

Discrimination, Mental Health and Academic Performance among Underrepresented College Students: The Role of
Extracurricular Activities at Predominantly White Institutions

Janelle T. Billingsley

University of Virginia

Abstract

In this study, I explored the potential of extracurricular activity involvement (ECAI) among underrepresented college students to counter and protect against the noxious effects of perceived discrimination on academic performance. Students ($N = 340$; 68.5% female), were eligible to participate if they identified as a member of a historically underrepresented racial or ethnic group, as first-generation college students, and/or if their families were economically disadvantaged. Data were collected over three time points during students' first two academic years attending a predominantly White institution. I explored the potential association between ECAI and grade point average (GPA) in the context of students' experiences of discrimination by testing depressive symptoms as a mediator and ECAI as a compensatory factor. Bootstrapped confidence intervals of the standardized indirect effect indicated that discrimination at time one indirectly predicted lower GPAs at time three via greater depressive symptoms, while ECAI at time one acted conversely and indirectly predicted higher GPAs at time three via fewer depressive symptoms. These results suggest that promoting ECAI may be an effective strategy to facilitate academic success by countering negative psychological health outcomes stemming from underrepresented students' experiences of discrimination.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

For students from traditionally underrepresented groups (e.g., historically underrepresented racial/ethnic minority, first-generation college, and socioeconomically disadvantaged students), postsecondary education is supposed to facilitate upward mobility and reduce racial and ethnic disparities in income. However, students belonging to underrepresented groups are likely to face a combination of normative and unique stressors that hinder social integration and academic success within collegiate institutions. The threat of experiencing unique stressors that hinder successful integration and success is of particular salience for underrepresented students attending elite predominantly White institutions (PWIs) as their minority status may be more salient in such contexts and they may face an array of marginalizing experiences (Griffith, Hurd, & Hussain, 2017). Marginalizing experiences such as discriminatory treatment may lead underrepresented students to underperform academically relative to their majority White, non-first-generation, and middle class peers (Eisenberg, Hunt, & Speer, 2013). However, involvement in extracurricular activities may help to neutralize or offset the harmful effects of discrimination on underrepresented students' psychological well-being. The current study was undertaken to examine whether participation in extracurricular activities may foster academic resilience in the face of discriminatory treatment based on a range of social identity factors.

Guiding Frameworks

To guide the present study, three conceptual frameworks were used to understand how involvement in extracurricular activities may buffer or protect against the negative impact of discrimination on underrepresented college students' psychological well-being and academic performance. The first framework is García Coll et al.'s (1996) Integrative Model of the Study of Developmental Competencies in Minority Children. The integrative model suggests that social

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

position variables (e.g., race, gender, socioeconomic standing) interact with social stratification mechanisms (e.g., discrimination), environmental contexts (e.g., PWIs), and individual characteristics to inform developmental outcomes, such as psychological well-being (García Coll et al., 1996). For this study, the integrative model is useful in understanding how experiences of perceived discrimination influence the developmental competencies of underrepresented students. Specifically, the model suggests that underrepresented college students attending elite PWIs may be more vulnerable to psychological distress and academic underachievement as a consequence of discriminatory treatment based on their marginalized social identities.

Though the integrative model suggests that perceived discriminatory experiences have the potential to undermine psychological well-being, which could then affect students' academic performance, the model also acknowledges heterogeneity in responses to risk factors within marginalized groups. Focusing on heterogeneity in adjustment in the context of risk ties directly to resilience models that have been advanced to explain positive adaptation in the face of adversity (Luthar & Cicchetti, 2000; Zimmerman & Arunkumar, 1994), which is the second conceptual framework guiding the current study. According to a resilience framework (Fergus & Zimmerman; 2005), promotive factors may directly contribute to positive outcomes in the presence of the risk factor (i.e., compensatory model of resilience) and/or buffer against negative outcomes associated with the risk factor (i.e., protective model of resilience). Such promotive factors may be individual assets or resources within one's environment (Hurd & Zimmerman, 2010). The central tenet of a resilience framework is that promotive factors foster resilient outcomes in the face of risk. Within-group studies that examine drivers of resilience among marginalized groups can provide meaningful data about promotive factors that are most effective in countering specific risk factors facing specific groups. Notably, the identification of promotive

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

factors for marginalized groups facing risk can inform intervention efforts aimed at reducing unequal outcomes.

Tinto's theory of student departure (1993), the third guiding framework for this study, suggests that college students' integration into the social and academic contexts of the institution is influenced by both individual attributes and experiences within the university. Tinto's theory dictates that the promotion of student success in institutions of higher education is dependent on students' successful integration within the college environment and their ability to receive support within that contextual space. Considering that campus organizations may provide students with access to networks of support and that student involvement may serve as an indicator of successful integration in the college environment (Baker, 2013), Tinto's theory may be used to suggest that on-campus extracurricular involvement may positively influence students' academic performance. Involvement with on-campus organizations may foster greater feelings of campus belongingness and social integration among students (Hurtado & Carter, 1997), which may contradict messages of exclusion communicated through acts of discrimination. Therefore, investigation is needed to explore whether involvement in extracurricular activities may serve as a factor that promotes academic resilience in the face of risk for underrepresented students experiencing perceived discriminatory treatment.

Perceived Discrimination and Underrepresented College Students

An extensive body of research has shown that racial/ethnic minority students often report experiencing racial discrimination on college campuses (Banks, 2010; Banks & Kohn-Wood, 2007; Greer & Chwalisz, 2007), while first-generation and socioeconomically disadvantaged college students have reported perceived experiences of discrimination based on classism (Langhout, Rosselli, & Feinstein, 2007). This reporting is concerning as experiences of

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

discrimination may serve to shape developmental outcomes such as academic underachievement. When studying Black college students, Chao and colleagues found negative associations between increased reporting of perceived experiences of discrimination and poorer academic performance (Chao, Mallinckrodt, & Wei, 2012). Similar findings have been demonstrated when examining the impact of racial discrimination on the emotional well-being of Black and Latinx college students (Hwang & Goto, 2008; Prelow, Mosher, & Bowman, 2006).

The potential effects of perceived discriminatory treatment based on facets of one's identity beyond race also have been studied to a lesser degree. For instance, research findings indicate that perceived discrimination on the basis of sexual minority status and religious affiliation may be linked to higher emotional distress (Almeida, Johnson, Corliss, Molnar, & Azrael, 2009; Rippey & Newman, 2006). Relatedly, low-income and first generation students have reported feelings of exclusion and intimidation while attending elite universities (Aries & Seider, 2005). The threat of experiencing perceived discrimination is of particular concern for underrepresented students as they are likely to possess multiple social identities at risk of marginalization. The concept of intersectionality may be used to explain how combinations of social identities intersect to impact the lived experience and individuals' overall well-being (Seng, Lopez, Sperlich, Hamama, & Meldrum, 2012). For example, Crenshaw (1989) highlights the complexity of considering intersectionality through reference to Black women who are likely to experience discrimination as a result of both racism and sexism simultaneously (Crenshaw, 1989). Moreover, prior research considering perceived discrimination based on multiple social identities has found that experiencing discrimination is harmful to one's mental health, regardless of the reason for which one is experiencing discrimination (Hatzenbuehler, Corbin, & Fromme, 2011; Kessler, Mickelson, & Williams, 1999). For students experiencing perceived

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

discrimination, worse mental health is likely to affect their academic performance (Hurd, Tan, & Loeb, 2016; Ying & Han, 2006). Given that discrimination occurs across multiple domains, further research is needed to better understand underrepresented students' experiences of perceived discriminatory treatment when considering their various marginalized identities and the effects of such treatment on students' academic performance.

