse peer interactions and institutional commitment to diversity as moderators of the relationships between discrimination and sense of belonging. The second set of moderated-moderation regressions examined the interaction of (a) ethnicity and diverse peer interactions (Model 3) and (b) ethnicity and institutional commitment to diversity (Model 4) as moderators of the relationship between discrimination and sense of belonging. PROCESS allows the use of categorical variables, such as ethnicity, as moderators. Continuous predictors and moderators were mean-centered in all regression models. Covariates in all regression models included gender and academic classification. All analyses were conducted in SPSS Version 24.

Results

Descriptive findings indicate that all major variables in the study were significantly correlated (see Table 1). Discrimination and bias was negatively correlated to sense of belonging ($r = -.20$, $p < .001$) and institutional commitment to diversity ($r = -.31$, $p < .001$). Diverse peer interactions ($r = .17$, $p < .001$) and institutional commitment to diversity ($r = .46$, $p < .001$) were positively correlated to sense of belonging (see Table 1).

An omnibus analysis of variance test showed assumption of homogeneity of variances based on means was not violated for discrimination and bias or diverse peer interactions (Levene statistic $p > .05$) but was violated for institutional commitment to diversity and sense of belonging (Levene statistic $p < .05$). Bonferroni post hoc tests were examined for equal variances assumed, whereas Tamhane's T2 post hoc tests were examined for equal variances not assumed, where applicable. Controlling for sex and academic classification, there were significant mean differences in discrimination and bias, institutional commitment to diversity, and sense of belonging by ethnicity. Specifically, Black students reported more frequent experiences of discrimination and bias than did Asian students ($\Delta M = .27$, $p < .01$). Black students also reported lower belief in institutional commitment to diversity than did Asian students ($\Delta M = -.36$, $p < .001$) and Latino students ($\Delta M = -.26$, $p < .01$). Again, Black students reported lower levels of sense of belonging than did both Asian ($\Delta M = -.17$, $p < .05$) and Latino ($\Delta M = -.21$, $p < .05$) students. There were no

differences in diverse peer interactions by ethnicity (see Table 2 for more information regarding F statistics, mean differences, and standard deviations).

A simple linear regression model ($R^2 = .04$, $p < .001$) showed, controlling for sex and academic classification, discrimination and bias negatively predicted sense of belonging ($\beta = -.20$), $t(3,622) = -4.84$, $p < .001$, 95% confidence interval [CI: $-.19$, $-.08$]. Students of color who reported experiencing more instances of discrimination and bias were also more likely to report lower levels of sense of belonging, supporting Hypothesis 1.

Moderated Regressions, Model 1 and Model 2

The first moderated regression model examined the moderating effect of diverse peer interactions on the association between discrimination–bias and sense of belonging, controlling for sex and academic classification. The total model was significant ($R^2 = .11$, $p < .001$). Diverse peer interactions moderated the effect of discrimination and bias on sense of belonging ($b = .04$), $t(625) = 2.32$, $p < .05$, 95% CI [.01, .07]; see Table 3). The negative association between sense of belonging and discrimination and bias was attenuated at higher levels of diverse peer interactions. That is, more diverse peer interactions buffered the negative effects of discrimination and bias on sense of belonging; this finding supported Hypothesis 2 (see Figure 1).

The second moderated regression model examined the moderating effect of perception of institutional commitment to diversity on the association between discrimination–bias and sense of belonging, controlling for sex and academic classification. The total model was significant ($R^2 = .23$, $p < .001$). Perceptions of institutional commitment to diversity moderated the effect of discrimination and bias on sense of belonging ($b = .08$), $t(625) = 2.18$, $p < .05$, 95% CI [.01, .15]; see Table 3). The negative association between sense of belonging and discrimination and bias was attenuated at higher levels of perceived institutional commitment to diversity (see Figure 2). That is, more positive perception of institutional commitment to diversity buffered the negative relationship between discrimination–bias and sense of belonging, which supported Hypothesis 3.

Moderated by Ethnicity, Model 3 and Model 4

The next two moderation models built upon the findings from Models 1 and 2 by incorporating ethnicity as a secondary moderator. Model 3 examined the three-way interaction effect of discrimination, diverse peer interaction, and ethnicity on sense of belonging, controlling for sex and academic classification (see Table 4). The total model was significant ($r^2 = .13$, $p < .001$). However, the buffering effect of diverse peer interactions on the relationship between discrimination–bias and sense of belonging was not moderated by ethnicity ($p > .05$).

