

Alberto F. Cabrera
Amaury Nora
JE Patrick T. Terenzini
Ernest Pascarella
Linda Serra Hagedorn

Campus Racial Climate and the Adjustment of Students to College

A Comparison Between White Students and African-American Students

Benefits associated with a college degree are multiple. From a societal standpoint, a college graduate is far less likely to commit a crime and approximately 30% less likely to be unemployed compared to a student who has simply earned a high-school diploma (Hossler, Braxton, & Coopersmith, 1989; Pascarella & Terenzini, 1991). From an individual perspective, each additional year of schooling past high school seems to prolong life by 0.4%, or nearly 2 percentage points, upon graduation from college (Hossler, Braxton, & Coopersmith, 1989). Moreover, earning a college degree is known to produce greater gains in occupational prestige (e.g., Lin & Vogt, 1996) and economic returns (e.g., Leslie & Brinkman, 1986) as compared to simply attaining a high-school diploma.

A precondition for the attainment of these benefits is persistence to graduation. Although persistence rates have remained remarkably stable at roughly 45% as far back as 1885 (Tinto, 1982; Porter, 1990), there are notable variations when the ethnicity of the student is introduced. Com-

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Alberto F. Cabrera is an associate professor and research associate at the Center for the Study of Higher Education, The Pennsylvania State University; Amaury Nora is a professor in the College of Education, University of Houston; Patrick T. Terenzini is a professor and acting director at the Center for the Study of Higher Education, The Pennsylvania State University; Ernest Pascarella is Mary Louise Petersen professor of higher education in Planning, Policy, and Leadership Studies, University of Iowa; Linda Serra Hagedorn is an assistant professor at the Center for Higher Education Policy Analysis, University of Southern California.

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pared to White students, African Americans are 20% less likely to complete college within a six-year period (Porter, 1990). For every two White students who drop out in that time frame, three African Americans have departed from a postsecondary institution (Porter, 1990).

Several hypotheses have been advanced that may account for enrollment and persistence trends of minority students. Hauser and Anderson (1991) explored the extent to which declines in college participation rates could be attributed to changes in college aspirations and changes in high-school completion rates among African Americans. Tinto (1987) argued that overall differences in persistence rates between African Americans and non-minorities were primarily due to differences in their academic preparedness rather than differences in their socioeconomic backgrounds. Tinto contended that differences in ability arise from prior educational experiences at elementary and secondary school levels that tend to favor the educational achievement and persistence of non-minorities relative to minorities. Other researchers speculate these trends could be attributed to changes in the composition of federal financial aid packets and patterns of financing higher education exhibited by minority students (Mortenson & Wu, 1990; Olivas, 1985; Porter, 1990; St. John, 1994).

Exposure to a climate of prejudice and discrimination in the classroom and on campus has gained attention as the main factor accounting for differences in withdrawal behavior between minorities and non-minorities (e.g., Fleming, 1984; Hurtado, 1992, 1994; Hurtado, Carter, & Spuler, 1996; Smedley, Myers, & Harrel, 1993). The role of perceived discriminatory behavior on the maladaptive behavior of minority students to college has been scrutinized through two conceptualizations. The first approach relies on Student-Institution Fit models (Bean, 1990; Spady, 1970; Tinto, 1993) and views prejudice and discrimination as a factor interfering with a student's integration into his or her social and academic environments. A second, more recent approach uses transactional models of stress and coping behaviors as their theoretical premises (Muñoz, 1987; Smedley, Myers, & Harrell, 1993).

The transactional model (Muñoz, 1987; Smedley, Myers, & Harrell, 1993) regards experiences of racism and discrimination on campus as psychological and sociocultural stressors. Like other stressors, experiences of prejudice and discrimination are associated with psychological distress that can lead to the maladjustment of students at their respective institutions. Unlike other stressors, however, experiences of discrimination are considered unique in that they (a) are present only among minority students and (b) heighten the feeling of not belonging at the institution with spillover effect on a student's academic performance.

Proponents of the Student-Institution Fit perspective argue that intolerance toward the minority student plays a key role for explaining his or her maladjustment with the institution. When members of an institution are prejudiced about and discriminate against the morphological makeup, values, and ways of behaving associated with a particular subculture on campus, members of this subculture view this as lack of tolerance (Murguía, Padilla, & Pavel, 1991). This intolerance establishes a climate of racial prejudice and discrimination that permeates the interactions of the minority student throughout the campus (Hurtado, 1992, 1994; Hurtado, Carter, & Spuler, 1996; Loo & Rolison, 1986). This climate of prejudice and discrimination creates disincentives for the minority student to interact with non-minority students, faculty, and campus administrators (D. G. Smith, 1989). The resulting low involvement with the different campus communities, then, impinges on the minority's student cognitive and affective development as well as his or her decisions to persist in college (Fleming, 1984; Loo & Rolison, 1986; D. G. Smith, 1989, 1992; Tracey & Sedlacek 1984, 1985, 1987; Thompson & Fretz, 1991; Suen, 1983).

