EXAMINING CAMPUS AND STUDENT FACTORS THAT PREDICTED ACADEMIC PERFORMANCE AND INTENTION TO PERSIST FOR SUCCESSFUL AFRICAN AMERICAN AND LATINO STUDENTS AT FOUR-YEAR COLLEGES.

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This study examined the relationship of campus climate, institutional satisfaction, and academic adjustment in contributing to the academic performance and intentions to persist in college for successful African American and Latino students at traditional four-year colleges. Despite the dramatic increased enrollment of students of color in higher education, colleges’ strategies have failed to effectively and meaningfully increase the graduation rates for African American and Latino students (NCES, 2011).

A national sample of responses on the Your First College Year survey (N = 5,559) was analyzed to describe the experiences and variables that contributed to perceptions of college campuses and academic outcomes for African American and Latino students. Methods included Exploratory Factor Analysis, Linear Regression Analysis, and Logistic Regression Analysis. Results identified the significance of: (a) Felt Discrimination on Campus; (b) Academic Self-Efficacy; (c) Sense of Belonging; and (d) Institutional Satisfaction on the academic performance and intentions to persist for respondents. This research is extremely timely because the outcry for more U.S. citizens with college credentials must include educational attainment for greater numbers of African American and Latino college students.
Conclusions of this study suggest that colleges must understand and accept: (a) the needs of its changing demographics; (b) that African American and Latino students have unique needs; and (c) addressing those needs and expectations will increase student satisfaction, academic performance, and retention. Furthermore, discrimination continues to be pervasive on college campuses. Genuinely combating micro-aggressions on campus is essential to fostering a sense of belonging for students of color.
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Concerns regarding the low rate of higher education degree attainment for African Americans and Latinos in the United States have reached a heightened state of alarm in recent years, in part due to the national push to increase the number of Americans with college degrees and changing funding formulas for public colleges and universities. According to the U.S. Department of Education, for several decades the enrollment and degree attainment rates for African Americans and Latinos between the ages of 18 to 24 at four-year institutions have considerably lagged behind those of their White and Asian peers (National Center for Educational Statistics [NCES], 2010, 2011). While demographic data can effectively highlight a problem, nevertheless, fails to provide sufficient information to develop effective means to increase graduation rates for students of color. Furthermore, higher education has had a heightened focus and dedicated resources to increase retention and degree attainment for nearly all students for over 30 years with no measure impact on the graduation rates for African American and Latino students. Studies that analyzed demographic educational data are prevalent in the literature and are addressed later in this chapter. The myopic focus on demographic factors that correlate with negative educational outcomes fails to acknowledge educational environment’s influence on student outcomes. Furr and Elling (2002) suggested that numerous factors (beyond demographic characteristics) can influence graduation rates and Hall (1999) found that the factors contributing to degree attainment
differed by racial/ethnic-group. Yet, several authors have argued that little research aims to identify the factors most relevant to influencing the persistence and graduation rates for students of color (Grier-Reed, Ehlert, & Dade, 2011; Longerbeam, Sedlacek, & Alatorre, 2004).

Institutional focus on persistence and graduation rates has become a national priority and fiscal imperative. In the wake of President Obama’s 2009 State of the Union Address, where rapidly increasing the number of U.S. citizens with college degrees by 2020 was set as a national agenda (Carey, 2009; Hebel & Selingo, 2009; Kelderman, 2009), colleges and universities began scrambling to implement policies and practices believed to influence graduation rates (Ensign, 2010). In 2010, 17 states agreed to develop plans to increase graduation rates in higher education to set yearly graduation goals, and to publicly report state and institutional progress on set goals (Nelson, 2010). The Lumina Foundation set a goal for 60% of Americans to hold college degrees and credentials by 2025, requiring that 23 million more degrees be conferred. Faced with decreased state revenues and an increased scrutiny on the cost-effectiveness of higher education (Hoover, 2011), many states have modified their state funding formulas to increase the significance of graduation rates rather than enrollment rates. The State Higher Education Executive Officers (SHEEO) reported that 32 states used graduation or retention rates as one of several indicators of performance for higher education institutions (Jacobs & Archie, 2008). Current trends suggest that the importance of graduation rates on state funding for public institutions will become more substantial, contributing to the pressure for institutions to increase the persistence and graduation
rates of all students, particularly for the increasing number of African American and Latino students in higher education whose academic and socio-cultural needs may continue to be unmet by traditional campus services.

**Demographic Changes in Higher Education**

U.S. higher education has experienced significant demographic changes since the 1970s when the most prevalently-applied college student retention models were first developed. The NCES (2010) reported that the total number of undergraduate student enrollment in degree-granting institutions in the United State rose from 9.42 million in 1976 to 17.56 million in 2009, an increase of 86.0%. The increasing enrollments of historically under-represented non-White racial/ethnic-groups contributed considerably to the reported increase in enrollments. LaVant, Anderson, and Tiggs (1997) suggested in recent years that colleges and universities have placed unprecedented emphasis on recruiting students of color. Pascarella and Terenzini (1998) reported a 61% increase in undergraduate racial minorities in the early 1990s compared to only a 5.1% increase in White students. The increase of all U.S.-recognized non-White racial/ethnic-groups increased from 1.53 million in 1976 to 6.27 million in 2009, an increase of 309.8% and a total undergraduate enrollment distribution gain of nearly 20 percentage points. In the 2009 undergraduate college enrollment figures, African American students (at 2.58 million) and Latino students (at 2.36 million) comprised 79.8% of the non-White racial/ethnic students and 28.1% of the total undergraduate enrollment. African American and Latino college students are the most rapidly increasing groups in higher education, undeniably changing the demographic profile of college campuses (Adams,
Higher education in the 21st century serves a much broader demographically diverse population today than it served 40 years ago. Multiple sources agree that demographics in higher education will continue to diversify; colleges and universities will serve increasing numbers of racial/ethnic minorities and invisible minorities such as first generation students, immigrants, sexual orientation minorities, and students with disabilities (Keller, 2001; NCES, 2010; Reason, 2009; Woodard et al., 2000). Reflecting this demographic shift, a broad range of literature has segmented higher education into various social groups and categories. Nunez (2009), Maramba (2008) and Gloria, Castellanos, and Orozco (2003) examined how new or emerging ethnic-groups in the U.S. perceived their cultural fit and obstacles to higher education in America. While all non-White racial/ethnic-groups have made considerable gains in higher education enrollment given the sizable increased enrollment of African American and Latino students and its implications for higher education, these two racial/ethnic-groups have overwhelmingly received the majority of the attention by educational researchers, administrators, and practitioners.