Model 4 examined the three-way interaction effect of discrimination and bias, institutional commitment to diversity, and ethnicity on sense of belonging, controlling for sex and academic classification. Although the total model was significant ($r^2 = .24$, $p < .001$), the buffering effect of positive perceptions of institutional commitment to diversity on the negative relationship between discrimination–bias and sense of belonging was not mod-

Table 1
Means, Standard Deviations, Correlations and Reliability of Major Scales

Scale	1	2	3	4	<i>M</i>	<i>SD</i>
1. Discrimination and bias	—				2.01	.88
2. Sense of belonging	-.20***	—			3.00	.64
3. Diverse peer interactions	.17***	.19**	—		.14	1.67
4. Institutional commitment to diversity	-.31***	.46***	.03	—	2.74	.60
α	.87	.88	.80	.87		

Note. $N = 626$.

** $p < .01$. *** $p < .001$.

Table 2
ANOVA, Differences in Major Scales by Ethnicity

Ethnicity	Discrimination and bias		Sense of belonging		Diverse peer interactions		Institutional commitment to diversity	
	<i>M</i> (<i>SD</i>)	<i>F</i>	<i>M</i> (<i>SD</i>)	<i>F</i>	<i>M</i> (<i>SD</i>)	<i>F</i>	<i>M</i> (<i>SD</i>)	<i>F</i>
Overall		5.97**		5.83**		.11		20.16***
Asian	1.90 (.89)		3.07 (.53)		.15 (1.70)		2.90 (.60)	
Black	2.17 (.89) ^a		2.90 (.71) ^b		.10 (1.62)		2.53 (.68) ^b	
Latino	2.08 (.83)		3.11 (.70)		.18 (1.72)		2.78 (.65)	

Note. Covariates appearing in the model are evaluated at the following values: Gender = 1.68; academic classification = 2.43. ANOVA = analysis of variance.

^a Significant ΔM from Asian. ^b Significant ΔM from Asian and Latino.

** $p < .01$. *** $p < .001$.

erated by ethnicity. Together these findings did not support Hypothesis 4 that ethnicity, particularly being a Black student, would moderate the buffering effects of diverse peer interactions and institutional commitment to diversity on the negative relationship between discrimination–bias and sense of belonging (see Table 4).

Discussion

Findings from this study draw attention to three major conclusions. First, this study adds to the foundational knowledge that experiences of discrimination and bias contribute to diminished sense of belonging to the college for students of color. Previous research has empirically established a relationship between experiences of discrimination and lowered sense of belonging for students of color (Hurtado & Carter, 1997; Levin et al., 2006; Nuñez, 2009). These studies have typically focused on Latino students' experiences of discrimination as it relates to sense of belonging. Our findings from this study include the experiences of Latino, Black, and Asian students, highlighting that experiences of discrimination are similarly detrimental to the sense of belonging of students of various racially minoritized backgrounds attending a primarily White institution. However, univariate analyses from our study also show that a negative campus climate is particularly salient for Black students—specifically, they indicate a lower sense of belonging and less positive feelings that their institution is committed to diversity. These findings add to

past research that posits Black and African American students feel less connected to their campus and feel the campus does not reflect their identity (Steele et al., 2002; Walton & Cohen, 2007).

Second, findings from this study suggest that frequent diverse peer interactions are necessary to buffer against the effects of experiences of discrimination and bias on sense of belonging for all students of color. Past studies have certainly linked the importance of interacting with peers outside of the classroom to greater sense of belonging in college (Hurtado & Ponjuan, 2005). This study focused on the positive forms of social interactions with diverse others, including engaging in conversations outside the classroom. Chang (1999) stated that when students socialize with diverse peers and engage in conversations, they report higher levels of connection to the college. Findings from our study show that more engagement in this type of socialization with peers is protective against high levels of discrimination and bias on sense of belonging for all students of color. This is an important finding because students of color may be more uncertain than are White students about their belongingness in higher education institutions (Steele et al., 2002; Walton & Cohen, 2007) and may feel that they will not be fully included in these historically segregated institutions (Steele et al., 2002). Feeling more connected to the institution by way of having positive experiences, such as engaging with diverse peers, can be greatly beneficial to other positive college outcomes, such as persistence and graduation (Hausmann et al.,

Table 3
Moderation Regression Table, Models 1 and 2

Model outcome ^a	Coefficient	<i>p</i>	95% CI	
			LL	UL
Model 1				
Discrimination and bias	-.18	.000	-.24	-.12
Diverse peer interactions	.09	.000	.06	.12
Discrimination and bias × Diverse peer interactions	.04	.020	.01	.13
Model 2				
Discrimination and bias	-.04	.185	-.09	.02
Institutional commitment to diversity	.42	.000	.35	.49
Discrimination and bias × Institutional commitment to diversity	.08	.029	.01	.15

Note. Covariates in both models include gender and academic classification. CI = confidence interval; LL = lower limit; UL = upper limit.