Despite advances in conceptualizations of this phenomena and an ever increasing research base, firm conclusions regarding the effect of discrimination and prejudice on the adjustment of students to college remain to be established. Scholars have been inconsistent in how they conceptualize and measure students' experiences and perceptions of prejudice and discrimination. Previous measures have included (a) adjustment problems with curriculum, support services, faculty, peers, and academic staff (Allen, 1988; Fleming, 1984; Nettles, Thoeny, & Gosman, 1986); (b) a lack of congruence between the minority student and the institution (Loo & Rolison, 1986; Suen, 1983); (c) global measures assessing racial tensions, perceived ability to communicate with students from other ethnic backgrounds, experiences of discrimination, perceived racial/ethnic tension, and degree of trust between minorities and campus administrators (Hurtado, 1992, 1994; Hurtado et al., 1996); and (d) ability to understand and cope with racism (Tracey & Sedlacek, 1987).

The lack of studies contrasting minorities with non-minorities is also problematic. Though there is support for the notion that perceptions of prejudice have negative impacts on student outcomes when the analysis focuses on a single minority group (e.g., Fleming, 1984; Hurtado, 1992; Hurtado et al., 1996), results are rather mixed when different racial and ethnic groups are studied simultaneously. Arbona and Novy (1990), for instance, failed to provide support for Tracey and Sedlacek's (1987) suppositions that noncognitive dimensions were predictive of college

grades and persistence for both African American and Hispanic students. Likewise, Nettles, Thoeny, and Gosman (1986) found that cognitive and noncognitive factors explained college academic performance not only for African Americans but for Whites as well. They noted that the intensity of the effects of cognitive and affective factors varied when the analyses were disaggregated by ethnicity, but the patterns of the effects themselves were remarkably similar for both minorities and non-minorities. More recently, Cabrera and Nora (1994) found that although minorities perceived more acts of discrimination and prejudice than Whites, these negative perceptions exerted mostly an indirect effect on their decisions to persist (Nora & Cabrera, 1996a). Moreover, perceived discriminatory behavior affected the social and academic adjustments to college among White students in a pattern similar to the one exhibited by minorities. Finally, Eimers and Pike (1997) reported that perceived racial discrimination had equivalent effects on intent to persist for Whites and minorities. Also, the authors found that both minorities and non-minorities undergo a college adjustment process remarkably similar. Only 2 of the 12 relationships hypothesized were found to be empirically different.

Objectives

This study examines the role that perceptions of prejudice and discrimination play within the adjustment to college processes of African American and White students in terms of four assertions in the literature. The first assertion claims that academic preparedness for college is one of the main factors accounting for differences in persistence behavior between African American and White students (Tinto, 1987, 1993). The second assertion claims that successful adjustment to college involves severing ties with family and past communities (Tinto, 1987). The third assertion rests on two interrelated claims: (a) perceptions of prejudice and discrimination are unique to minorities and (b) persistence decisions among minorities are shaped primarily by exposure to a climate of discrimination. The final assertion claims that current models of college adjustment fail to capture minorities' collegiate experiences (Tierney, 1992).

Methodology

Data sources

The sample was selected from incoming first-year students at 18 four-year colleges and universities that participated in the National Study of

Student Learning (NSSL), a large longitudinal investigation of the factors influencing student learning and personal development in college. Institutions were selected from the National Center on Education Statistics IPEDS data base to represent different colleges and universities nationwide on a variety of characteristics, including type and control, size, location, and the ethnic distribution of the undergraduate student body. In aggregate, the student population of those 18 institutions approximated the national population of undergraduates in four-year institutions by ethnicity and gender.

The subjects in this study consisted of 1,454 students (1,139 Whites and 315 African Americans) attending four-year institutions in the fall of 1992. Although the original sample was comprised of all students enrolled at four-year institutions ($N = 2,416$), appropriate sample sizes were attained only for two ethnic groups. Several procedures were employed to secure a representative sample of students. To avoid confounding effects due to type of institution attended, only four-year students were included. Next, based on college transcripts, only those students with enrollment status information and grade point averages were retained. Several researchers have warned against the use of self-reported student information, particularly as it pertains to family income, enrollment status, and academic performance (e.g., Adelman, 1998; Cabrera, Stampen, & Hansen, 1990).

The Model

Construct definitions, item development and measurement models were based on the Student Adjustment Model (Nora & Cabrera, 1996a) and the Perceptions of Prejudice-Discrimination Model (Cabrera & Nora, 1994). The Student Adjustment model proposes that the experiences of the student at his or her institution are reflected in two domains: a social domain encompassing experiences with other students and faculty (but of an informal nature), and an academic domain reflecting experiences with faculty, other students (but of an academic nature), and academic staff. Because these experiences have been found to enhance the affective and cognitive development of the student, the model posits that students undergo academic and intellectual development, become more involved in a healthy socialization process, feel more committed to attaining a college degree, and develop a sense of belonging at and commitment to their institutions. Commitments to an institution are also expected to be enhanced to the extent the student perceives his or her institution as instrumental in the attainment of valued outcomes such as socioeconomic benefits (Tinto, 1987).

Gains in academic and intellectual development are expected to exert

a positive influence on three major student outcomes: academic performance during the first year, commitment to the institution in which they are enrolled, and commitment to the attainment of an undergraduate degree. If these outcomes are achieved during the first year in college, students are more likely to continue attending their institutions (Tinto, 1987, 1997). Based on theoretical frameworks by Tinto (1987, 1993) and Bean and Metzner (1985), the model further presupposes that academic and social experiences are interdependent: positive experiences in one domain are conducive to positive experiences in the other. Support for this interrelationship is provided by Stage (1989), Cabrera, Castañeda, Nora, and Hengstler (1992), and Cabrera, Nora, and Castañeda (1993).