Though perceived discriminatory experiences have the potential to negatively impact students' psychological well-being and academic performance, there is substantial variability in the outcomes of underrepresented students who experience discrimination. Specifically, research findings have demonstrated that some underrepresented students display high academic achievement in the face of risks such as discriminatory treatment (Thomas, Caldwell, Faison, & Jackson, 2009; Sanders, 1997). Thomas and colleagues' findings suggest that underrepresented students are able to leverage factors that promote resilience in the face of risk. Specific to underrepresented college students facing discriminatory treatment, there is reason to believe that access to social connections may play an important role in fostering psychological and academic resilience (Crockett et al., 2007; Nettles, 1991). At its core, discrimination is centered on social exclusion through communicated messages of inferiority and has been shown to have a direct negative effect on students' sense of belonging within college spaces (Glass & Westmont, 2014). Therefore, one social resource that may serve as a promotive factor for underrepresented college students experiencing perceived discrimination is involvement in on-campus extracurricular activities, which have been found to promote feelings of inclusion, social connectedness, and greater sense of belonging (Brown & Evans, 2002; Civitci, 2015).

Extracurricular Activity Involvement, Psychological Health, and Academic Performance

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

Underrepresented college students are likely to experience feelings of isolation and social disconnection at PWIs (Smith, Chesin, & Jeglic, 2014; Smith & Moore, 2002) often due to experiences of perceived discrimination (Chao, Mallinckrodt, & Wei, 2012; Levin, Van Laar, & Foote, 2006; Nora & Cabrera, 1996). Therefore, it is essential that opportunities are available within college spaces that allow students to connect with peers who share similar interests and valued identities. Often, student involvement in extracurricular activities provides space for such connections to form. While understudied among college students, evidence from studies with younger samples suggests involvement in extracurricular activities fosters sense of belonging and promotes healthy adjustment among students. For example, Fredericks and Eccles (2006) found that increased student involvement in extracurricular activities yielded decreases in depressive symptoms by promoting feelings of belongingness among high school students. Relatedly, previous research with middle and high school students has shown that involvement in school-based extracurricular activities may enhance students' school identification, which then may promote better student academic performance (Cooper, Valentine, Nye, & Lindsay, 1999; Eccles & Barber, 1999). While previous research has largely focused on the psychological and academic benefits of involvement in extracurricular activities among middle and high school students, further research is needed to better understand the impact of such involvement among college students. Given that the educational context of college is much less structured than that of junior and high school, and that college students are forced to rely less on family for support when away at college (Baker, 2013), the role of extracurricular activity involvement may be even more salient in fostering healthy development within this developmental space. Thus, college campuses may be critical settings for understanding the links among involvement in extracurricular activities, psychological health, and academic performance.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

Several reasons exist for why student involvement in multiple extracurricular activities may lead to better psychological health outcomes and consequently, better academic performance among underrepresented college students experiencing perceived discrimination. One potential reason for the stated associations is that through involvement in multiple organizations, students are able to develop supportive peer groups with other members involved in their extracurricular activities and potentially develop a broader social network (Darling, Caldwell, & Smith, 2005; Eccles & Barber, 1999; Schaefer, Simpkins, Vest, & Price, 2011). Having access to supportive peer groups is important as an extensive body of research has linked positive social relationships to improved psychological health and academic outcomes (Barrera, 1986; Brown, 2008; Cohen & Wills, 1985; Lakey & Cronin, 2008; Wang & Eccles, 2012; Wentzel, 2009).

Additionally, underrepresented students experiencing discrimination may benefit from involvement in extracurricular activities that provide direct focus and support towards their targeted marginalized identities. For example, racial/ethnic minority-based student organizations may provide unique support for students who experience perceived discrimination as a result of their race and in this way, help buffer against the negative effects of discrimination on psychological and academic outcomes (Harper & Quaye, 2007; Museus, 2008; Sutton & Kimbrough, 2001). Consequently, involvement in a range of extracurricular groups and activities could provide additive benefits to students experiencing discrimination on the basis of multiple identities. Lastly, there is reason to believe that involvement in multiple different extracurricular activities could potentially protect the psychological well-being of underrepresented students experiencing perceived discrimination. More time spent in a range of structured, pleasurable activities provides students with fewer opportunities to ruminate on marginalizing and stressful

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

experiences (e.g., discrimination), buffering the potential for prolonged reflection which could fuel depressive symptoms (Mahoney & Stattin, 2000) and hinder academic performance (Deroma, Leach, & Leverett, 2009; Haynes, Norris, & Kashy, 1996; Hysenbegasi, Hass, & Rowland, 2005).

Current Study

The first aim of the current study was to document the experiences of underrepresented students in regards to perceived discriminatory treatment and involvement in extracurricular activities. Currently, little is known about the extent to which underrepresented students experience discrimination based on a variety of identities or the types of extracurricular activities these students are involved in. This study sought to document the nature of these experiences in addition to the ways in which they may interact to influence students' academic performance. Specifically, the second aim of this study was to explore potential associations among perceived discrimination, involvement in extracurricular activities, and student outcomes by investigating the potential for extracurricular involvement to counter and protect against the potential harmful effects of perceived discrimination experiences on underrepresented college students' academic performance via potential decreases in depressive symptoms. While previous research has largely focused on the relationship between racial discrimination and poorer educational outcomes (Mattison & Aber, 2007; Wang & Huguley, 2012), fewer studies have considered the impact of discrimination based on several facets of one's identity (e.g., gender, religion, skin color, income, etc.) or the mechanisms through which academic performance may be impacted by experiences of discrimination. Moreover, additional research is needed to understand potential promotive factors that may counteract or neutralize the effects of discrimination. Given that discriminatory treatment may lead victims to experience feelings of exclusion, isolation, and

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

depression (Dovidio, Gluszek, John, Dittmann, & Lagunes, 2010; Noh & Kaspar, 2003; Wong, Eccles, & Sameroff, 2003), involvement in extracurricular activities may be particularly well positioned to offset or neutralize the experience of stigmatization, exclusion and resulting depressive symptoms stemming from discriminatory treatment. Involvement in extracurricular activities may offset or neutralize the effects of discrimination by helping underrepresented students feel included and connected to similar others. Given the psychological health and academic benefits of student involvement in extracurricular activities found among middle and high school students, there is reason to believe involvement in extracurricular activities may be just as, if not more, beneficial to college students who are away from their home systems of support. As such, involvement in extracurricular activities may help to counter against the noxious effects of perceived discriminatory experiences on underrepresented college students' academic performance.

Several potential confounds were accounted for in the current study. Specifically, extraversion, identifying as White, identifying as male, and students' standardized test scores (as an indicator of academic preparedness) were measured and included in study analyses. Previous studies have found that extraversion may predict both extracurricular involvement (Burger & Caldwell, 2000; Shiah, Huang, Chang, Chang, & Yeh, 2013) and depressive symptoms (Grav, Stordal, Romild, and Hellzen, 2012; Hasel, Beharat, Abdolhoseini, Nasab, & Niknam, 2012). Being White and being male may afford students easier integration into the educational context of a PWI, even among students who are underrepresented due to first generation status or low socioeconomic background. Thus, though dealing with challenges related to class status, for example, white students may still have increased opportunity for involvement in extracurricular activities relative to students from historically underrepresented racial and ethnic groups.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

Moreover, male students may be afforded better treatment in classroom contexts where stereotypes about greater academic ability among male relative to female students may benefit them (Steele, Spencer, Aronson, 2002). Additionally, previous research has found that being White and being male may be associated with fewer depressive symptoms (Beauboeuf-Lafontant, 2007; Twenge & Nolen-Hoeksema, 2002), and greater academic performance (Noguera, 2003; Strayhorn, 2010), particularly in the context of a PWI where whiteness and maleness are both privileged identities that afford access to specific opportunities and treatment (McIntosh, 1988). Participants' standardized test scores were also accounted for in the model given that they may be related to the extent to which participants have opportunities for extracurricular activity involvement, experience psychological distress, or succeed academically (Coyle & Pillow, 2008; Everson & Millsap, 2005).