^a Based on the Sense of Belonging scale.

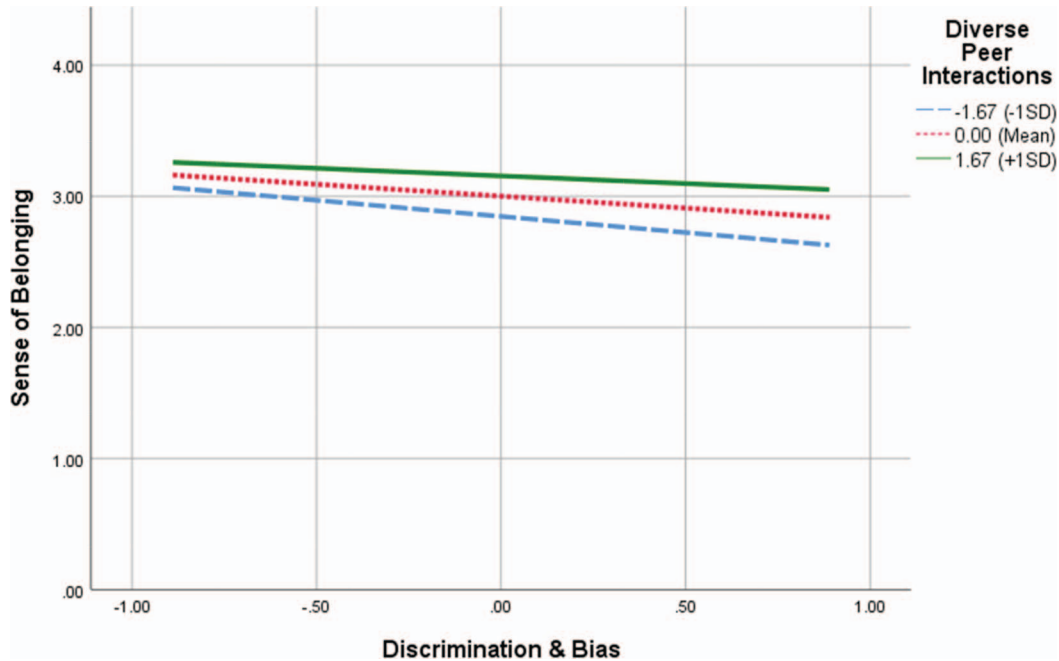


Figure 1. Moderating effect of diverse peer interactions on the relationship between discrimination–bias and sense of belonging. Discrimination–bias and diverse peer interactions were mean-centered. Covariates in the model include gender and academic classification. See the online article for the color version of this figure.

2007). This reality underscores the importance of college educators' understanding how to foster a sense of belonging among their students of color (Museus, Yi, & Saelua., 2018).

Third, findings from our study indicate that for students of color, having a more positive perception of the institution's commitment to diversity can also buffer against the adverse effects of discrimination and bias on sense of belonging. Although past research has shown that students of color are more likely than are their White counterparts to perceive the institution to be unsupportive of diversity issues (Loo & Rolison, 1986; Nora & Cabrera, 1996) and that students of color who perceive their institution to be unsupportive of ethnic minorities have lower sense of belonging to the institution (Rodriguez et al., 2000; Sedlacek, 1987), it has not examined these aspects of campus climate in light of the discriminatory experiences that students of color have reported at PWIs. Our finding extends the literature by contextualizing the importance of institutional commitment to diversity to sense of belonging for students of color in discriminatory experiences. Discrimination and bias serves to undermine the positive psychological connection that students of color can have to their campus, and positive support from the institution at large, even perceived support, can serve to disrupt the negativity and enhance positive experiences for students of color. When students feel or perceive that their institution supports them, they are also more likely to engage in more campus activities holistically, which is beneficial for other positive outcomes, such as better psychological well-being and enhanced academic performance (Wilson, 2006).