**College Student Retention and Persistence**

Higher education constantly experiences the daunting and many times cyclical exercise of converting student retention theory into programs and policies aimed at increasing the national college student persistence rate and affirmatively rectifying inequities in the graduation rates of historically underrepresented groups. These retention
models heavily reinforced and promoted services to students that could easily assimilate and be accepted into the longstanding campus culture, customs and traditions. Oseguera, Locks, and Vega (2009) defined student retention as the outcomes of institutional efforts to maintain its matriculated student cohorts through graduation, whereas persistence is the outcome of individual student behavior and decisions to obtain a degree. As such, a student can be described as not retained or persisted, retained by an institution and persisted to graduation, or not retained by an institution but persisted at another institution. Cherry and Coleman (2010) indicated that educators have written about retention and the factors that may influence college student persistence for more than 30 years.

College student retention and persistence to graduation is a concern for all institution types. Colleges and universities in the U.S. experienced an average departure rate of about 25% for all first year students (Braxton, 2000; Tinto, 1993), and the NCES (2011) reported that only about 25% of college graduates earning a bachelor degree will be retained by the first college they attended. Jacobs and Archie (2008) suggested that the reasons that students leave college and how institutions may retain students to graduation are complex phenomenon, further complicated by varying institution type, campus culture and resources, and student demographics.

The NCES (2012) reported that from the 2004 student cohort approximately 58% of first-time, full-time students attending four-year bachelor institutions obtained a bachelor’s degree at their first institution within six-years of enrolling in college, with noticeable variations in graduation rates by institution type, gender, and race/ethnicity.
Private non-profit institutions had the highest graduation rates at 65%, followed by public institutions at 56% and private for-profit institutions at 28%. The six-year graduation rate for female students (at 58%) continued to outpace the graduation rate of male students (at 53%). By race/ethnicity, the six-year graduation rates of Asian students (at 69%) and White students (at 62%) remained considerably higher than Hispanic students (at 50%), and Black and American Native American students (at 39%). These statistics represent the percentage of students that were retained by their first institution of enrollment but did not reflect students who chose to persist after transferring to another institution. The national low graduation rate is one part of the institutional retention and college student persistence challenge that has motivated many institutions to actively develop programs and initiatives to increase institutional retention and students’ persistence to degree decisions (Braxton, Hirschy, & McClendon, 2004; Cherry & Coleman, 2010; Furr & Elling, 2002; Oseguera et al., 2009; Pan, Guo, Alikonis, & Bai, 2008).

**Importance of Focusing on African American and Latino Students**

Despite the dramatic increased enrollment in students of color in higher education, the graduation rates for African American and Latino students remain alarmingly low when compared to the national average and other groups in college. Many college retention, academic services, and campus culture initiatives have made only superficial attempts to acknowledge the educational needs and expectations of African American and Latino students. According to the NCES (2011), in 2009, African American and Latino college students consistently graduated at a rate of about 20 percentage points less than their White and Asian peers. Among the 2000 to 2007
college student cohorts, the four and six-year graduation rates for African American
students were 20.7% and 40.7%, and graduation rates for Latino students were slightly
higher at 26.5% and 48.8% (NCES, 2011). In comparison, the four and six-year
graduation rates for White students were noticeably higher at 39.7% and 60.4%, and the
graduation rates for Asian students were 42.9% and 67.1% (NCES, 2011). The disparity
in graduation rates by race and ethnic identity suggest that there are institutional or
socio-cultural factors that are disproportionately impacting the degree attainment for
African American and Latino college students, and identifying and understanding those
factors may contribute to culturally-specific interventions that would considerably
improve the national graduation rate.

The graduate rates for male students across all racial/ethnic-groups were less than
their female group-specific peers, while the apparent racial/ethnic educational attainments
gap remained consistent. The four and six-year graduation rates for African American
males were 14.9% and 34.5%, respectively, and the graduation rates for Latino males
were 22.1% and 44.3%. As a result, the graduation rate for male students, particularly
African American male students, has received critical attention in the form of research
and institutional interventions such as all male learning communities, enrichment
programs, and formal faculty/staff mentoring programs for male students (Cuyjet, 2006;
Harper, 2005; Thompson, Gorin, Obeidat, & Chen, 2006). Conversely, the low
graduation rates of Latino males have not received an equal amount of attention despite
its second to the lowest statistic after African American males. Longerbeam et al. (2004)
suggested that while college retention has been studied in general, the lack of research on
the persistence of Latino students and the increasing disparity in graduation rates for Latino students have elevated the importance of retention and graduation rates for Latino students in the United States. The student outcome data strongly suggest the need to examine the factors relevant to the persistence of African American and Latino students, as well as their relative sex sub-groups.

Compounding the issue, in addition to the low graduation rates, African Americans and Latinos are still largely underrepresented in higher education relative to their representation in the general population. The Center for Urban Education was specifically formed to analyze and develop interventions to overcome the disparities in higher educational attainment that are experienced by African Americans and Latino college students (Bensimon, 2004, 2006; Bensimon, Dowd, Daniels, & Walden, 2010; Harris & Bensimon, 2007). The low college participation and graduation rates for African Americans, particularly at predominately White institutions, have been well documented (Adams, 2005; Fleming, 1984; Grier-Reed, Madyun, & Buckley, 2008; Harper, 2005; Hausmann, Schofield, & Woods, 2007; Hughes, 1987; LaVant et al., 1997; Rodgers & Summers, 2008; Thompson et al., 2006). Latinos are the fastest growing segment in the U.S. population, experiencing a 57.9% increase between 1990 and 2000 (Longerbeam et al., 2004) and a 43% increase between 2000 and 2010 (U.S. Census Bureau, 2011) but continue to be underrepresented in the number of college graduates compared to their college enrollment rates (Arana, Castañeda-Sound, Blanchard, & Aguilar, 2011; Castillo et al., 2006; Garcia & Bayer, 2005; Oseguera et al., 2009). The research that examines the demographic data for African Americans and Latino students
resoundingly agrees that these two populations are faced with double jeopardy regarding higher education; that is, low enrollment rates and low graduation rates for those who do attend college.