The model further hypothesizes that a student's precollege academic ability has a direct influence on the academic performance of the student, his or her academic and intellectual development during the first year in college, and the decision to reenroll in the coming academic year. Precollege academic abilities not only impact the potential to do college work but also the motivation to engage in such work itself (Tinto, 1993). Furthermore, precollege ability is posited as having a direct influence on the persistence of the student and exerting a stronger effect for African Americans than it has for non-minorities. This hypothesis is consistent with Tinto's (1987) proposition that preparation for college may be particularly critical for persistence decisions among African American students.

The model regards parental encouragement as facilitating the transition of the student to college. Moreover, it exerts a positive influence on a student's educational aspirations and on her or his decision to persist in college. These hypothesized relationships are consistent with several college persistence models (e.g., Bean, 1990; Bean & Vesper, 1992, Cabrera, Nora, & Castañeda, 1993; Nora, 1987), the occupational attainment literature (Sewell & Hauser, 1980), and recent research (Cabrera et al., 1993; Nora, Cabrera, Hagedorn, & Pascarella, 1996). The conceptual framework also posits that parental support and encouragement may covary with a student's precollege academic ability. Research on occupational attainment indicates parental encouragement tends to be positively associated with a student's ability (Hossler, Braxton, & Cooper-smith, 1989).

Perceptions of racial prejudice and discrimination on campus and in the classroom are expected to have a direct impact on withdrawal decisions, while at the same time affecting a student's academic performance and his or her social and academic experiences at the institution. Moreover, these perceptions lessen commitments to both the institution

and to the goal of college completion. These hypotheses are consistent with several perspectives regarding the nature of the maladjustment of minority students at predominantly White institutions (e.g., Fleming, 1984; Hurtado, 1992, 1994; Hurtado et al., 1996; Loo & Rolison, 1986; Smedley, Meyers, & Harrell, 1993; Suen, 1983). In Fleming's (1984) student developmental model, for instance, exposure to prejudice and discrimination on campus is viewed as one of the most important factors impinging on the cognitive growth (i.e., academic performance, critical thinking) and the affective development of minority students. Models by Tracey and Sedlacek (1984, 1985, 1987), Suen (1983), and Loo and Rolison (1986) regard racially related experiences in college as one of the main explanatory variables accounting for differences in persistence and academic performance between minorities and non-minorities. D. G. Smith (1989, 1992), building on Astin's (1984) involvement postulates, argues that perceptions of prejudice and discrimination operate on the cognitive and affective development of minorities by discouraging them from becoming involved with faculty, students, and campus organizations. As a result of this isolation in the classroom and in student-related activities, the minority student is more likely to be deprived of the opportunity to learn new skills and concepts. A transactional model by Smedley, Myers, and Harrell (1993) regards experiences of racism and discrimination on campus as a psychological and sociocultural stressor that can lead to the maladjustment of the minority student at the institution. Like other stressors, experiences of racism and alienation are associated with psychological distress and poor academic performance.

Recent research seems to support some of these propositions. Hurtado, Carter, and Spuler (1996) have reported that discriminatory experiences had a dampening effect on Latino students' commitments to the institution.

Constructs and Measures

Persistence. The dependent variable for the study was the student's persistence decision. This measure was dichotomous in nature. Students who reenrolled in the fall of 1993 were coded as "1". Those who voluntarily withdrew between the end of the spring 1993 semester and the beginning of the fall 1993 semester were classified as "0".

Precollege academic ability. Students' self-reported high-school grade point averages were used to provide measures of this construct. Participating institutions did not provide information on SAT/ACT scores and high-school grade point averages.

Parental encouragement. This construct was measured via an item assessing the extent to which the student felt that his or her family pro-

vided encouragement to continue attending the institution. This item was drawn from Cabrera et al. (1992).

Perceptions of prejudice-discrimination. Four items were employed to measure this construct. These items gauge the extent to which the student (a) heard negative words about minorities while attending classes, (b) believed students were prejudiced against minorities, (c) observed discriminatory words, behaviors, or gestures directed at minority students, and (d) thought that instructors treated all students the same regardless of race. These items were adapted from the campus/racial climate scale (Cabrera & Nora, 1994) and were consistent with research showing that questions appraising actual witnessing of acts of prejudice and discrimination are highly predictive of the adjustment process to college among both minorities and non-minorities (i.e., Eimers & Pike, 1997; Nora & Cabrera, 1996a).

Academic experiences. The Interactions with Faculty scale developed by Pascarella and Terenzini (1980) provided the means for measuring students' academic experiences. The scale consisted of six items assessing the nature and quality of the interactions of students with faculty. Support for the use of this scale is further provided by Nettles, Thoeny, and Gosman (1986), who reported that measures gauging students' perceptions regarding the quality of their interactions with faculty were more predictive of academic performance for both African Americans and Whites than measures assessing the actual frequency of interaction between faculty and the student.

Social experiences. A single scale (Interactions with Peers), also developed by Pascarella and Terenzini (1980), provided a measure of the social involvement of students at their respective institutions. This scale consisted of five items measuring overall satisfaction with the social life of the student at campus, ease in making friends, and the influence such relationships had on the intellectual growth of the student. Evidence of the predictive validity of this scale can be found in Bers and Smith (1991), and Cabrera et al. (1992), among others.

Academic and intellectual development. Perceived gains in learning-related and cognitive skills were assessed via items developed by Pace (1979) and constructs established by Nora, Cabrera, Hagedorn, and Pascarella (1996): (a) quantitative skills, (b) ability to think analytically, and (c) appreciation for fine arts. Evidence about the construct validity of these scales as they pertain to persistence can be found in Nora et al. (1996).