Limitations

Next, we address three major limitations of our study before continuing with the implications of our findings. First, the study

was conducted at a 4-year, primarily White institution in a mid-Atlantic state, and data from this campus may not be generalizable to other 4-year institutions in the United States. Second, our group of students of color included only students who identified as Black, Latino, or Asian. Due to very small numbers, we could not include other students of color, such as American Indian, Hawaiian, or Pacific Islander, in our analyses. Finally, related to this issue, we had different sample sizes of the ethnic groups represented in the analyses, with almost half identifying as Asian. Having more proportionate and representative ethnic groups could contribute to a better understanding of how a variety of students of color experience sense of belonging at PWIs.

Implications for Research and Practice

This study has notable implications for future research and practice. Regarding future scholarship, research on the buffering effects of diverse peer interactions and institutional commitment to diversity on the negative effects of discrimination on sense of belonging for students of color should be conducted longitudinally. Obtaining data on experiences of discrimination, engagement with diverse peers, perceptions of institutional commitment to diversity, and sense of belonging as students of color first enter college and before they graduate would provide a better picture of how students' experiences and perceptions develop and evolve over time in college. It could shed light on specific instances or events at the institution that contribute to shaping perceptions and experiences of discrimination and sense of belonging among students of color. Additionally, longitudinal studies would allow for testing interventions. Specifically, prospective studies of first-year experiences on the progression of sense of belonging, such as through cross-lag models, would allow for determining the order of influence be-

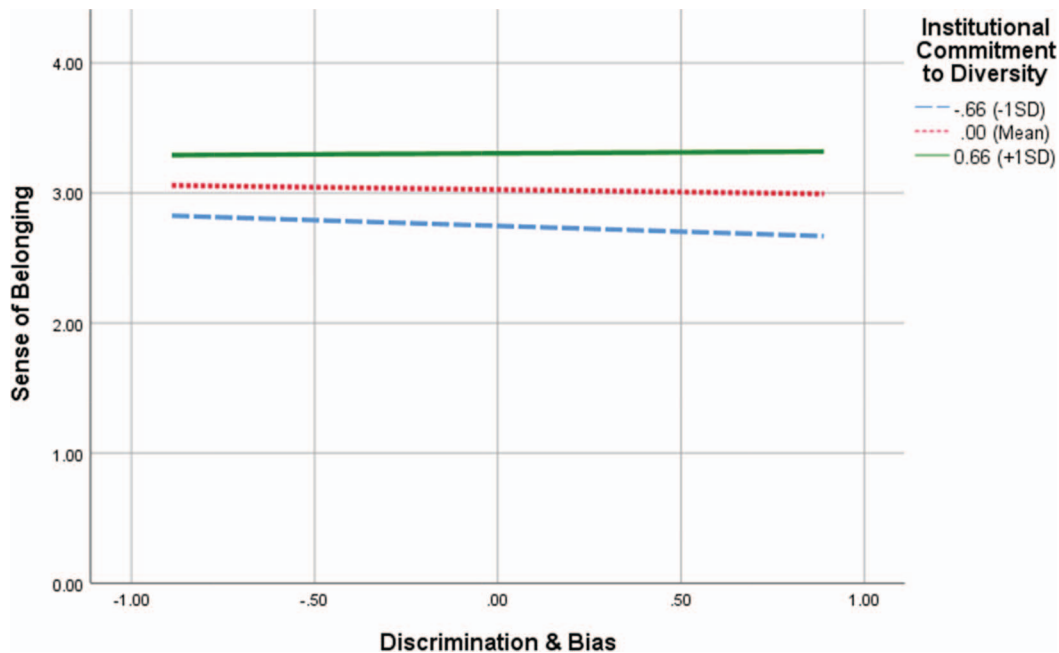


Figure 2. Moderating effect of institutional commitment to diversity on the relationship between discrimination–bias and sense of belonging. Discrimination–bias and institutional commitment to diversity were mean-centered. Covariates in the model include gender and academic classification. See the online article for the color version of this figure.

tween and among sense of belonging, institutional commitment to diversity, peer interactions, and discrimination.

Second, although the findings contribute to extant knowledge on positive diverse interactions as a buffer against the negative effects of discrimination on sense of belonging, more research is needed in this area. Although we did not find that the buffering effects of diverse peer interactions were moderated by ethnicity, we recognize that students from ethnic groups, such as African Americans and Blacks, that have been systematically, historically, and explicitly marginalized in higher education institutions in the United States will have differential campus climate experiences than do other less marginalized students (Mendoza-Denton et al., 2002; Steele et al., 2002; Walton & Cohen, 2007). Future research should focus on where these underserved groups engage in these essential diverse peer interactions and how to cultivate more frequent positive interactions with peers to combat the detrimental impact that constant discrimination can have on students' sense of belonging.