The precarious outlook on higher education for students of color has led several researchers and scholars to advocate for more research on the factors that increase degree attainment for African American and Latino college students. There are numerous criticisms of existing college retention research as it relates to students of color, including the suggestion that the existing foundational knowledge and models used to guide college student retention interventions were not developed with the current college student profile in mind (Pascarella & Terenzini, 1998; Reason, 2009) and that the guiding methodology for many studies are distracted by the practice of comparing minority groups to White students or predominately White institutions to historically African American and Latino-serving institutions (Adams, 2005). Bensimon (2004, 2006) and the Center for Urban Education developed the Diversity Scorecard, later evolved into the Equity Scorecard, to provide institutions with a process for examining the disparities in educational outcomes for African American and Latino students compared to White and Asian students. The goal of the Equity Scorecard was to achieve equal outcomes across racial/ethnic-groups by eliminating institutional barriers, but it did not attempt to identify factors that may be unique to a cultural groups’ academic success (Bensimon et al., 2010). Few studies aimed to examine the impact of campus experiences as a factor that promotes academic success for students of color; independently of how those factors pertain to the majority student group.
In the last decade, an increased acceptance that there are various pathways for degree attainment and that some factors may be more relevant to one cultural group versus another has led to an urgent call for research on the individual and cultural experiences that have contributed to academic success for students of color. Arana et al. (2011) suggested that statistics that indicate Latino students are not obtaining undergraduate and bachelor degrees at a rate relative to their representation in traditional colleges revealed the need to examine factors that influence the college persistence and graduation rates of Latino students. Lang (2002) suggested that predominately White institutions, which enrolled the majority of students of color, continued to minimize the importance of social and psychological needs of African American students, relying instead on the general perception that African American student attrition was attributed to academic preparation and financial concerns. Understanding the factors that most contributed to the success of students of color and how those factors related to the culture of higher education would better equip students of color to productively adapt to the college environment (Grier-Reed et al., 2011).

**Statement of the Problem**

Research has neglected to provide higher education administrators and practitioners with the student persistence and degree attainment factors that are most relevant to increasing the graduation rates of students of color, and therefore higher education is either ill-equipped or unwilling to develop effective interventions or transform the culture of higher education to that where all students could be successful. Researchers have confirmed that the traditional and most relied upon academic
performance measures (e.g., ACT/SAT scores and high school GPA) used to predict college academic performance failed to distinguish between African Americans who persisted in college versus those who did not persist and had less predictive power with students of color than White students (Furr & Elling, 2002; Young & Rogers, 1991). Demographic data analysis of factors that are beyond a student’s control (e.g., race/ethnicity, gender, quality of K-12 education, parent’s education level, and parent’s socioeconomic status) have been shown to correlate with obstacles to degree attainment but do not offer any insight into effective strategies that promoted academic success despite the circumstances in which one was born. Furthermore, interventions that started from a deficit foundation inadvertently assume that marginalized groups have lower success rates due to lack of motivation, under-preparedness, and limited financial resources, while ignoring how institutionalized policies and practices may have provided an advantage to one group while disadvantaging other groups. As such, the most common higher education framework for viewing the educational outcomes of students of color has been to focus on factors that have contributed to academic failure rather than to analyze and to identify factors that have contributed to persistence and college degree attainment.

A few institutions that have applied culturally-specific interventions have demonstrated that colleges can effectively increase the academic performance and retention rates of students of color. Nguyen, Bibo, and Engle (2012a, 2012b) reported findings that highlighted improvements in the graduation rates and narrowed the graduation gaps of Latino and African American students at four-year institutions. The
importance of these reports is in challenging sentiments that closing graduation rate gaps and increasing degree attainment for students of color are unattainable goals and that increasing the national graduation rate of college students at four-year institutions is only possible through more selective admissions criteria. The overall bachelor graduation rate in the U.S. improved by 3.3% points from 2004 to 2010, whereas Latino graduation rates increased by 3.5% points (Nguyen et al., 2012b, p. 2), but African American graduation rates were reported to be stagnant over the same time period (Nguyen et al., 2012a, p. 2). Nguyen et al. reported that 40% of Latino students (2012b, p. 2) and 60% of African American students (2012a, p. 2) are concentrated in colleges that have experienced no improvement in their graduation rates. Despite these somewhat modest gains, several institutions have been able to overcome the national inertia and have experienced significant improvements with regards to the graduation rates of African American and Latino college students.

Higher education is faced with the daunting challenge of changing institutional culture from simply a provider of higher educational opportunities to a relationship of deliberate engagement to achieve degree attainment for all. This would require colleges to shift from programs and policies that advantage a diminishing racial majority and become more informed of the variations in the pathways that lead to student success. Two reports published by Nguyen et al. (2012a, 2012b) highlight many public and private colleges as “Top Gainers” in improving graduation rates or “Top Gap-Closers” in narrowing the disparities in graduation rates between minority and majority-group students without decreasing access to the institution. Many institutions are listed as “Top
Gainers” and “Top Gap-Closers” for both African American and Latino students, which suggests that it is possible to create student success policies and programs that are inclusive of students from various backgrounds and particularly that there may be similarities in the factors contributing to the success for both African American and Latino students.

Higher education as a whole should look to the institutional leaders that have reformed, and developed effective programs and strategies to enhance the academic performance and persistence of African American and Latino students. Stony Brook University, University of Kansas, Virginia Commonwealth University, and Texas Tech University were reported to have implemented institution-wide comprehensive programs that achieved notable improvements in graduation rates for both African American and Latino students (Nguyen et al., 2012a, 2012b). Similarly, entire state systems such as the University System of Georgia and the California State University System were highlighted for achieving substantial gains in graduation rates while serving a wide range of students (in terms of pre-college preparation and cultural background) and increasing access to higher education for students of color. The problem for scholarly researchers is to identify the factors that have most contributed to the specific success for African American and Latino students at those institutions in order to most efficiently develop future programming and institutional practices.

Purpose Statement

The purpose of this study was to examine the relationship of campus climate, institutional satisfaction, and academic adjustment in contributing to the academic
performance and expressed intention to persist in college (and retention) for academically successful African American and Latino students at traditional four-year colleges in the United States. The U.S. Department of Education, as well as several scholarly sources, highlighted the low college participation and graduation rates for African American and Latino students relative to other racial/ethnic-groups (NCES, 2010, 2011). Yet, a preoccupation with the obstacles and challenges that many students of color face is an ill-fated obsession for producing strategies that will lead to educational success. While much of the available literature on college persistence focused on the high rates of educational attrition and associated factors of educational failure for African American and Latino college students, few researchers have focused on the factors that contributed to academic success and intentions to persist for this population.