Academic performance. The cumulative grade point averages earned by the end of the spring 1993 semester (end of first year in college) were provided through institutional records.

Goal commitment. Commitment to program completion, a single item, was employed for this construct. Because this item was found to be highly skewed (most students expressing a high desire to complete their program of studies), the item was dichotomized. Consequently, this dichotomy conceptually reflected whether a student was highly committed to earning a degree (coded 1) or not (coded 0).

Institutional commitment. Importance of completing a college degree at the institution provided the measure for this construct. Distribution of the scores suggested a bipolar pattern. Accordingly, this item was measured dichotomously (1 if the student was committed to the institution, 0 otherwise).

All items were measured by means of Likert scales ranging from 1 (strongly disagree) to 5 (strongly agree). Scale scores were based on averages across respective items. Negatively worded items were recoded for consistency with other items in corresponding scales. Table 1 displays summary statistics and reliabilities for Whites and African Americans.

Data Analyses

Given the dichotomous nature of the dependent variable (persistence), PRELIS 2.02 (Jöreskog & Sörbom, 1988, 1993) was employed to compute the polychoric correlations. Following recommendations by Jöreskog & Sörbom (1988, 1993) the PRELIS program was also used to assess the extent to which violations to the assumption of multivariate distribution were present in the data. To correct for these violations, the

TABLE 1
Descriptive Statistics, Reliabilities, and T-Tests

Construct/Variable	Whites			African Americans			t-test
	Mean	SD	Alpha	Mean	SD	Alpha	
1. Precollege ability	5.038	0.812	—	4.578	0.710	—	11.06**
2. Parental encouragement	4.631	0.613	—	4.603	0.639	—	0.78
3. Perceptions of prejudice & discrimination	2.909	0.885	0.801	2.867	0.948	0.747	0.49
4. Academic experiences	3.519	0.699	0.836	3.513	0.719	0.809	0.14
5. Social experiences	4.121	0.779	0.847	3.924	0.763	0.759	4.55*
6. Academic & intellectual development							
A. Quantitative skills	2.110	0.776	0.861	2.359	0.763	0.818	-5.61**
B. Analytical thinking	2.717	0.610	0.759	2.793	0.631	0.790	-2.11*
C. Awareness of fine arts	2.307	0.647	0.754	2.367	0.647	0.756	-1.62
7. Academic performance	3.013	0.631	—	2.719	0.721	—	6.58*
8. Institutional commitment	4.162	0.970	—	4.078	1.018	—	1.46
9. Goal commitment	4.616	0.660	—	4.709	0.642	—	-2.55**

* $p < 0.05$. ** $p < 0.01$

asymptotic variance-covariance matrix was estimated and used in the estimation of the structural model. LISREL 8.02 (Jöreskog & Sörbom, 1993), by means of a weighted least square (WLS) solution, was used to estimate the structural model. Jöreskog & Sörbom (1993) recommend using the WLS solution, because it provides better estimates of the chi-square goodness-of-fit measures and standard errors whenever categorical data are involved and departures from normality are observed.

Several indicators were used to judge the goodness of fit of the model. These included the chi-square¹, the Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI)², the Root Mean Square Residual (RMR)³, and the type-2 Normed Fit Index⁴. Assessment of the goodness of fit of the model was also guided by a careful examination of standardized residuals, Q-plots of standardized residuals, modification indices, and individual parameter estimates. Because the model hypothesized directional effects among the constructs, one tailed *t*-tests were employed for assessing the statistical significance of the structural paths.

Results

Reliability coefficients for both Whites and African Americans indicated a high degree of consistency for the campus/racial climate scale. The Cronbach alpha coefficients for the two scales were 0.80 and 0.75 for non-minorities and African Americans, respectively (see Table 1). High reliabilities were also found for the rest of the scales across the two ethnic groups. These reliabilities ranged from 0.75 to 0.86 among Whites and from 0.75 to 0.82 among African Americans.

No differences were observed in perceptions of prejudice and discrimination between Whites and African Americans (*t*-test = 0.49, see Table 1). However, African Americans were slightly less likely to report positive experiences with peers than were Whites. Consistent with Tinto's (1993) assertion and past research (e.g., Nettles et al., 1986), African Americans entered into college with slightly lower precollege academic abilities than Whites. African Americans' academic performance in college was also slightly lower (see Table 1). On the other hand, African Americans reported more gains in quantitative and analytical skills and were more committed to the goal of college completion than were Whites. Both groups of students were equally committed to the institution, reported similar levels of encouragement and support from their parents, were comparably satisfied with faculty, and displayed similar gains in awareness of fine arts (see Table 1).

Tables 2 through 5 report the direct, indirect, and total effects of the variables on six cognitive and affective outcomes as well as on persis-

tence decisions. For African Americans the goodness of fit indexes were: chi-square = 97.11 ($df = 30$; p -value = 0.000), Adjusted Goodness of Fit = 0.97, RMR = 0.100, and NFI2 = 0.99. For Whites, these indicators were: chi-square = 137.71 ($df = 70$; p -value = 0.000), Adjusted Goodness of Fit = 0.97, RMR = 0.067, and NFI2 = 0.96. With the exception of the chi-square, all indicators of fit provide support for the model across the two ethnic groups. The stem leaf plots and the Q-plots of standardized residuals provided additional evidence on behalf of the model.