Third, current and up-to-date research on how institutional commitment to diversity can be particularly impactful in cultivating sense of belongingness in the context of minoritized students' experiences of discrimination and bias is necessary. One of our findings indicates that more positive perceptions of the institution's commitment to diversity can offset the adverse impact that discrimination and bias have on sense of belonging for students of color at a PWI. However, extant research has not examined institutional commitment to diversity within this context (i.e., discriminatory experiences at a PWI). Students of color perceive support from the institution as the most salient aspect of campus climate (Gilliard, 1996; Loo & Rolison, 1986; Rodriguez et al., 2000; Sedlacek, 1987). Thus, broadening future scholarship to include

faculty–staff validation and other concrete forms of institutional validation and/or support will be beneficial to in understanding ways that students of color find ways to feel connected to their college (Hurtado & Ruiz Alvarado, 2015) even in the face of adversity and discrimination.

We offer two implications for practice stemming from our findings. One, although institutions cannot directly decrease external sources of discrimination, they can provide ways to buffer against its adverse effect on students' sense of belonging. Colleges should create spaces and opportunities outside of the classroom whereby students can engage with their peers in positive and meaningful ways. Including students in the conversation of where diverse peer interactions take place and how to facilitate these types of interactions should be prioritized. In addition to incorporating the voices of students, institutions should connect with on-campus student organizations to ensure that students have frequent opportunities to have conversations and interact in positive ways with diverse students they otherwise may not encounter in their classrooms.

Second, our findings suggest that institutions boldly affirm their commitment to diversity and diversity-related issues. Students of color feel more connected to their institution when they know topics that are relevant to their presence at the university are supported by the administration, faculty, and staff. Leaders at universities can meaningfully indicate to these students that they are vital to the fabric of the campus and as individuals by ensuring that their commitment to diversity is unwavering. This message can be relayed through consistency in handling issues of intolerance or discrimination, offering varied and consequential multicultural courses, and supporting community engagement in diver-

Table 4
Ethnicity Moderated-Moderation Regression Table, Models 3 and 4

Model outcome ^a	Coefficient	p	95% CI	
			LL	UL
Model 3				
Discrimination and bias	-.14	.001	-.23	-.06
Diverse peer interactions	.07	.001	.03	.11
Discrimination and bias × Diverse peer interactions	.02	.314	-.02	.07
Z1 ^b	-.12	.023	-.23	-.02
Z2 ^c	.07	.324	-.07	.22
Discrimination and bias × Z1	-.06	.373	-.18	.07
Discrimination and bias × Z2	-.06	.483	-.24	.11
Diverse peer interactions × Z1	.02	.634	-.05	.08
Diverse peer interactions × Z2	.07	.097	-.01	.16
Discrimination × Diverse peer interactions × Z1	.04	.244	-.03	.12
Discrimination × Diverse peer interactions × Z2	-.04	.480	-.14	.07
Model 4				
Discrimination and bias	-.03	.492	-.10	.05
Institutional commitment to diversity	.34	.000	.22	.45
Discrimination and bias × Institutional commitment to diversity	.05	.362	-.06	.15
Z1	-.00	.976	-.11	.10
Z2	.07	.293	-.06	.22
Discrimination and bias × Z1	-.01	.922	-.12	.11
Discrimination and bias × Z2	-.07	.394	-.24	.09
Institutional commitment to diversity × Z1	.17	.050	-.00	.33
Institutional commitment to diversity × Z2	.06	.562	-.15	.28
Discrimination and bias × Institutional commitment to diversity × Z1	.03	.697	-.12	.18
Discrimination and bias × Institutional commitment to diversity × Z2	.04	.769	-.22	.29

Note. Covariates in both models include gender and academic classification. CI = confidence interval; LL = lower limit; UL = upper limit.

^a Based on the Sense of Belonging scale. ^b Coding for ethnicity: Z1 = Asian (-1.00), Black (1.00), Latino (.00). ^c Coding for ethnicity: Z2 = Asian (-1.00), Black (.00), Latino (1.00).

sity topics. Taking these holistic approaches to including diversity as an essential part of higher education can reaffirm to students of marginalized backgrounds that they indeed belong.

Although there are many challenges that students of color face in light of daily and perpetuated discrimination, institutional obstacles to inclusion should not be an added challenge. It is essential and necessary that higher education institutions create an environment where historically marginalized students feel connected and integrated to the campus community both psychologically and through policy.

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