This study has analyzed an existing anonymous national dataset, gathered by the Higher Education Research Institute at the University of California Los Angeles, to examine African American and Latino student responses on the *Your First College Year Survey*. The principal researcher was specifically interested in identifying factors and items on the survey that had a significant and predictive relationship with academic performance and an expressed intention to continue in college at the end of a student’s first year of college. This study defined academic performance in terms of grade point average (GPA) but recognized that the full spectrum of academic performance and learning achievement could not be entirely measured by course grades. The researcher also examined students’ college enrollment intentions for the preceding year. The goal of the study was to identify factors that had a positive influence on academic success and
intentions to persist for African American and Latino college students. Understanding these factors would theoretically better inform student success programming and higher education practitioners.

**Significance of the Study**

Higher education attainment is an imperative in order for individuals to achieve a rewarding career and to pursue a life of purpose and meaning. Cardoza (1991) suggested that educational attainment is one of the most important means to gain socioeconomic mobility for minorities in society. Careers that provide economic and social security in the middle class commonly require a college degree. According to the U.S. Census (2011), the number of all minority racial and ethnics groups in the U.S. population is growing at a faster rate than that of Whites. Latino Americans, the largest minority group at 16.3% of the U.S. population, reported a 43.0% population increase from 2000 to 2010, and African Americans, the second largest minority group at 12.6%, reported a 12.3% increase from 2000 to 2010, compared to a national population increase rate of only 9.7% (U.S. Census, 2011, p. 4). Despite the increased representation of African Americans and Latinos in the general U.S. population over that period, each group only experienced about a 5.8% increase in college enrollment (NCES, 2010), and their graduation rates have remained relatively flat (NCES, 2011). As the profile of the U.S. population and colleges becomes increasingly diverse, higher education must abandon antiquated notions of who can be successful in college and pursue novel knowledge that appreciates the diverse backgrounds and pathways that students use to successfully navigate college.
This study should enhance the body of student success literature that is representative of the aggregated experiences of college students but that often fails to reflect and appreciate unique experiences and realities of students of color. The objective was to identify factors with a significant relationship with academic success and persistence for African American and Latino college students. The practical application of the results will be to better inform student success programming and higher education practitioners to meet the educational support needs of African American and Latino students from an appreciative perspective. Cherry and Coleman (2010) insisted that higher education has the challenge and desire to balance both the retaining of students through graduation and the maintaining of high standards for academic performance. For far too long there has been a focus on identifying the factors that contribute to African American’s and Latino’s failure in education and that suggested that institutions ought to either accommodate such factors (which leads to degrading the quality of education) or to provide additional support to help students overcome their shortcoming (which perpetuates a flawed deficit model mentality). The principal researcher recognized that African Americans and Latinos have strengths and experiences that are frequently overlooked and devalued in education and formalized institutions. This study aimed to examine the unique strengths and experiences of African American and Latino students to identify a set of factors that if appropriately applied can be used to develop strategies that enhance and improve the educational outcomes of African American and Latino college students.

The intended audience for this study was student affairs practitioners with the goal of providing them insight into interventions and campus programs for student persistence
inform student persistence. Student affairs practitioners develop generalized programming with the majority of students in mind to have the greatest reach and impact on campus, but such programming overwhelmingly (and in many cases unintentionally) caters to the needs, sensibilities, and interests of White students. After such programming is implemented, practitioners often agonize as to why students of color are not receiving the same benefits from the programs as White students, without realizing that the programming was not deliberately developed with students of color in mind. This study aimed to highlight the necessity for student affairs practices to learn the specific and unique needs of African American and Latino students on their campus and to have those needs guide programming designed for students.

Another intended audience was higher education administrators with the goal of counteracting the current trend of directing students with low standardized test scores to community colleges as a different but similar educational option or a pathway to future admissions into a four year college. These initiatives are bullish and assume that one-size-fits-all, which negates decades of educational research on the reliance of different groups of students on different strategies and indicators that predict academic successful. These obstacles to enrollment at four-year institutions are intended to increase the graduation rates by directing students where they are believed to be most successful. Unfortunately, these initiatives overwhelmingly affect students of color negatively by directing a significantly higher proportion of them to community colleges, despite evidence that ACT/SAT scores are a poor predictor of academic success for African American and Latino students. While the quality of academic preparation is relevant to student success,
institutional complacency with programs and policies known to ineffectively equally meet the needs of both the majority population on campus and students of color constitutes a social injustice. Failing to promote the academic and social success of all students (beyond simply celebrating diversity) is contributing to the U.S. student departure challenge. This research aimed to inform higher education administrators of campus environmental factors that have an influence on students of color and of proven successful strategies that enhanced the graduation rates of African American and Latino students. This research is explicitly opposed to the implementation of institutional policies that perpetuate a two-tier separate and unequal higher education system.

Lastly, this study has examined the impact of race/ethnicity and sex identity in higher education outcomes in the post-President Obama society. Many individuals, including faculty, staff, administrators, and students across races, hold beliefs that racism is a thing of the past and therefore minimize the possibility of educational obstacles related to race or socio-cultural minority status. Some individuals who subscribe to this ideation have at the foundation of their beliefs the misguided phenomena of the model minority myth and deficit models that blame those who are systematically disadvantaged for the entirety of their circumstances by not conforming to the dominate culture or possessing attributes that are somehow innately inferior (Bensimon, 2006). By focusing on successful African American and Latino students, this study has provided current insights on the significance of race and ethnicity on the experiences of minority college students.
Theoretical Frameworks

Research and literature on the retention and departure of college students have largely been dominated by an interactionalist theoretical perspective for nearly five decades. The collective works of sociologist Vincent Tinto (1975, 1987, 1993, 1996), and to a lesser extent Alexander Astin (1964, 1975, 1984), have widely been accepted and utilized as the foundation for understanding college student departure by higher education administrators, practitioners, and researchers (Bean & Eaton, 2000; Oseguera et al., 2009; Reason, 2009; Rendón, Jalomo, & Nora, 2000). A substantial portion of the literature and research on college student retention revolves around Tinto’s Student Integration Model, which has been the subject of numerous quantitative research analyses (as indicated by Rendón et al., 2000).