Academic Experiences

Parental encouragement and perceptions of prejudice accounted for 12% of the variance in African Americans' experiences with faculty (see Table 2). Whereas parental encouragement exerted a positive effect on these experiences, perceptions of prejudice and discrimination had the largest negative effect on African Americans' academic experiences. For Whites, parental encouragement and perceptions of prejudice accounted for only 3% of the variance observed. Both variables significantly affected Whites' experiences with faculty, but to a lesser extent than the effects observed among African Americans.

Social Experiences

Parental encouragement and perceptions of discrimination explained 6% of the variance in social experiences among African Americans (see Table 2). Though both variables exerted significant effects, results show that the social experiences of African American students were negatively dominated by perceptions of discrimination. For Whites, these two variables explained 8% of the variance in Social Experiences. Only parental encouragement was found to exert a significant effect among Whites.

Academic and Intellectual Development

Academic ability, parental encouragement, perceptions of prejudice, and academic and social experiences explained 25% of the variance in African Americans' academic and intellectual developments (see Table 3). The most important variables directly affecting African Americans' academic and intellectual development were: academic experiences, academic ability, and social experiences. Perceptions of discrimination exerted an indirect effect on this cognitive outcome. For Whites, these five variables accounted for 17% of the variance in academic and intellectual development. In order of importance, these factors were: academic and social experiences, parental encouragement, and academic ability.

TABLE 2

Direct, Indirect, and Total Effects on Academic Experiences and Social Experiences

Construct	Academic Experiences						Social Experiences					
	Whites			African Americans			Whites			African Americans		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
1. Academic ability	—	—	—	—	—	—	—	—	—	—	—	—
2. Parental encouragement	0.15**	—	0.15**	0.17**	—	0.17**	0.29**	—	0.29**	0.11**	—	0.11**
3. Perceptions of prejudice & discrimination	-0.09**	—	-0.09**	-0.29**	—	-0.29**	0.03	—	0.03	-0.20**	—	-0.20**
4. Academic experiences	—	—	—	—	—	—	—	—	—	—	—	—
5. Social experiences	—	—	—	—	—	—	—	—	—	—	—	—
6. Academic and intellectual development	—	—	—	—	—	—	—	—	—	—	—	—
7. Academic performance	—	—	—	—	—	—	—	—	—	—	—	—
8. Goal commitment	—	—	—	—	—	—	—	—	—	—	—	—
9. Institutional commitment	—	—	—	—	—	—	—	—	—	—	—	—
		$R^2 = 0.03$			$R^2 = 0.12$			$R^2 = 0.08$			$R^2 = 0.06$	

* $p < 0.05$. ** $p < 0.01$, one-tailed.

TABLE 3
Direct, Indirect, and Total Effects on Academic & Intellectual Development and Academic Performance

Construct	Academic & Intellectual Development						Academic Performance					
	Whites			African Americans			Whites			African Americans		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
1. Academic ability	0.11**	—	0.11**	0.28**	—	0.28**	0.39**	0	0.40**	0.47**	-0.02	0.45**
2. Parental encouragement	0.11**	0.08**	0.19**	-0.07	0.07**	0	0.02	0.01	0.03	-0.06	0	-0.06
3. Perceptions of prejudice & discrimination	0.04	-0.02**	0.02	-0.06	-0.12**	-0.18**	0	0	0	-0.05	0.02	-0.03
4. Academic experiences	0.30**	—	0.30**	0.33**	—	0.33**	—	0.01	0.01	—	-0.03	-0.03
5. Social experiences	0.12**	—	0.12**	0.14**	—	0.14**	—	0.01	0.01	—	-0.01	-0.01
6. Academic and intellectual development	—	—	—	—	—	—	0.05*	—	0.05*	-0.09	—	-0.09
7. Academic performance	—	—	—	—	—	—	—	—	—	—	—	—
8. Goal commitment	—	—	—	—	—	—	—	—	—	—	—	—
9. Institutional commitment	—	—	—	—	—	—	—	—	—	—	—	—
	$R^2 = 0.17$			$R^2 = 0.25$			$R^2 = 0.17$			$R^2 = 0.19$		

* $p < 0.05$. ** $p < 0.01$, one-tailed.

Academic Performance

Academic ability, parental encouragement, perceptions of prejudice, academic and social experiences, and academic and intellectual development accounted for 19% of the variance in African Americans' academic performance (see Table 3). Only prior academic ability was found to exert a significant effect on this cognitive outcome. Perceptions of prejudice did not have direct or indirect effects. For Whites, these six variables explained 17% of the variance in academic performance. As in the case of African Americans, only academic ability exerted a significant effect on this cognitive outcome.

Goal Commitment

Seventy-nine percent of the variance in African Americans' goal commitment was accounted for by parental encouragement, perceptions of prejudice, academic and social experiences, and academic and intellectual development (see Table 4). Only parental encouragement and academic and intellectual development exerted a significant effect. Parental encouragement dominated this outcome among African Americans. The effect associated with this variable was almost four times higher than the one exerted by academic and intellectual gains. Perceptions of discrimination exerted no direct or indirect effects on African Americans' goal commitment. Among Whites, these five variables explained 55% of the variance in goal commitment. As in the case of African Americans, the largest effect was exerted by parental encouragement. Unlike African Americans, perceptions of prejudice had a small but significant negative effect on Whites' goal commitment.