Method

Participants and Procedure

Participants in the current study included 340 undergraduate students attending an elite, predominantly White public university in the Southeastern region of the United States. Students were eligible for participation if they indicated in their college application that they were a member of one or more historically underrepresented racial/ethnic groups (Black/African American, Hispanic/Latino, American Indian/Alaskan Native, or Native Hawaiian/Other Pacific Islander), if they were first-generation college students, or if their families were economically disadvantaged based on qualification to receive the full amount of the federal need-based Pell grant. Following approval from the research team's institutional review board, recruitment for the current study first occurred during the 2013 – 2014 academic school year. Based on eligibility criteria, 775 students were contacted via email and asked to participate in a

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

longitudinal study examining college adjustment and psychological well-being. The response rate of eligible students was 44%. Sixty-nine percent of the sample identified as female and 45% reported that they were first-generation college students. The annual family income of participants ranged from below \$4,900 to \$105,000 and above. Calculations based on family income and family size indicated that 61% of participants came from families whose annual income was at or below 200% of their state's poverty level. The sample identified with the following racial/ethnic groups: Black/African American (29%), White (23%), Hispanic/Latino (10%), Multiracial (20%), Asian (17%), and American Indian/Alaskan Native (< 1%). Forty percent of participants belonged to at least two of the three eligibility groups (i.e., historically underrepresented racial/ethnic group, first-generation college student, or economically disadvantaged).

Students who expressed interest in participating were consented in the research laboratory. Participants over the age of 18 provided informed consent, while participants under the age of 18 provided assent, with consent obtained from their parents or guardians. Once consent was received, participants then completed an online survey questionnaire lasting approximately an hour. During the initial meeting, participants agreed to be contacted for participation in future time points of data collection. In the current study, data from students' first three years of college were used. Time 1 (T1) of data collection occurred during the Spring semester of participants first year in college (2013 – 2014 academic year). The following two time points of data collection occurred during the Spring semesters of their second and third years in college (2014 – 2015 and 2015 – 2016 academic years). Participants were compensated with a \$20 Visa gift card during the first time point of data collection, with the amount of

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

compensation increasing by \$5 with each academic year. Across the three time points, a retention rate of 94% was maintained.

Measures

Perceived experiences of discrimination. Participants' perceived experiences of discrimination were measured during T1 and were assessed utilizing the Everyday Discrimination Scale (EDS; 9-item measure; Williams et al., 1997). For each of the nine items, participants were asked to indicate how often they experienced discriminatory experience in their day-to-day life over the past year. Each item represents a potential scenario of discrimination they may have experienced such as "You are treated with less courtesy than other people" or "You are threatened or harassed." Response options ranged from 0 ("Less than once a year") to 4 ("Almost every day"). Students' responses were then summed as I was interested in overall frequency of discriminatory experiences and expected that some types of discriminatory treatment may be more common than other types (suggesting that an average score on this measure would be less useful). Higher scores on the scale indicated higher levels of perceived discriminatory experiences. Participants were then asked to indicate which facet of their identity they believed to be the main reason for experiencing discrimination. Response options included the following identities: ancestry/national origin/ethnicity, gender/sex, race, age, height, skin color, sexual orientation, weight, income/education level, religion, disability, and one open ended response for reasons not listed. Participants could select more than one response option.

Extracurricular activity involvement. To assess involvement in extracurricular activities, participants indicated the types of activities they had participated in during T1 of data collection. Options included participation in the following activities: division-one athletic team, intramural sports team or sports/fitness organization, community service organization, foreign

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

language organization, sorority or fraternity, academic/honors society, cultural/racial ethnic organization, political organization, LGBTQ organization, career development organization, religious organization, music, arts, or theatre organization, and one open ended response for additional activities not listed. Additional non-listed activities included involvement with the university newspaper, student council, and leadership programs. Participants' responses were assigned a 1 for each activity endorsed and a 0 for activities they did not endorse. Responses were summed to create the total number of extracurricular activities participated in at each point of data collection.

Depressive symptoms. The Beck Depression Inventory II (BDI-II; Beck, Steer, & Brown, 1996) measured students' depressive symptoms over the previous two weeks during Time 2 (T2) of data collection. For each question of the 20-item measure, participants picked out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today." Response options ranged from 0 ("I do not feel sad") to 3 ("I am so sad or unhappy that I can't stand it"). All items on the measure were summed to create a composite score for each participant. According to the BDI-II scoring manual, scores of 14 through 19 may be indicative of mild levels of depression ($n = 42$ students had scores in this range at T2), whereas scores of 20 or greater may reflect moderate levels of depression ($n = 56$ students had scores in this range at T2). Cronbach's alpha indicated high reliability ($\alpha = .92$).

SAT/ACT scores. Participants' incoming standardized test scores were obtained from admission records submitted as part of their application to the university. ACT scores were converted to a 2400 scale to be consistent with the scoring of the SAT.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

Grade Point Average. With participants' written consent, students' grade point average (GPA) were obtained during T1 and Time 3 (T3) of data collection via academic records. GPAs were calculated on a 4-point scale.

Demographics. During initial data collection, participants provided information regarding their background and demographics including their age, race/ethnicity, gender, and socioeconomic status (SES). Prior to conducting analyses, dichotomous variables were created to represent gender (0 = female and other, 1 = male) and race (0 = non-white, 1 = white) to assess for any differences that may be associated with privileged identities within the PWI educational context. Participants' SES was measured by self-reported estimates of total annual household income for their families of origin and the number of persons in the household during the previous year. Response options for total annual household income ranged from 1 (Below \$4,999) to 12 (\$105,000 and above). Participants were considered economically disadvantaged if their family's income was at or below 200% of the federal poverty line when factoring in the number of persons in their household.

Data Analysis

All analyses were conducted using SPSS software (version 24). Bivariate correlations were conducted to assess for associations among the primary study variables. Analysis of variance was used to test whether having more marginalized identities (categories were based on total number of marginalized identities possessed) was associated with more perceived discrimination. Chi-square tests of independence were also conducted to test for associations between underrepresented students' marginalized identities and the reasons students reported experiencing discrimination. A series of regression analyses were then conducted to test potential direct and interactive effects of T1 perceived discrimination and extracurricular activity

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

involvement on students' T3 academic performance (i.e., GPA) both directly and indirectly via participants' T2 depressive symptoms after accounting for the potential effects of standardized test scores, being White, being male, and extraversion. Experiences of perceived discrimination were tested as a risk factor and extracurricular activity involvement was tested as a compensatory factor in the model investigating effects on academic performance via depressive symptoms. Using the MEDIANE SPSS macro (Hayes & Preacher, 2014) I tested both direct and indirect effects from perceived discrimination experiences and extracurricular involvement at T1 and an interaction term between the two to T3 GPA (accounting for T1 GPA) via T2 depressive symptoms. I centered the two continuous independent variables prior to the computation of the interaction term to prevent potential issues of multicollinearity (Aiken & West, 1991). Furthermore, bias-corrected confidence intervals (CI) were constructed around the product coefficient of the indirect effects using a bootstrapping technique. The indirect effect was deemed significant if the 90% CI surrounding the standardized effect did not include zero.

Results

Perceived Experiences of Discrimination and Extracurricular Activity Involvement

All participants in the study reported experiencing discriminatory treatment at least one time in the past year ($M = 1.68$, $SD = 0.63$) and reported on average two reasons for which they experienced discrimination ($M = 2.42$, $SD = 1.78$). Table 1 shows the number of reasons reported for experiencing discrimination, Table 2 shows the frequency of discrimination experiences reported for participants holding specific social identities, and Table 3 shows the percentage of students within an array of social identity categories who reported experiencing discrimination based on a specific identity category. Students holding multiple marginalized identities did not report more frequent perceived discrimination; $F(5, 217) = 1.24$, $p = 0.29$. Table 4 shows the

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

proportion of participants who reported participation in each extracurricular activity. Participants were most involved in community service, cultural/race/ethnic, and religious organizations.