A simple search in Academic Search Complete returned an astonishing 1,418 peer-reviewed academic articles when searching on the terms, “College Student Retention AND Tinto OR Astin,” compared to similar searches on other notable retention and persistence researchers such as Bean which returned only 40 articles, Hurtado returned 15 articles, Tierney returned 10 articles, and Bensimon returned three articles. Over the past decade, due in part to the changing demographics of higher education and inequity in persistence rates between racial groups (Bensimon, 2004, 2006), there has been a growing sentiment that Tinto’s and Astin’s interactionalist models are outmoded with a considerable need to develop new college student retention models that represent the diversity and complexity of the contemporary college student population (Braxton, 2000; Keller, 2001; Pascarella & Terenzini, 1998; Reason, 2009). The following review of
college student departure theoretical frameworks will focus on the two longstanding interactionist models: Astin’s (1975) Theory of Involvement and Tinto’s (1975) Student Integration Model. Additionally, Bean and Eaton’s (2000) Psychological Model of College Student Retention potentially has greater conceptual applicability to a multicultural and highly diverse college student population.

The prevalence of Tinto and Astin referenced articles in the existing literature suggests that no review of the topic would be complete without first acknowledging their influence on the understanding of college student departure. Astin’s (1975, 1984) Theory of Student Involvement stressed that active participation in student life (including sports, student organizations, and leadership activities) and academic activities were crucial to a student’s developing a commitment to the institution and establishing close relationships with peers, faculty, and staff. Astin posited that highly involved students would spend more time on campus, would interact more frequently with faculty and other students, and would be more focused on their academics. In turn, student engagement programming and surveys (such as the National Survey of Student Engagement) suggest that more involved students are significantly more likely to be retained, and ultimately graduate from college (Pike, 2013).

Tinto’s (1975) Student Integration Model implied that students who become highly integrated into the social and academic culture of an institution are less likely to depart from college prematurely and are more likely to be academically successful. Tinto’s later revisions to the model acknowledged that students enter college with existing demographic and cultural characteristics that might vary significantly from the
institution (Tinto, 1993, 1996). Nevertheless, the Student Integration Model stressed that
the institutional culture was static, whereas individual student’s success and retention was
highly dependent on the student’s ability to adjust to the norms, expectations, and
traditions of the institution in order to achieve institutional integration. The Student
Integration Model has been reported to be a valid predictor of student departure (Braxton,
Sullivan, & Johnson, 1997; Jacobs & Archie, 2008; Pan et al., 2008). Despite the striking
similarities between Astin’s and Tinto’s theories of student departure, Tinto’s model
ultimately has become the most extensively referenced model of student departure for
several decades (Braxton, 2000; Jacobs & Archie, 2008).

With the wide utilization of new student orientation programs, summer bridge
programs, and first-year experiences courses are possibly the most readily application of
the Student Integration Model. Tinto’s (1975) model and Astin’s (1975) theory both
indicated that as students become increasingly integrated, more involved, and more
committed to both academic and social elements of a university, they are less likely to
decline to leave college. Pan et al. (2008) stated that the theoretical foundation for all
prolonged college orientation programs and retention initiatives such as intrusive
advising, academic assistance, first-year experience (FYE), social integration (including
residence halls programming and learning communities), and general campus orientation
is based on the college student departure work of Tinto (1975) and Astin (1975).

The fundamental objective of orientation and retention programs is to recognize
the preexisting characteristics (and possibly the deficits) of first-year students to better
assist their adjustment into the type of students who are more likely to be successful at a
given institution. Several longitudinal studies that have examined the influence and effectiveness of first-year experience programs and intervention programs (academically and socially focused) have agreed that such program enhanced college persistence and academic success, although given the inconsistency in designs, it remains unclear what elements of these programs most contribute to student retention (Cherry & Coleman, 2010; Furr & Elling, 2002; Grier-Reed et al., 2011; Pan et al., 2008). Notwithstanding, Pan et al. (2008) stated that results of a longitudinal multilevel study of college success intervention programs “confirmed Tinto’s (1993) statement that involvement in social and intellectual life of a college helps learning and persistence in college” (p. 97).

**Criticism of the Student Integration Model.** Despite the wide acceptance of the Student Integration Model and Theory of Student Involvement for nearly 50 years (Reason, 2009), there has been growing criticism in the literature regarding the application of Astin’s (1975) and Tinto’s (1975) seminal works as the foundation for studying and describing student retention in higher education for all students. Reason (2009) summarized the sentiments of several authors by asserting that the wide acceptance of Tinto’s model stagnated the understanding of student retention and persistence at a time period prior to a rapid change in the demographics of college students (a perspective also expressed by Braxton, 2000; Keller, 2001; Pascarella & Terenzini, 1998). Criticism of Tinto’s model largely argued that the *integration* implied in the model and theory is rooted in an assimilationist bias, suggesting that students of color and students with cultural heritages other than that of the majority American culture would need to forego their cultural identity and be assimilated by the dominant cultural
group on campus in order to be retained and successful in college (Hurtado & Carter, 1997; Oseguera et al., 2009; Rendón et al., 2000; Tierney, 1992). Additionally, Braxton et al. (1997) found internal consistency problems among institutions and within the same institution and in both residential status and gender and suggested that, as higher education becomes more diverse, the model becomes increasingly less reliable. The following section discusses the criticism of Tinto’s Student Integration Model and the model’s applicability to students of color and other marginalized student groups.

The primary criticism of the Student Integration Model is its assimilationist framework, which is in stark contrast to many higher education institutions’ goals to increase multicultural competencies and capitalize on the rich diversity currently on college campuses. Rendón et al.’s (2000) chapter on the theoretical considerations of minority college student retention highlighted the mounting body of criticism regarding the applicability of Tinto’s model in appreciating the retention and persistence variables for historically underrepresented college students. Tinto’s model has been described as a social interactionalist model, such that the only pathway to sustainable membership and identify infusion for students is to become incorporated into the existing social and academic environment (Hurtado & Carter, 1997; Kraemer, 1997; Oseguera et al., 2009; Rendón et al., 2004; Tierney, 1992). Rendón et al. (2000) suggested that the assimilation nature of the model perpetuated social sentiments prevalent in the 1960s whereby minority groups were blamed for any experience of poverty or societal alienation. Furthermore, the believed cause for most social, educational, and economic inequities
affecting minority groups was because of their refusal or inability to fully assimilate into and adopt the dominate culture.