Institutional Commitment

Thirty-one percent of the variance in African Americans' attachment to the institution was explained (see Table 4). Exposure to a campus climate of prejudice substantially lessened African Americans' commitment to the institution. However, parental encouragement and positive academic experiences had the opposite effect. Prior academic ability, social experiences and gains in intellectual growth did not have a direct effect on African Americans' commitment to the institution. For Whites, these six factors explained 30% of the variance in institutional commitment. The largest effect was exerted by parental encouragement followed by perceptions of prejudice, social and academic experiences, and academic and intellectual development.

Persistence

Academic ability, parental encouragement, perceptions of prejudice, academic performance, goal commitment, and institutional commitment

TABLE 4

Direct, Indirect, and Total Effects on Goal and Institutional Commitments

Construct	Goal Commitment						Institutional Commitment					
	Whites			African Americans			Whites			African Americans		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
1. Academic ability	—	0.02	0.02	—	0.05**	0.05**	0.05	0.01	0.06*	0.01	0	0.01
2. Parental encouragement	0.65**	0.05**	0.70**	0.88**	-0.05	0.82**	0.31**	0.09**	0.40**	0.30**	0.02	0.32**
3. Perceptions of prejudice & discrimination	-0.11**	-0.01	-0.11**	-0.09	0.06	-0.03	-0.21**	-0.01	-0.22**	-0.40**	-0.03	-0.43**
4. Academic experiences	0.11**	0.05**	0.16**	-0.20	0.06**	-0.14	0.15**	0.03**	0.18**	0.10**	0	0.10**
5. Social experiences	0	0.02**	0.02	-0.17	0.03*	-0.14	0.16**	0.01**	0.18**	-0.02	0	-0.02
6. Academic and intellectual development	0.17**	—	0.17**	0.20**	—	0.20**	0.10**	—	0.10**	0	—	0
7. Academic performance	—	—	—	—	—	—	—	—	—	—	—	—
8. Goal commitment	—	—	—	—	—	—	—	—	—	—	—	—
9. Institutional commitment	—	—	—	—	—	—	—	—	—	—	—	—
	$R^2 = 0.55$			$R^2 = 0.79$			$R^2 = 0.30$			$R^2 = 0.31$		

* $p < 0.05$. ** $p < 0.01$, one-tailed.

explained 56% of the variance in African Americans' decisions to persist in college (see Table 5). Decisions to persist were directly influenced the most by parental encouragement, followed by institutional commitment and academic performance. Perceptions of prejudice and discrimination and academic ability were found to exert only an indirect but large effect. These six factors explained 39% of the variance in decisions to persist among Whites. Unlike African Americans, White students' decisions to persist were dominated by college-related experiences. The largest effect was exerted by institutional commitment, followed by academic performance, academic ability, and parental encouragement. As in the case of African Americans, perceptions of discriminatory acts exerted only an indirect effect on this behavioral outcome.

Non-Causal Relationships

For both groups, the amount of parental encouragement was in direct proportion to a student's prior academic ability ($\phi = 0.42$ for African Americans and $\phi = 0.39$ for Whites). Results also indicated that only among Whites were academic and social experiences positively interrelated ($\psi = 0.14$).

Discussion

Limitations

Because this study uses Whites as a comparison group, it represents an improvement over previous research. Furthermore, the present study incorporates valid measures for constructs and uses a national sample. However, several limitations do constrain our ability to form strong conclusions regarding the role of perceptions of prejudice in the adjustment of African Americans to college. These problems pertain to the composition of the African American sample, the voluntary nature of the sample population, and the nature of the model tested.

The finding that African Americans have similar levels of perceptions of prejudice and discrimination as Whites is not only inconsistent with expectations, but with prior validations of the College Adjustment Model as well (Cabrera & Nora, 1994; Nora & Cabrera, 1996a). This problem stems from the fact that the majority of the African American sample (59%) was drawn from Historically Black Institutions, a subsample that exhibited significantly lower perceptions of discrimination and prejudice than their counterparts enrolled at predominately White institutions ($t = -5.6, p < 0.001$). Unfortunately, the small number of African Americans attending predominately White institutions (128) prevented us from disaggregating the analyses further. The voluntary na-

TABLE 5
Direct, Indirect, and Total Effects on Persistence

Construct	Persistence					
	Whites			African Americans		
	Direct	Indirect	Total	Direct	Indirect	Total
1. Academic ability	0.16**	0.12**	0.28**	-0.03	0.16**	0.14**
2. Parental encouragement	0.10**	0.19**	0.29**	0.52**	-0.10	0.43**
3. Perceptions of prejudice & discrimination	0.05	-0.09**	-0.05	0.15	-0.21**	-0.05
4. Academic experiences	—	0.08**	0.08**	—	0.07**	0.07**
5. Social experiences	—	0.07**	0.07**	—	0.02	0.02
6. Academic and intellectual development	—	0.06**	0.06**	—	-0.09	-0.09
7. Academic performance	0.24**	—	0.24**	0.39**	—	0.39**
8. Goal commitment	0.04	—	0.04	-0.27	—	-0.27
9. Institutional commitment	0.38**	—	0.38**	0.47**	—	0.47**
		$R^2 = 0.39$			$R^2 = 0.56$	

* $p < 0.05$. ** $p < 0.01$, one-tailed.

ture of the sample also compounds our concerns about the representativeness of the sample of African Americans. For both Whites and African Americans alike, we observed that their self-reported high-school GPA was slightly higher than that of the general population. In spite of these two limitations it is important to note that the results of our study are largely consistent with those few studies that compared collegiate experiences between Whites and minorities in general (Eimers & Pike, 1997; Nora & Cabrera, 1996a) and between Whites and African Americans in particular (Arbona & Novy, 1990; Nettles et al., 1986).