Correlations and Chi-Square Test of Independence

The associations among primary study variables were examined using bivariate correlations (see Table 5). Identifying as male was associated with greater reports of T1 perceived discrimination and fewer reports of T2 depressive symptoms, while identifying as White was associated positively with standardized test scores. Students who reported higher levels of extraversion reported more T1 extracurricular activity involvement, and fewer T2 depressive symptoms. Students' reports of experiencing discrimination were positively related to T2 depressive symptoms, while T1 extracurricular involvement was negatively related to T2 depressive symptoms. Students' T2 depressive symptoms were negatively associated with students' T3 GPAs.

Results of chi-square test for independence indicated an association between students' self-reported race/ethnicity and students' reporting of race as a reason for experiencing discrimination [47.3% non-White, 3.8% White; $\chi^2(1) = 48.10, p < .001$] and students' reporting of ethnicity, ancestry, or national origin as a reason for experiencing discrimination [28% non-White, 5% White; $\chi^2(1) = 17.49, p < .001$]. Associations were also found between students' race/ethnicity and students' reporting of skin color as a reason for experiencing discrimination [36% non-White, 3% White; $\chi^2(1) = 32.75, p < .001$] and between students' self-reported gender identity and students' reporting of gender or sex as a reason for experiencing discrimination [49% female and other, 10% male; $\chi^2(1) = 44.3, p < .001$]. Additional associations were found between students' self-reported religious affiliation and students' reporting of religion-based discrimination [6% non-Christian, 18% Christian; $\chi^2(1) =$

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

12.41, $p < .01$], and between students' sexual minority status and students' reporting of sexual orientation as a reason for experiencing discrimination [29% sexual minority, 1% non-sexual minority; $\chi^2(1) = 57.8, p < .001$]. Of note, associations were not found between students' SES and students' reporting income or education level as a reason for experiencing discrimination [21% of students who reported family incomes at or below 200% of the poverty line, 18% of students who were above 200% of the poverty line; $\chi^2(1) = 0.6, ns$].

Results of Regression Analyses for Direct and Indirect Effects

After accounting for the potential effects of being White, being male, students' extraversion, students' standardized test scores, and students' T1 GPA, T1 experiences of discrimination were positively associated with T2 depressive symptoms ($\beta = 0.18, p < .05$). Conversely, T1 extracurricular involvement was negatively associated with T2 depressive symptoms ($\beta = -0.18, p < .05$). T2 depressive symptoms, in turn, were negatively associated with students' T3 GPA ($\beta = -0.13, p < .05$). Participants' T1 experiences of discrimination were indirectly related to lower T3 GPA via greater T2 depressive symptoms (indirect effect = $-.02$; 90% CI = $[-.05, -.00]$). Participants' T1 extracurricular activity involvement indirectly associated with greater T3 GPA via fewer T2 depressive symptoms (indirect effect = $.02$; 90% CI = $[.00, .05]$). Support was not found for an interaction effect between T1 perceived discrimination experiences and T1 extracurricular activity involvement on T2 depressive symptoms ($\beta = 0.01, p = 0.29$) or T3 GPA ($\beta = -0.01, p = 0.45$).

Discussion

Findings of this study indicate while perceived discrimination is associated with more depressive symptoms and consequently, lower GPA, involvement in on-campus extracurricular activities may counteract the harmful effects of discriminatory treatment on mental health and in

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

this way, encourage academic success among underrepresented students experiencing discriminatory treatment at a PWI. These findings are in line with previous research that suggests extracurricular activity involvement may improve students' psychological well-being (Fredericks & Eccles, 2006) and promote their academic success (Cooper, Valentine, Nye, & Lindsay, 1999; Eccles & Barber, 1999). Moreover, this study expands on the findings of previous research that links involvement in extracurricular activities with psychological and academic benefits among middle and high school students by demonstrating the potential impact of such involvement among underrepresented college students facing discriminatory treatment.

The findings of this study suggest that involvement in extracurricular activities may address the issues that make underrepresented students more susceptible to psychological distress, vulnerabilities that may be complicated by discriminatory treatment. Extracurricular activities may provide underrepresented students with additional networks of support, help them structure their time, and potentially provide them with a greater sense of belonging and connection to similar others within the college environment. For these reasons, underrepresented students may find on-campus extracurricular activity involvement to be a positive developmental space to foster mental health. It is important to note, however, that involvement in extracurricular activities was directly associated with lower T3 GPA.

Thus, although there may be promotive mental health benefits associated with participation especially in the context of discriminatory experiences, it may be that being involved in more organizations and activities can take away from students' study time and undermine their academic performance. Taken together, the findings of this study suggest extracurricular activity involvement may foster better mental health but could also detract from students' academic success.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

Future research should more carefully investigate the potential benefits and harms of ECAI among underrepresented college students and help determine whether there may be an optimal level of participation that both allows students to reap the psychological benefits of involvement without detracting from their academic success by consuming too much of their time, energy, and cognitive resources.

It also is notable that the protective model of resilience was not supported. Thus, while the findings suggest that involvement in extracurricular activities may counter the harmful effects of discriminatory treatment on students' mental health and consequently, their academic performance, the findings of this suggest that involvement in extracurricular activities does not reduce the harmful influence of discriminatory treatment on student outcomes. Consequently, more may need to be done within the context of extracurricular activities to directly address strategies to cope with discriminatory treatment. It may be that on-campus extracurricular activities are not where underrepresented students are processing or having discussions around discriminatory treatment as university clubs and organizations may not be equipped with resources to help students cope with discriminatory treatment. When examining the buffering effects of support on stress, Cohen and Wills (1985) suggest that support functions are most effective when the resources they provide are closely aligned to the specific event eliciting stress. While on-campus extracurricular involvement may provide underrepresented students with connection and companionship, students experiencing perceived discriminatory treatment may need explicit opportunities to receive emotional support and validation specific to their discriminatory experiences and maybe specific advice and guidance about how to cope. This explicit emotional and instrumental support may be available to youth through other sources such as intergenerational relationships with supportive nonparental adults (Griffith, Hurd, &

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

Hussain, 2017) or via college counseling centers or support groups (Ottens, Black, & Klein, 2000).

In documenting the experiences of underrepresented college students, this study found that experiences of discriminatory treatment were fairly prevalent, with all students reporting at least one instance of discriminatory treatment within the previous year. In addition, most students reported multiple identity group sources for the perceived discrimination they experienced with mistreatment based on race, gender, and age being the most frequently endorsed. Patterns of associations among social identities held by students and reasons for experiencing perceived discrimination were largely consistent with what was expected when comparing privileged and disadvantaged groups as students of color were more likely than their White peers to endorse perceived discrimination based on race, ethnicity, and skin color; women and non-binary students were more likely than men to endorse perceived discrimination based on their gender (there were a few non-binary students in the study but all of them identified gender as a source of discriminatory treatment); and sexual minority students were more likely than their non-sexual minority peers to endorse discrimination based on sexual orientation.

Findings are consistent with what was expected in light of research showing that members of marginalized groups report fairly frequent experiences of discrimination based on their marginalized identity status (Banks, 2010; Greer & Chwalisz, 2007; Langhout, Rosselli, & Feinstein, 2007) and also confirms that students who hold privileged and non-targeted identities (e.g., White, male, heterosexual) are not likely to report perceiving discriminatory treatment based on those privileged identities. This pattern was pretty consistent across all of the identity groups examined with only a couple of exceptions (Almeida, Johnson, Corliss, Molnar, & Azrael, 2009; Banks & Kohn-Wood, 2007; Schmitt, Branscombe, Kobrynowicz, & Owen, 2002;

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

Shaffer et al., 2000). Specifically, patterns around reporting age-, SES-, and religious-based discrimination were unexpected. Age-based discrimination was the most frequently endorsed reason for experiencing perceived discrimination among the full sample of the study. This finding was surprising as the sample consisted entirely of traditional-aged college students (i.e., students who directly entered college after graduating high school) and there was not a single participant outside of the 17-19 age range upon college entry in the sample. Whereas reporting of perceived age-based discrimination may be expected with a sample that included non-traditional students (i.e., students entering college over the age of 20; Hurtado, Kurotsuchi, & Sharp, 1996).