During the period when Tinto’s model was constructed minority characteristics were viewed as pathological—systemic to the problems of social inequities (Braxton, 2000). In the assimilationist framework, the only path to academic and career success for students of color was to disconnect from their cultural heritages, languages, and epistemologies and ultimately to be judged on their ability to adopt the dominate culture’s social norms. The expectation of full assimilation for all students, without regard to students’ cultural realities or institutions’ willingness to address systemic problems that place some groups at a distinct disadvantage, is at the core of many criticisms of Tinto’s Student Integration Model (Bensimon, 2004, 2006; Hurtado, 1997; Rendón et al., 2000). Numerous contemporary researchers have observed that the majority of student transition and involvement theories were constructed around the norms of White male students and, as such, advocated for the development of new models that accurately reflected the unique and significant factors important when describing the retention and persistence experiences for students of color in higher education (Braxton, 2000; Braxton et al., 2004; Hurtado, 1997; Metz, 2004; Pascarella & Terenzini, 1998; Rendón et al., 2000).

Researchers have made attempts to apply Tinto’s model to non-White college students. Studying the persistence of African American graduate students, Merriweather Hunn (2008) examined the application of Guiffrida’s (2006) cultural sensitivity enhancements of Tinto’s model and found that the modified model still failed to capture
the importance of some factors affecting why minority students left institutions, such as the need to develop relationships with individuals on campus rather than the institution or departments as an entity, maintaining relationships with communities outside of campus as a source of motivation, encouragement and support, and effectively coping with the perceived level of racism on campus. Burley, Butner, Causey-Bush, and Bush (2007) studied African American graduates’ opinions of and attachment levels to their alma mater and found opinions not to be highly favorable regarding their affiliation (membership) and prior experiences with their college, contradicting the nation that in order to be successful, students must also experience high levels of social and academic integration with an institution.

The one-size-fits-all approach to theoretical models on college student retention may have to give way to conducting demographic-specific research to describe and appreciate the complexities of a multicultural student population. Despite attempts to apply Tinto’s model to a diverse population, given the demographic changes in higher education, Pascarella and Terenzini (1998) stated that it is essential that future research be based on inclusive and representative samples of the diversity that currently exists in higher education. Student persistence models developed since Tinto’s (1975) model continue to fall short of appreciating the experiences of students of color in part because the models either attempt to modify Tinto’s original model (normed on White males), assume the retention factors most relevant to students of color are similar to those for majority students, or become overly focused on comparing and contrasting students of color to White students. The most logical and less explored remaining path is to examine
the factors most relevant to persistence of students of color, utilizing a research approach or neutral foundation that is unrestricted and unlimited by existing models where the experiences of students of color historically have been marginalized, if not all together absent from the aggregate.

**Alternative retention theories and models.** Mounting criticisms of existing assimilationist college student departure models have sparked the generation of alternative models that strive to overcome the limitations of Tinto’s model and to be more reflective of the current diversity in higher education. Cerna et al. (2009) provided a theoretical perspective for Latino student retention that focused on forms of social capital that influenced degree attainment, rather than the barriers to degree attainment. The factors that Cerna et al. examined as influencing persistence for Latino students included (a) the reasons given for attending college and for choosing their selected institution, (b) the attributes of one’s academic and career-related goals and values, (c) determining the most important factors attributed to their degree attainment, and (d) the forms of capital (e.g., economic, human, social, and cultural) utilized by Latino college students who have earned a bachelor’s degree.

Tierney’s (1993, 2004) Intervention Model proposed the need for systematic academic and developmental support for increasing the numbers of under-prepared students who are enrolled in higher education. Tierney discussed that under-prepared students contribute considerably to the college departure rate in the United States, therefore, providing interventions such as summer bridge programs, student success courses, and developmental programs is essential for increasing the retention rate of
college students. Supporting Tierney’s advocacy for more college student intervention programs, in a longitudinal study Pan et al. (2008) reported that 22.54% of the variance in retention and 17.93% of the variance in cumulative GPA was attributed to the participation in a student success/intervention program (p. 95). Braxton et al. (2004) recommended that to increase persistence and retention rates among racial and ethnic minorities that colleges must strive to (a) achieve and maintain a critical mass of minority student enrollment, (b) create an environment that appreciates the cultural values of different racial and ethnic-groups, and (c) adapt the Intervention Model proposed by Tierney which emphasizes affirming students’ identities and a sense of belonging, rather than assimilating students into the college environment.

Bean and Eaton (2000) provided the structure for a psychological framework that described the process by which students decide to depart from college. Bean and Eaton discussed that college departure is highly complicated (involving the values and experiences that students have before enrolling in college and students’ experiences and responses to the college environment), which is not as simple as the one-directional interactions proposed by Tinto. Oseguera et al. (2009) suggested that Bean’s (1982) original model begin a much-needed shift in the conceptual explanation of college student departure, and Rodgers and Summers (2008) found Bean and Eaton’s (2000) model useful in describing the persistence and academic performance of racial and ethnic students of color. Bean and Eaton’s model demonstrated an appreciation for the unique experiences of students of color and therefore was the theoretical model subscribed by this study.
**Bean and Eaton’s psychological model of college student retention.** The Psychological Model of College Student Retention (PMCSR), first proposed by Bean (1982) and further developed by Bean and Eaton (2000), incorporated four psychological concepts into a unifying model that described college retention in terms of a process (factors that influenced academic decision-making) and a content (the institutional environment). To explain retention decisions, the PMCSR unified the effects of (a) how attitudes influence behaviors (Attitude-Behavior Theory), (b) the effectiveness of coping strategies to reduce stress (Coping Behavior Theory), (c) perceptions of one’s ability to perform specific tasks (Self-Efficacy Theory), and (d) the extent that one recognizes personal responsibility for individual outcomes (Attribute Theory: Locus of Control). Bean and Eaton believed that a persistent and successful college student would have attitudes that motivated him or her to be academically successful, applied effective strategies to cope with stress experienced in college, perceived he or she had the aptitude to be successful academically based on prior academic success, and accepted accountability for his or her academic performance (rather than assigning academic performance to good or bad luck). The model explains student’s decision-making process after continuing at the college of choice, transferring to a different college or departing from college altogether (Cherry & Coleman, 2010; Rodgers & Summers, 2008).