Our model presumes that perceptions of prejudice and discrimination are institution-based; however, our results are based on students drawn from several institutions embracing different conditions pertaining to curriculum, course requirements, faculty, academic staff, and experiences with peers. Although the multi-institutional characteristic of our study does raise internal validity questions, this approach has an important advantage over single-based studies: multi-institutional studies do provide for greater variability in each of the measures under consideration than do single-based studies, a feature that enhances the ability to conduct model testing (Braxton, Sullivan, & Johnson, 1996). As noted by Nettles, Thoeny, & Gosman (1986) multi-institutional studies also overcome a major problem associated with single-institutional studies: securing adequate sample sizes of minority students. In view of these limitations, however, we consider that this study should be regarded as exploratory of the role that perceptions of prejudice and discrimination have on the adjustment of African Americans to college.

Conclusions

This study examined four important contentions related to the adjustment of African American and White students to college. The first widely held notion is that academic preparedness at the time of high-school graduation is a key factor accounting for differences in persistence behavior between African American and White students (Tinto, 1987, 1993). A second fallacy is that a successful adjustment to college by all students involves severing ties with family and past communities (Tinto, 1987). The third is that minorities and historically discriminated groups, targets of racism and bigotry, are the only ones susceptible to discriminatory perceptions on campus and that college academic performance and even persistence decisions for these groups are shaped primarily by exposure to a climate of discrimination. The final contention is that current models of the adjustment of students to college fail to capture fully minority collegiate experiences (Tierney, 1992).

No support was found for the claim that academic unpreparedness ex-

plains why African Americans are less prone to persist than Whites. In reality, though African American students reported that they had less prior preparation for college than their White counterparts, prior ability exerted at most an indirect effect on their decisions to persist. Save differences in magnitude, factors affecting African American students were largely similar to those affecting White students' decisions to persist (see Tables 2 through 5).

Disengagement with family, friends, and past communities is not a precondition for the successful adjustment to college; the reverse appears to be more truthful. For both African American and White students parental encouragement and support facilitated the transition into the academic and social realms of the institution, enhanced commitments to both the goal of college completion and to the institution, and increased the likelihood to persist in college. It should be stressed how important a role encouragement and support from family play in the persistence behavior of African Americans, for whom encouragement outweighed the effect of college academic performance, a factor that the extant literature underlines as the main determinant of persistence decisions for this group (Tinto, 1993).

Perceptions that prejudice and discrimination exist in the classroom and on campus are not unique to African Americans. Both groups were equally likely to perceive a campus climate of prejudice and discrimination. Furthermore, exposure to this type of campus climate impinges on college-related outcomes regardless of the ethnicity of the student. With two notable contrasts, in that perceptions of prejudice affect goal commitments only among Whites and social experiences only among African Americans, the pattern of the effects is remarkably similar for both groups. What distinguishes one group from the other is the intensity of the effect and the role that perceptions of discrimination play on commitments to the institution. Whereas perceptions of prejudice and discrimination have the second largest direct effect on Whites' institutional commitment, exposure to a prejudiced campus climate clearly dominates African Americans' commitments to the institution.

African Americans' cognitive outcomes and persistence decisions are not primarily shaped by perceptions of discrimination and prejudice. For African Americans, gains in quantitative skills, analytical thinking, and appreciation of fine arts are dependent upon positive interactions with faculty, beneficial experiences with students, and prior academic ability. Their college academic performance is shaped primarily by prior academic ability, whereas persistence decisions are dominated by factors other than perceptions of discrimination and prejudice. In short, predictors of White students' cognitive and persistence outcomes are basically

the same as African Americans', a finding that is consistent with those few studies that examine differences in the adjustment process between minorities and non-minorities (Eimers & Pike, 1997; Cabrera & Nora, 1994; Nettles et al., 1986; Nora & Cabrera, 1996a).

The assertion that current conceptual models of college persistence are inappropriate for explaining persistence decisions among minorities (Tierney, 1992) was not supported. Significant variation on several African Americans' college-related outcomes was explained by the model (see Tables 2 through 5); furthermore, the model explained more variation on persistence decisions among African Americans than it did among Whites (56% vs 39%). Over fifty percent of the hypothesized interrelations among the variables for African Americans were also validated.

Implications

There has been much discussion on the merits of a diversified student body. Theories of adult learning, for instance, consider learning enriched and enhanced when an organization provides opportunities for its members to work with dissimilar others on an ongoing basis (Bandura, 1986). International management experts consider that for companies to compete successfully in an increasingly global market, a workforce whose values and ways of thinking transcend ethnocentric frameworks is a must (Pucik, Tichy, & Barnett, 1993). Hence, one criterion by which to judge institutional success is the extent to which colleges and universities prepare individuals to be tolerant of, if not open to, cultural diversity. To do so, however, colleges and universities need to maintain a culturally diverse student body with opportunities for positive contacts among all groups on a continuous basis.