I did not anticipate that many students in the current sample would report experiencing age-based discrimination. One explanation for this finding is that all of the students were in their first-year of college when asked about perceived discriminatory experiences, indicating that the sample would have been the youngest group of students attending the university. Therefore, students may have felt as though they were treated unfairly by their older peers (i.e., second through fourth-year students at the university or even graduate and professional school students). First-year students also may have felt as though their requests and concerns were taken with less regard by university faculty, staff, and administration relative to the requests and concerns of their older peers. An example may be students given lower priority in regards to course registration or other opportunities that present in the university context. This may have been especially challenging for first-year students who may have possessed a higher sense of subjective social status only months' prior as a senior in high school (Loeb & Hurd, 2017). Unfortunately, I was not able to collect more information from students in regards to the types of age-based discrimination they experienced and future research is needed to better understand this potential phenomenon.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

Other unexpected findings pertained to students' SES and religious affiliation, where in neither case did belonging to traditionally marginalized groups (i.e., low SES background or non-Christian religious affiliation) lead students to report experiencing discrimination based on these identity statuses more so than their counterparts who did not hold those identities. In regards to SES, the lack of findings may be a function of the higher average SES of students at the institution (average family income was \$155,000 at the university). Thus, the distinction between students from families at or below 200% of the poverty threshold for the state and their counterparts who were above this threshold may not have accurately captured students' experiences of relative SES at the institution. Hence, students who were from families that were above the 200% poverty threshold may still have felt economically disadvantaged compared to their more affluent peers and been the recipients of classist treatment based on their relatively lower SES.

Contrary to what was expected, Christian students reported more religious-based perceived discrimination than their non-Christian peers. These findings may reflect the possibility that Christian students for whom religious identification is an important tenant of their identity feel stifled in a non-religiously affiliated public institution of higher education. In these academic spaces, religious views may not be welcomed or respected, with deference going to secular or science-based arguments over faith-oriented perspectives (Stamm, 2003; Vaccaro, 2010). Thus, Christian students attending public institutions of higher education may experience others looking down on them or otherwise mistreating them for holding non-secular perspectives, especially if they hold them strongly or feel that Christianity is a central component of their identity. In the current study, I was limited in my ability to test differences in perceived discrimination between Christian students and subgroups within the non-Christian group of

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

students. Nearly half of non-Christian students in our study did not identify with any religion, which may be more reflective of the broader composition of the student body (Eagan et al., 2014). It is not clear if and how Christian students' experiences of discrimination differ from discrimination experienced by non-secular students and historically stigmatized religious minority students such as Jews and Muslims in the U.S. Therefore, more research is needed to better understand what religious-based discrimination may look like in the college context and whether it is equally harmful regardless of religious affiliation (or lack of affiliation).

Lastly, I expected that students who held multiple marginalized identities (e.g., Black, female, queer, Muslim student) would report more frequent discrimination as research on the intersection of multiple marginalized identities suggests that minorities face stressors that are multiplicative in nature (Stirratt et al., 2008). However, support was not found for this claim as holding a greater number of marginalized social identities was not associated with a greater total frequency of discriminatory experiences (although there was a trend toward significance suggesting a pattern in the expected direction). It may be that students who held multiple marginalized identities made more of an effort to seek out safe spaces in which they could be isolated from hostile environments (i.e., by being more intentional in curating their interactions they may have limited their exposure to intolerant others), which may speak to the role of individual agency as a protective mechanism (Buttny, 1999; Gudykunst, 1995). It also may be that discrimination based on physical appearance such as being a woman or having darker skin ends up being a more salient driver of discrimination frequency as opposed to holding multiple marginalized identities that may be less outwardly visible (e.g., sexual orientation, SES, religious affiliation). Given that most students in the study reported experiencing discrimination due to multiple social identities, I was unable to run comparative analyses to determine whether

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

discrimination based on specific social identity group membership (e.g., racial discrimination) may have been more detrimental than discrimination based on other social identity group membership (e.g., class-based discrimination). This distinction is worth further investigation as previous research has shown that different types of discrimination may have differential health effects for subgroups of the population (Landrine et al., 1995; Mays & Cochran, 2001; Stuber, Galea, Ahern, Blaney, & Fuller, 2003). Future research that includes a qualitative component could be helpful to get a more nuanced understanding of underrepresented students' discriminatory experiences and to explicitly examine the discriminatory experiences of those holding multiple marginalized identities. Having a more comprehensive understanding of the experiences and effects of discriminatory treatment based on a range of different social identities would help to inform intervention efforts targeting unfair treatment and its consequences.

Conclusion

Underrepresented college students attending PWIs suffer from perceived discriminatory treatment based on a range of social identities they hold (e.g., race, gender, sexual orientation) as well as their physical characteristics (e.g., weight, height). These perceived experiences of unfair treatment threaten to undermine the academic performance of underrepresented college students. As such, PWIs need to do more to reduce or eliminate acts of bias on campus and create a more diverse and inclusive climate for students. This may be approached through curricular changes focused on increased intergroup dialogue accompanied by teachings about power, privilege, and oppression (Sorenson, Nagda, Gurin, & Maxwell, 2009). Student organizations that focus on creating campus-wide change to increase campus diversity and yield a more inclusive environment may both directly benefit student members and yield ripple effects for future generations of underrepresented students at the PWI.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

While involvement in on-campus extracurricular activities did not mitigate the harm of perceived discriminatory treatment, extracurricular activity involvement did appear to counter the noxious effects of experiencing perceived discriminatory treatment on depressive symptoms. Thus, findings of this study suggest that encouraging underrepresented college students to become involved in on-campus extracurricular activities could facilitate adjustment and academic success; however, there may be some negative academic consequences associated with potential overinvolvement in extracurricular activities and this should be considered when advising underrepresented students about participation in these types of activities and organizations. In regards to maximizing potential benefits, extracurricular activities could be structured to include more emotional and informational support about discriminatory experiences. If underrepresented students are drawn to campus organizations in a way that they may not be drawn to counseling or mental health services, it would be worth considering how these organizations could be leveraged as places where underrepresented students could process marginalizing experiences and even receive advice from similar others on what resources to pursue and best ways to cope with experiences of discriminatory treatment. Nevertheless, it seems clear that extracurricular activity involvement is not the solution to issues of bias and unfair treatment on college campuses. Therefore, PWIs must do more to ensure that their campuses are diverse and inclusive spaces where underrepresented students will feel welcomed and be treated fairly. There likely are no “silver bullets” to erase or reduce the harm done by discriminatory treatment and as such, a focus on ways to eradicate discrimination from these institutions of higher education must remain a priority.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regressions: Testing and interpreting interactions*. Thousand Oaks, CA: SAGE Publications.
- Almeida, J., Johnson, R. M., Corliss, H. L., Molnar, B. E., & Azrael, D. (2009). Emotional distress among LGBT youth: The influence of perceived discrimination based on sexual orientation. *Journal of Youth and Adolescence*, 38, 1001-1014.
- Aries, E., & Seider, M. (2005). The interactive relationship between class identity and the college experience: The case of lower income students. *Qualitative Sociology*, 28, 419-443.
- Baker, C. N. (2013). Social support and success in higher education: The influence of on-campus support on African American and Latino college students. *The Urban Review*, 45, 632-650.
- Banks, K. H. (2010). African American college students' experience of racial discrimination and the role of college hassles. *Journal of College Student Development*, 51, 23-34.
- Banks, K. H., & Kohn-Woods, L. P. (2007). The influence of racial identity profiles on the relationship between racial discrimination and depressive symptoms. *Journal of Black Psychology*, 33, 331-354.
- Barrera, M. Jr. (1986). Distinctions between social support concepts, measures, and models. *American Journal of Community Psychology*, 14, 413-445.
- Beauboeuf-Lafontant, T. (2007). You have to show strength: An exploration of gender, race, and depression. *Gender & Society*, 21, 28-51.
- Beck, A.T., Steer, R.A., & Brown, G.K. (1996). *Manual for the Beck Depression Inventory-II*. San Antonio, TX: Psychological Corporation.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