Prior to the PMCSR, students were perceived as the only actor in college retention, whereas Bean (1982) initiated the shift toward colleges also having an implied responsibility or influence on student retention (Oseguera et al., 2009). Bean and Eaton
viewed departure from college as a psychological behavior and sought to describe how motivations and characteristics of students and perceptions of the college environment contributed to a student’s academic performance and decision to depart from college. Cherry and Coleman (2010) asserted that all persistence models since the 1960s have assumed persistence is the choice of students and do not address the set of circumstances in place when students are dismissed by colleges. Bean and Eaton (2000) suggested that the model does in part explain both voluntary and involuntary student attrition. Bean and Eaton acknowledged that the model is less applicable to academically underprepared students but also suggested that poor academic performance (low GPA even in high school) is often the product of low motivation in part due to low academic self-efficacy and personal expectations, negative attitudes towards an educational environment, and a resignation that one’s academic progress is beyond one’s control. According to Bean and Eaton, students develop attitudes towards college based on (a) the beliefs and psycho-socio attributes that students bring to campus and (b) the perceptions students form based on their interactions with a particular campus environment. Furthermore, Bean and Eaton suggested that there was a strong relationship between students’ attitudes about a particular college environment and the students’ academic performance and intentions to persist or depart from college. At the core of the PMCSR is the assumption that an affirming psychological orientation towards education and strategies to cope with stressful situations on campus is a better predictor of academic success and student retention than simply relying on fitting in on campus.
In an extensive review of student retention and persistence literature, Cherry and Coleman (2010) found that researchers have been writing about persistence and the factors that influence persistence for over 30 years, but few have focused on examining the unique experiences and factors that influenced persistence and retention for racial and ethnic minorities, noting that most research was grounded by theories and models largely formed around the experiences of White males (Braxton, 2000; Braxton et al., 2004; Hurtado, 1997; Metz, 2004; Pascarella & Terenzini, 1998; Rodgers & Summers, 2008; Rendón et al., 2000). Rodgers and Summers (2008) promoted the cultural relevance of PMCSR by discussing factors uniquely important to students of color, including establishing a sense of belonging, an expanded understanding of institutional fit, and the importance of developing a bi-cultural identity. Bean and Eaton (2000) concluded that the sociological environment of colleges is important, but, as psychological beings, students’ perceptions of the environment are of primary importance, whereas the sociological content is secondary. The absence of an assumed dominant group or cultural bias in the PMCSR provides a neutral foundation from which to examine the factors that influence college student retention decisions for students from various cultural backgrounds and those attending various institution types.

**Research Questions**

Understanding that students of color and White students would have different factors contributing to their academic success (Hall, 1999), this study was specifically interested in examining how campus and individual factors contributed to the academic performance and intentions to persist for African American and Latino students. Further,
it analyzed and identified constructs that had a significant relationship and predicted academic performance and intentions to persist for African American and Latino college students at four-year colleges and universities. Contrary to common college departure explanations for students of color that pointed to financial concerns and lack of academic preparedness (Lang, 2002), this study focused on aspects of student retention that were within the control of students and institutions. Therefore, the study aimed to answer the following research questions:

- What factors best explained variance in the data for African American and Latino students at four-year colleges and universities?
- What items in the data best predicted academic performance for African American and Latino students?
- What items in the data best predicted retention and persistence for African American and Latino students in good academic standing?
CHAPTER II
REVIEW OF THE LITERATURE

Introduction and Overview

This chapter reviewed the literature and topics that are critical in understanding the educational and socio-cultural landscape regarding persistence to graduation and academic performance for African American and Latino college students. The changing demographic profile of college students was explored, as well as the call for research to explore factors more relevant to the educational attainment of students of color. College student persistence models were examined for their appropriate applicability to a more diverse college student profile, including the Student Integration Model (Tinto, 1975), the Theory of Student Involvement (Astin, 1975), and the Psychological Model of College Student Retention (Bean & Eaton, 2000). Programs and services designed to increase college student persistence and retention were explored (Cherry & Coleman, 2010; Pan et al., 2008). Hall (1999) suggested that the variables that predict student success were different for White students and students of color; therefore, factors found to contribute specifically to the educational outcomes of students of color were examined. The goal of this chapter was to increase the reader’s understanding of the experiences and outcomes of students of color in higher education, as well as the programs implemented and factors found to increase the college persistence and academic performance of African American and Latino students.
General Student Retention Programming

Student retention literature examining institutional programming administered within the first or second year of college designed to increase student persistence, such as First-Year Experience (FYE) courses or Save Our Semester (SOS) interventions, suggests that such programs are generally effective at promoting behaviors that contribute to college student retention. The largest period of student attrition happens before a student’s sophomore year of college, which is why several authors have identified the freshman year as a critical period to influence a student’s decision to persist towards graduation (Levitz, Noel, & Richter, 1999; Murtaugh, Burns, & Schuster, 1999; Tinto, 1996). Pan et al. (2008) suggested that all college student retention programs were developed with a theoretical foundation based on Tinto’s (1975) Student Integration Model and Astin’s (1975) Theory of Involvement. Two recent research teams, Cherry and Coleman (2010) and Pan et al. (2008) studied the effectiveness of retention programming and concluded similar results.

Cherry and Coleman (2010) studied the influence a “Plan for Academic Success” program had on elevating the academic standing and retention of students faced with academic dismissal at a large public liberal arts college. This study specifically focused on examining academically at-risk students because Cherry and Coleman believed that all persistence models since the 1960s assumed retention was the choice of students, which does not address when colleges dismiss students. The “Plan for Academic Success” program was guided by Bandura’s (1986, 1997) theory of self-efficacy (the perception of one’s ability to be successful), which placed a high level of responsibility for
self-advocacy and accountability on the student to actualize the academic improvement plan. In the study, a total of 75 students (over the course of five years) who were subject to academic dismissal were given the opportunity to create a plan to rectify the conditions that led to their poor academic performance. Cherry and Coleman found that 82.65% of program participants achieved the required institutional GPA standard and were retained, 16% were not retained, and 1.35% (one student) withdrew from the college (p. 27). The researchers determined the “Plan for Academic Success” program was effective because the retention rate of those in the program (82.65%) was comparable to the college’s overall fulltime freshmen retention rate, which ranged from 81.2% to 83.5% over the period of the study (p. 28). The study clearly demonstrated that providing motivated students a second chance through creating a plan for success and setting improvement goals could be an effective method of raising academic performance and retention.

Pan et al. (2008) conducted a three-year longitudinal study on the impact of an intervention program on college student persistence and cumulative GPA. The sample included 1,305 full time students participating in one of 20 student success intervention programs offered at a large state university. The types of student success programs included advising, academic assistance, first-year experience courses, social integration, and general orientation. The study collected data on the retention rates for three fall quarters following the interventions and cumulative GPA over the same period. The results of the study found that 22.54% of the variance in retention and 17.93% of the variance in cumulative GPA could be attributed to the various student success programs (p. 95). Among the programs, a hierarchal linear modeling analysis revealed that the
academic-help programs significantly increased the retention rates for the first year, whereas the general orientation significantly increased the cumulative GPA of all participants. Additionally, for students in selective academic programs, the advising program significantly increased student retention, and the social integration programs were shown to significantly help retention and cumulative GPA. The study strengthened the case for early intervention programs and specifically highlighted the importance of academic support programs in increasing retention, the need for general orientation for all students to increase college GPA, and social integration programs to increase the GPA and retention of academically prepared students.