Maintaining a vibrant and diversified student body presupposes understanding how Whites and minorities differ in their adjustment to college (Eimers & Pike, 1997). Our results indicate that minorities and non-minorities adjust to college in a similar manner. For both groups, persistence is determined by preparation for college, positive academic experiences, strong parental encouragement, and academic performance in college. For both groups, exposure to a campus climate of prejudice and intolerance lessens commitment to the institution and, indirectly, weakens decisions to persist. In view of this commonality it stands to reason that institutional policies and practices that address the students' *needs* rather than his or her *ethnicity* would be effective not only in fostering tolerance among students but in retaining all students, be they minorities or non-minorities.

Because of the negative effect that exposure to a prejudiced campus

climate brings to all students, our results suggest that broad-based policies and practices need to be implemented. One intervention method that appears most promising is education. Vogt's (1997) comprehensive review on tolerance led him to conclude that prejudice and discrimination are rooted in misconceptions rather than in personality traits. Because stereotypes can be overcome through information, college administrators can effectively diffuse racial tension on their campuses by creating a climate that fosters tolerance among students, faculty, and staff. Cultural awareness workshops, multicultural education in the curriculum, collaborative learning classroom practices, faculty training on cultural diversity, and culturally sensitive hiring practices are some of the strategies that can be used to enhance tolerance (Banks, 1993; Cabrera & Nora, 1994; Hurtado, Milem, Clayton-Pedersen, & Allen, 1998; Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1996; Vogt, 1997). Cabrera and Nora (1994) recommend specificity when they suggest reducing acts of discrimination in college classrooms rather than addressing the campus climate as a whole. Targeting discriminatory behaviors at the classroom level has the advantage of being more easily monitored and addressed than dealing collectively with student perceptions. As noted by Pascarella et al. (1996), classroom-based intervention strategies need not be long in duration. Pascarella et al. (1996) found that even attending a one-day cultural awareness workshop enhanced students' openness to diversity. Moreover, classroom-based activities need not rest solely on a specialized curriculum on diversity. Chavez and Castañeda (1998) found that intervention strategies can be incorporated as part of the general curriculum. These researchers found that involving first-year business majors in experiential exercises based on sampling and discussing the cultural background of ethnic food enhanced their tolerance toward other groups.

Our results indicate that the adjustment to college by all students represents a complex process that links a student's motivations, attitudes, and abilities with institutional features. Enrollment management strategies patterned after this complex process would be more than likely successful. Unfortunately, most efforts that address negative campus climates are all but comprehensive. As noted by Hurtado et al. (1998), most diversity policies seek to increase the number of minorities based on the naive notion that interaction among ethnic groups would evolve naturally. However, merely increasing the number of minorities on campus without the benefit of a well thought out strategy is inherently dangerous; research on school desegregation shows that discrimination and racial tensions climb as the proportion of minorities to Whites increases (Blalock, 1982; A. W. Smith, 1981a, 19881b; Vogt, 1997).

One promising approach to overcome the problem of racial tensions is the notion of building learning communities in the classroom (Tinto, 1997). Tinto noted that the classroom is instrumental in promoting the academic and social integration of students. His studies indicate using practices that bring students together and providing a means for communication and interaction help to create a situation where learning is enhanced and acceptance of differences is cultivated. Moreover, Tinto believes that these positive attitudes will spill over to student interactions outside of the classroom.

Another promising approach rests on Vogt's (1997) recommendation of using cooperative learning as a way to further the growth of tolerance. At the core of Vogt's recommendation lie Allport's (1954) five principles for successful interaction among people from different ethnic backgrounds. Collaborative learning approaches meet three of the five conditions: (a) individuals collaborate rather than compete, (b) equal status among participants is promoted, and (d) the focus of the group effort is directed at solving projects.

Finally, Nora and Cabrera (1996b) note that support and encouragement in different forms and from different sources are compelling in their influence on a number of cognitive and non-cognitive outcomes. Nora and Cabrera (1996a) tested the impact of perceptions of discriminatory behavior as detractors of academic and social integration, as stressors negatively influencing academic achievement, and as instigators of withdrawal decisions. Although the effects of racist remarks and bigoted behavior exerted negative effects on all constructs, encouragement and support from significant others negated the deleterious impacts of perceived prejudice and discrimination. Words of encouragement and gestures of support by faculty and teaching assistants have also been found to positively affect student performance (grade point averages) and decisions to reenroll in college (Nora & Cabrera, 1996b; Nora & Wedham, 1991).

Notes

¹The practice of relying on the chi-square as the sole criterion of model selection has been questioned in view of its sensitivity to sample size variations (see Bollen, 1989; Marsh, Balla, & McDonald, 1988). Instead, the literature suggests model selection be based on a careful examination of the overall pattern suggested by multiple measures of goodness of fit (for example, Bollen, 1989; Castañeda, 1993; Mulaik, et al., 1989).

²The GFI and the AGFI are measures of the relative amount of variance and covariance jointly accounted for by the model under consideration. The AGFI differs from the GFI by adjusting for the degrees of freedom. Values close to or above 0.90 signify a good fit (see Bollen, 1989).

³The RMR represents a measure of the average residuals when the covariances or correlations produced by the model under consideration are subtracted from the observed covariance or correlation matrix. Values of 0.10 or less indicate that the model yielded a close approximation of the data (see Bollen, 1989; Gerbing & Anderson, 1993).

⁴The NFI-2 or incremental normed fit index (Bollen, 1989) has been found to be less sensitive to sample variations (Anderson & Gerbing, 1988). Values close to or above 0.9 signify that the model represents a plausible representation of how the variables are associated to one another.

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