- Brown, D. L. (2008). African American resiliency: Examining racial socialization and social support as protective factors. *Journal of Black Psychology, 34*, 32-48.
- Brown, R., & Evans, W. P. (2002). Extracurricular activity and ethnicity: Creating greater school connection among diverse student populations. *Urban Education, 37*, 41-58.
- Burger, J. M., & Caldwell, D. F. (2000). Personality, social activities, job-search behavior and interview success: Distinguishing between PANAS trait positive affect and NEO extraversion. *Motivation and Emotion, 24*, 51-62.
- Buttny, R. (1999). Discursive constructions of racial boundaries and self-segregation on campus. *Journal of Language and Social Psychology, 18*, 247-268.
- Chao, R.C., Mallinckrodt, B., & Wei, M. (2012). Co-occurring presenting problems in African American college clients reporting racial discrimination distress. *Professional Psychology: Research and Practice, 43*, 199-207.
- Civitci, A. (2015). Perceived stress and life satisfaction in college students: Belonging and extracurricular participation as moderators. *Procedia – Social and Behavioral Sciences, 205*, 271-281.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310-357.
- Coll, C. G., Crnic, K., Lamberty, G., Wasik, B. H., Jenkins, R., García, H. V., & McAdoo, H. P. (1996). An integrative model for the study of developmental competencies in minority children. *Child Development, 67*, 1891-1914.
- Cooper, H., Valentine, J. C., Nye, B., & Lindsay, J. J. (1999). Relationship between five after-school activities and academic achievement. *Journal of Educational Psychology, 91*, 369-378.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

Coyle, T. R., & Pillow, D. R. (2008). SAT and ACT predict college GPA after removing g. *Intelligence, 36*, 719-729.

Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: Black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *University of Chicago Legal Forum 1989*, 139-168.

Crockett, L. J., Iturbide, M. I., Torres Stone, R. A., McGinley, M., Raffaelli, M., & Carlo, G. (2007). Acculturative stress, social support, and coping: Relations to psychological adjustment among Mexican–American college students. *Cultural Diversity and Ethnic Minority Psychology, 13*, 347–355.

Darling, N., Caldwell, L. L., & Smith, R. (2005). Participation in school-based extracurricular activities and adolescent adjustment. *Journal of Leisure Research, 37*, 51-76.

Deroma, V. M., Leach, J. B., & Leverett, J. P. (2009). The relationship between depression and college academic performance. *College Student Journal, 43*, 325-334.

Dovidio, J. F., Gluszek, A., John, M., Ditlmann, R., & Lagunes, P. (2010). Understanding bias toward Latinos: Discrimination, dimensions of difference, and experience of exclusion. *Journal of Social Issues, 66*, 59-78.

Eccles, J. S., & Barber, B. L. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research, 14*, 10-43.

Eagan, K., Stolzenberg, E. B., Ramirez, J. J., Aragon, M. C., Suchard, M. R., & Hurtado, S. (2014). *The American freshman: National norms fall 2014*. Los Angeles: Higher Education Research Institute, UCLA.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

- Eisenberg, D., Hunt, J., & Speer, N. (2013). Mental health in American colleges and universities: Variation across student subgroups and across campuses. *The Journal of Nervous and Mental Disease, 201*, 60-67.
- Everson, H. T., & Millsap, R. (2005). Everyone gains: Extracurricular activities in high school and higher SAT scores. In E. W. Gordon, A.E. Meroe, & B. Bridgall (Eds.), *Supplementary education: The hidden curriculum of high academic achievement*. Lanham, MD: Rowman & Littlefield Publishers.
- Fergus, S., & Zimmerman, M. A. (2005). Adolescent resilience: A framework for understanding healthy development in the face of risk. *Annual Review of Public Health, 26*, 399-419.
- Fredericks, J. A., & Eccles, J. S. (2006). Is extracurricular participation associated with beneficial outcomes? Concurrent and longitudinal relations. *Developmental Psychology, 42*, 698-713.
- Glass, C. R., & Westmont, C.M. (2014). Comparative effects of belongingness on the academic success and cross-cultural interactions of domestic and international students. *International Journal of Intercultural Relations, 38*, 106-119.
- Grav, S., Stordal, E., Romild, U. K., & Hellzen, O. (2012). The relationship among neuroticism, extraversion, and depression in the HUNT study: In relation to age and gender. *Issues in Mental Health Nursing, 33*, 777-785.
- Greer, T. M., & Chwalisz, K. (2007). Minority-related stressors and coping processes among African American college students. *Journal of College Student Development, 48*, 388-404.
- Griffith, A. N., Hurd, N. M., & Hussain, S. B. (2017). "I didn't come to school for this": A qualitative examination of experiences with race-related stressors and coping responses

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

- among black students attending a predominantly white institution. *Journal of Adolescent Research*. Advance online publication.
- Gudykunst, W. D. (1995). Anxiety/uncertainty management (AUM) theory: Current status. In R. L. Wiseman (Ed.), *International and intercultural communication annual, Vol. 19. Intercultural communication theory* (pp. 8-58). Thousand Oaks, CA: SAGE Publications.
- Harper, S. R., & Quaye, S. J. (2007). Student organizations as venues for black identity expression and development among African American male student leaders. *Journal of College Student Development, 48*, 127-144.
- Hasel, K. M., Beharat, M. A., Abdolhoseini, A., Nasab, S. A., & Niknam, S. (2012). Relationship of personality factors to perceived stress, depression, and oral lichen planus severity. *International Journal of Behavioral Medicine, 20*, 286-292.
- Hatzenbuehler, M. L., Corbin, W. R., & Fromme, K. (2011). Discrimination and alcohol-related problems among college students: A prospective examination of mediating effects. *Drug and Alcohol Dependence, 115*, 213-220.
- Hayes, A. F. (2012). *PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modeling* [White paper]. Retrieved from <http://www.afhayes.com/public/process2012.pdf>.
- Hayes, A. F., & Preacher, K. J. (2014). Statistical mediation analysis with a multicategorical independent variable. *British Journal of Mathematical and Statistical Psychology, 67*, 451-470.
- Haynes, M. E., Norris, M. P., & Kashy, D. A. (1996). The effects of depressed mood on academic performance in college students. *Journal of College Student Development, 37*, 519-526.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

- Hurd, N.M., Tan, J.S., & Loeb, E. (2016). Natural mentoring relationships and the adjustment to college among underrepresented students. *American Journal of Community Psychology, 57*, 330–341.
- Hurd, N. M., & Zimmerman, M. A. (2010). Natural mentors, mental health, and risk behaviors: A longitudinal analysis of African American adolescents transitioning into adulthood. *American Journal of Community Psychology, 46*, 36-48.
- Hurtado, S., & Carter, D. F. (1997). Effects of college transition and perceptions of the campus racial climate on Latino college students' sense of belonging. *Sociology of Education, 70*, 324-345.
- Hurtado, S., Kurotsuchi, K., & Sharp, S. (1996). *College entry by age groups: Paths of traditional, delayed-entry, and nontraditional students*. New York, NY: Paper presented at the meeting of the American Educational Research Association.
- Hwang, W.C., & Goto, S. (2008). The impact of perceived racial discrimination on the mental health of Asian American and Latino college students. *Cultural Diversity and Ethnic Minority Psychology, 14*, 326-335.
- Hysenbegasi, A., Hass, S. L., & Rowland, C. R. (2005). The impact of depression on the academic productivity of university students. *The Journal of Mental Health Policy and Economics, 8*, 145-151.
- Kessler, R., Mickelson, K., & Williams, D. (1999). The prevalence, distribution, and mental health correlates of perceived discrimination in the United States. *Journal of Health and Social Behavior, 40*, 208-230.
- Lakey, B., & Cronin, A. (2008). Low social support and major depression: Research, theory and methodological issues. *Risk Factors in Depression, 385-408*.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

- Landrine, H., Klonoff, E. A., Gibbs, J., Manning, V., & Lund, M. (1995). Physical and psychiatric correlates of gender discrimination: An application of the schedule of sexist events. *Psychology of Women Quarterly, 19*, 473-492.
- Langhout, R. D., Rosselli, F., & Feinstein, J. (2007). Assessing classism in academic settings. *The Review of Higher Education, 30*, 145-184.
- Levin, S., Van Laar, C., & Foote, W. (2006). Ethnic segregation and perceived discrimination in college: Mutual influences and effects on social and academic life. *Journal of Applied Social Psychology, 36*, 1471-1501.
- Loeb, E., & Hurd, N. M. (2017). Subjective social status, perceived academic competence, and academic achievement among underrepresented students. *Journal of College Student Retention: Research, Theory, & Practice, 9*, 10-20.
- Luthar, S., & Cicchetti, D. (2000). The construct of resilience: Implications for interventions and social policies. *Developmental and Psychopathology, 12*, 857-885.
- Mahoney, J. L., & Stattin, H. (2000). Leisure activities and adolescent antisocial behavior: The role of structure and social context. *Journal of Adolescence, 23*, 113-127.
- Mattison, E., and Aber, M. S. (2007). Closing the achievement gap: The association of racial climate with achievement and behavioral outcomes. *American Journal of Community Psychology, 40*, 1-12.
- Mays, V. M., & Cochran, S.D. (2001). Mental health correlates of perceived discrimination among lesbian, gay, and bisexual adults in the United States. *American Journal of Public Health, 91*, 1869-1876.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

- McIntosh, P. (1988). White privilege and male privilege: A personal account of coming to see correspondences through work in women's studies. In M. L. Andersen and P. Hill Collins (Eds.), *Race, class, and gender: An anthology*. Belmont, CA: Wadsworth.
- Museus, S.D. (2008). The role of ethnic student organizations in fostering African American and Asian American students' cultural adjustment and membership at predominantly white institutions. *Journal of College Student Development, 49*, 568-586.
- Nettles, S. M. (1991). Community contributions to school outcomes of African-American students. *Education and Urban Society, 24*, 132-147.
- Noguera, P. A. (2003). The trouble with black boys: The role and influence of environmental and cultural factors on the academic performance of African American males. *Urban Education, 38*, 431-459.
- Noh, S., & Kaspar, V. (2003). Perceived discrimination and depression: Moderating effects of coping, acculturation, and ethnic support. *American Journal of Public Health, 93*, 232-238.
- Nora, A., & Cabrera, A. F. (1996). The role of perceptions of prejudice and discrimination on the adjustment of minority students to college. *The Journal of Higher Education, 67*, 119-148.
- Ottens, A., & Black, L. L. (2000). Crisis interventions at college counseling centers. In A. R. Roberts (Ed.), *Crisis intervention handbook: Assessment, treatment, and research* (pp. 152-173). New York: Oxford University Press.
- Prelow, H. M., Mosher, C. E., & Bowman, M. A. (2006). Perceived racial discrimination, social support, and psychological adjustment among African American college students. *Journal of Black Psychology, 32*, 442-454.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

- Rippy, A. E., & Newman, E. (2006). Perceived religious discrimination and its relationship to anxiety and paranoia among Muslim Americans. *Journal of Muslim Mental Health, 1*, 5-20.
- Sanders, M. (1997). Overcoming obstacles: Academic achievement as a response to racism and discrimination. *The Journal of Negro Education, 66*, 83-93.
- Schaefer, D. R., Simpkins, S. D., Vest, A. E., & Price, C. D. (2011). The contribution of extracurricular activities to adolescent friendships: New insights through social network analysis. *Developmental Psychology, 47*, 1141-1152.
- Schmitt, M. T., Branscombe, N. R., Kobrynowicz, D., & Owen, S. (2002). Perceiving discrimination against one's gender group has different implications for well-being in women and men. *Personality and Social Psychology Bulletin, 28*, 197-210.
- Seng, J. S., Lopez, W. D., Sperlich, M., Hamama, L., & Reed Meldrum, C.D. (2012). Marginalized identities, discrimination burden, and mental health: Empirical exploration of an interpersonal-level approach to modeling intersectionality. *Social Science and Medicine, 75*, 2437-2445.
- Shiah, Y. J., Huang, Y., Chang, F., Chang, C.F., & Yeh, L. C. (2013). School-based extracurricular activities, personality, self-concept, and college career development skills in Chinese society. *Educational Psychology, 33*, 135-154.
- Smith, K. M., Chesin, M. S., & Jeglic, E. L. (2014). Minority college student mental health: Does majority status matter? Implications for college counseling services. *Journal of Multicultural Counseling and Development, 42*, 77-92.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

- Smith, S.S., & Moore, M. R. (2002). Expectations of campus racial climate and social adjustment among African American college students. *African American Education: Race, Community, Inequality, and Achievement*, 2, 93-118.
- Sorensen, N., Nagda, B. R. A., Gurin, P., & Maxwell, K. E. (2009). Taking a “hands on” approach to diversity in higher education: A critical-dialogic model for effective intergroup interaction. *Analyses of Social Issues and Public Policy*, 9, 3-35.
- Stamm, L. (2003). Can we bring spirituality back to campus? Higher education’s re-engagement with values and spirituality. *Journal of College and Character*, 2, 1–11.
- Steele, C. M., Spencer, S. J., & Aronson, J. (2002). Contending with group image: The psychology of stereotype and social identity threat. In M. Zanna (Ed.), *Advances in Experimental Social Psychology* (Vol. 23, pp. 379–440). New York: Academic Press.
- Stirratt, M. J., Meyer, I. H., Ouellette, S. C., & Gara, M. A. (2008). Measuring identity multiplicity and intersectionality: Hierarchical classes analysis (HICLAS) of sexual, racial, and gender identities. *Self and Identity*, 7, 89-111.
- Strayhorn, T. L. (2010). When race and gender collide: Social and cultural capital’s influence on the academic achievement of African American and Latino males. *The Review of Higher Education*, 33, 307-332.
- Stuber, J., Galea, S., Ahern, J., Blaney, S., & Fuller, C. (2003). The association between multiple domains of discrimination and self-assessed health: A multilevel analysis of Latinos and Blacks in four low-income New York City neighborhoods. *Health Services Research*, 38, 1735- 1760.
- Sutton, E. M., & Kimbrough, W. M. (2001). Trends in black student involvement. *Student Affairs Research and Practice*, 39, 30-40.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

- Thomas, O. N., Caldwell, C. H., Faison, N., & Jackson, J. S. (2009). Promoting academic achievement: The role of racial identity in buffering perceptions of teacher discrimination on academic achievement among African American and Caribbean Black adolescents. *Journal of Educational Psychology, 101*, 420-431.
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd Ed.). Chicago: University of Chicago Press.
- Twenge, J.M., & Nolen-Hoeksema, S. (2002). Age, gender, race, socioeconomic status, and birth cohort differences on the Children's Depression Inventory: A meta-analysis. *Journal of Abnormal Psychology, 111*, 578-588.
- Vaccaro, A. (2010). What lies beneath seemingly positive campus climate results: Institutional sexism, racism, and male hostility toward equity initiatives and liberal bias. *Equity & Excellence in Education, 43*, 202-215.
- Wang, M., & Eccles, J.S. (2012). Social support matters: Longitudinal effects of social support on three dimensions of school engagement from middle to high school. *Child Development, 83*, 877-895.
- Wang, M., & Huguley, J. P. (2012). Parental racial socialization as a moderator of the effects of racial discrimination on educational success among African American adolescents. *Child Development, 83*, 1716-1731.
- Wentzel, K. R. (2009). Peers and academic functioning at school. In K. H. Rubin, W. M. Bukowski, & B. Laursen (Eds.), *Social, emotional, and personality development in context. Handbook of peer interactions, relationships, and groups* (pp. 531-547). New York, NY, US: Guilford Press.

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

- Williams, D.R., Yu, Y., Jackson, J.S., & Anderson, N.B. (1997). Racial differences in physical and mental health: Socioeconomic status, stress, and discrimination. *Journal of Health Psychology, 2*, 335-351.
- Wong, C. A., Eccles, J. S., & Sameroff, A. (2003). The influence of ethnic discrimination and ethnic identification on African American adolescents' school and socioemotional adjustment. *Journal of Personality, 71*, 1197-1232.
- Ying, Y. W., & Han, M. (2006). The effect of intergenerational conflict and school-based racial discrimination on depression and academic achievement in Filipino and American adolescents. *Journal of Immigrant and Refugee Studies, 4*, 19–35.
- Zimmerman, M. A., & Arunkumar, R. (1994). Resiliency research: Implications for schools and policy. *Social Policy Report: Society for Research in Child Development, 8*, 1-17.

Table 1. Number of Participants who Reported 1 or More Perceived Reasons for Discriminatory Treatment.

# of Reasons	<i>n</i>
1	65
2	61
3	59
4	53
5	18
6	13
7	4
8	2

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

Table 2. Frequency of Discrimination Experiences Reported for Participants Holding Specific Social Identities.

Social Identity Status	<i>n</i>	Mean	<i>SD</i>
Asian	55	14.80	5.23
Black	87	16.52	6.24
Latino	34	13.97	4.96
White	77	14.64	5.40
Multiracial	64	14.83	5.62
Man	98	16.23	5.68
Woman	221	14.62	5.53
Non-binary	2	17.50	9.19
Above 200% Poverty	168	15.30	5.46
At or Below 200% Poverty	149	14.85	5.73
Non- Sexual Minority	287	15.03	5.49
Sexual Minority	32	16.16	6.83
Christian	138	15.47	5.92
Non-Christian	183	14.88	5.40

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

Table 3. Percent of Students Reporting Perceived Reasons for Discriminatory Treatment by Social Identity Status.

Social Identity	Reasons reported for experiencing perceived discrimination											
	Ethnicity (%)	Gender (%)	Race (%)	Age (%)	Height (%)	Skin Color (%)	Sexual Orientation (%)	Weight (%)	Income/Education Level (%)	Religion (%)	Disability (%)	Other (%)
Asian	35	31	51	40	11	16	5	20	25	7	0	5
Black	31	40	63	26	7	60	3	15	12	5	0	7
Latino	24	35	32	38	18	24	9	35	26	12	0	0
White	5	39	4	46	13	3	5	19	21	13	0	15
Multiracial	15	32	22	49	13	18	2	16	19	19	0	7
Man	22	10	30	30	11	23	6	12	21	10	0	11
Woman	22	47	39	42	11	29	3	21	19	12	0	7
Non-binary	0	100	0	50	0	0	50	50	0	0	0	0
Above 200% Poverty	17	38	35	44	13	29	4	18	18	12	0	9
At or Below 200% Poverty	29	35	39	35	10	27	5	20	21	9	3	8
Non- Sexual Minority	23	38	38	41	12	30	1	19	22	12	0	8
Sexual Minority	18	32	35	35	6	18	29	27	9	9	0	12
Christian	24	41	39	38	12	32	3	18	17	18	0	7
Non-Christian	21	32	33	39	10	23	5	20	21	6	5	9

Table 4. Proportion of Participants who Reported Participation in Each Extracurricular Activity.

On-campus extracurricular activity	<i>n</i>	%
Division-one athletic team	9	3
Intramural sports/fitness organization	72	21
Community service organization	123	36
Foreign language organization	12	4
Sorority or fraternity	48	14
Academic/honors society	10	3
Cultural/racial/ethnic organization	103	30
Political organization	19	6
LGBTQ organization	5	2
Career development organization	34	10
Religious organization	79	23
Music, arts, or theatre organization	45	13
Other	43	13

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

Table 5. Means, Standard Deviations, and Correlations of Primary Study Variables.

	Response Range	M	SD	2	3	4	5	6	7	8	9
1. T1 STS	0 - 2400	1894	202	-0.11*	0.11*	0.12*	0.35**	-0.18**	0.14**	-0.07	0.21**
2. T1 Extraversion	1 - 5	3.19	0.89	-	-0.08	0.03	-0.08	-0.06	0.19**	-0.28**	-0.03
3. T1 Male	-	31%	-	-	-	-0.04	-0.03	0.13*	-0.06	-0.17**	-0.05
4. T1 White	-	24%	-	-	-	-	0.11	-0.05	-0.08	-0.08	-0.02
5. T1 GPA	0 - 4	3.13	0.51	-	-	-	-	-0.15**	0.11*	-0.12*	0.47**
6. T1 PD	0 - 36	15.13	5.63	-	-	-	-	-	-0.07	0.23**	-0.02
7. T1 ECAI	0 - 5	1.83	1.13	-	-	-	-	-	-	-0.18**	-0.02
8. T2 Depressive Symptoms	0 - 60	11.30	9.71	-	-	-	-	-	-	-	-0.14*
9. T3 GPA	0 - 4	3.29	0.58	-	-	-	-	-	-	-	-

Note. PD = Frequency of Perceived Discrimination.
 ECAI = Extracurricular activity involvement. GPA = Grade
 point average. STS = Standardized test scores. *p < .05 **p <
 .01

DISCRIMINATION, MENTAL HEALTH, AND ACADEMIC PERFORMANCE

Table 6. Results of Analyses Testing Direct and Indirect Effects of Perceived Discrimination, Extracurricular Activity Involvement, and Their Interaction Term on T3 GPA via T2 Depressive Symptoms.

Outcome Variable	Independent variables	Standardized Coefficient	SE	t	p
T2 Depressive Symptoms	T1 Extraversion	-0.21	0.06	-3.52	0.00
	T1 White	-0.21	0.14	-1.56	0.12
	T1 Male	-0.45	0.12	-3.60	0.00
	T1 STS	0.01	0.06	0.22	0.82
	T1 GPA	-0.10	0.06	-1.60	0.11
	T1 PD	0.18	0.06	3.17	0.00
	T1 ECAI	-0.18	0.06	-3.02	0.00
T3 GPA	T1 Extraversion	-0.03	0.06	-0.46	0.65
	T1 White	-0.25	0.13	-1.98	0.05
	T1 Male	-0.01	0.12	-0.06	0.95
	T1 STS	0.13	0.06	2.11	0.04
	T1 GPA	0.45	0.06	7.78	0.00
	T2 Depressive Symptoms	-0.13	0.06	-2.14	0.03
	T1 PD	0.07	0.06	1.32	0.19
	T1 ECAI	-0.11	0.06	-1.91	0.06

Note. Bootstrap sample size = 10000. *p < 0.05 **p < 0.01 ***p < 0.001

STS = Standardized test scores. GPA = Grade point average. PD = Frequency of perceived discrimination. ECAI = Extracurricular activity involvement