**Minority Student Retention**

Research that links together racial identity with educational and socioeconomic outcomes, without an egalitarian examination of the societal and cultural underpinnings of those relationships, fails to thoroughly comprehend and communicate the true significance of such longstanding intersections. According to a review of college student retention literature conducted by Reason (2009), ample literature has examined race as a predictor of college retention. Peltier, Laden, and Matranga (1999) reported that race has consistently shown to predict student retention for several decades. The concern with research that simply reports on the relationship between race and graduation outcomes is that such research fails to explore why a socially constructed classification is a significant predictor of student retention. Historically, many researchers have relied on factors that are beyond the influence of students (e.g., race, parents’ level of education, parents’ socio-economic status, gender, and the resources of their primary and secondary school
districts) to describe student retention trends. Besides sounding an alarm for several decades, such research has provided very little practicality for increasing the educational attainment for historically marginalized populations in higher education. Highlighting the decreasing relevance of race as a factor of retention, Murtaugh et al. (1999) reported that after taking into consideration other variables (e.g., age, country of residency, college major, high school GPA, first term college GPA, and participation in a freshmen orientation class), the significance and impact of race was determined to be immaterial. While first college term GPA was significant in predicting the college retention for both White and African American students, Hall (1999) found that White students and students of color had different variables that explained the variance in college retention rates.

The limitations to these studies are noteworthy but do not undermine the significance of the results. Similar to much research, these studies were limited to single institutions, and participant selection may not be generalizable to all groups. Nevertheless, the research confirmed the results of many student retention programs; that is, something (any thoughtful intervention) is better than nothing. Schlossberg’s (1989) concepts of “marginality versus mattering” stated that students have a need to feel that they matter at their college (such as being acknowledged, appreciated, and caring about their success and well-being). Schlossberg stressed that developing a sense of mattering and the belief in one’s own worth must precede full involvement in academic and social activities on campus. Applying the Mattering theoretical lens, it is possible that the simple act of having a program demonstrates a sense of caring and mattering to students,
which facilitates students’ personal investment in their academic careers. While the literature confirms that institutional programming can positively influence student retention, it remains unclear what elements of these programs are most effective at promoting student retention and persistence. Furthermore, it is also unclear why demographic characteristics, such as race and ethnicity, are routinely found to be a significant factor in the prediction of college student retention and persistence.

Despite greater access to higher education, disparities in graduation rates between racial groups in the United States continue to exist and suggest that, specifically, the influences on retention for under-represented populations are in particular need of further examination. Notable researchers have focused on the college retention rates and academic performance of African American students (Adams, 2005; Grier-Reed et al., 2011; Furr & Elling, 2002; Harper, 2005; Jacobs & Archie, 2008) and Latino students (Arana et al., 2011; Cardoza, 1991; Cerna et al., 2009; Longerbeam et al., 2004; Oseguera et al., 2009). Oseguera et al. (2009) provided a literature review that aims to highlight scholars who shed new information on retention theory for Latino students who summarize factors that specifically affect Latino students, and who bring forward promising practices for effectively retaining Latino students in higher education institutions. LaVant et al. (1997) authored a chapter which dealt with how mentoring intervention programs have been used in higher education to increase the educational success (retention and graduation rates) of African American males. The chapter outline includes defining the mentoring process, followed by discussing theoretical frameworks, mentoring applications at universities, and recommendations for implementing a
mentoring initiative. The authors suggested that higher education has a history of using mentoring as an educational enrichment tool for both graduate and undergraduate students (Jacobi, 1991). The Center for Urban Education, housed at the University of Southern California, is at the forefront of examining and eliminating institutional barriers that contribute to achievement gaps for African American and Latino students (Bensimon, 2004; Harris & Bensimon, 2007). The Equity Scorecard, developed by Bensimon (2004), provides institutions with a structure for disaggregating student outcome data and developing practices to decrease the achievement gap of African American and Latino students in higher education. Beyond campus climate studies (Rankin & Reason, 2005), only recently have researchers begun to equally apply the same rigor to examining the retention and campus experiences of both African American and Latino students (Nguyen et al., 2012a, 2012b).

When examining institutional, cultural, and social influences on college student retention, several authors stress the importance of disaggregating data by sub-groups to identify relevant factors and to develop effective interventions to meet the specific needs of different groups (Bensimon, 2004; Harris & Bensimon, 2007; Furr & Elling, 2002). Likewise, researchers generally agree that early identification of factors that influence college student retention and academic performance, accompanied with an appropriate intervention, is critical in enhancing the success of students of color in higher education. The following studies provide a brief review of the variables and programming that influences the retention rates and academic performance of African American and Latino college students. This body of literature is important historically because many studies
that have examined student retention variables have failed to disaggregate data analysis by race, often simply resulting in race identification as a predictive factor that impact college retention and persistence.

**Minority Student Retention Programs and Research**

Institutions have implemented a variety of programs over the years with the single objective of increasing the enrollment and graduation rates of African American and Latino college students. Oseguera et al. (2009) provided a general overview of many national programs designed to promote academic retention and success of students of color. The TRIO Program (also known as Student Support Services) proportionally serves a large percentage of students of color ranging from high school to college undergraduate. TRIO is a federal program that provides campuses with funding to offer academic development, financial assistance, counseling, and tutoring to first generation college students. Similar to TRIO, there are state-specific and institution specific multiyear enrichment programs that strive to strengthen the educational pipeline of academically qualified yet under-represented students, such as *Adelante* (sponsored by Miller Brewing Company and Hispanic Association of Colleges and Universities), the *Precollege Enrichment Opportunity Program for Learning Excellence (PEOPLE)* sponsored by the University of Wisconsin System), *Engaging Latino Communities for Education (ENLACE* sponsored by the W. K. Kellogg Foundation), and *Mathematics, Engineering, Science Achievement (MESA)*, an academic enrichment partnership between eight states convened to assist disadvantaged students. Because college campuses are often *uncharted territory* for a large number of students of color (Grier-Reed et al.,
many institutions offer Summer Bridge programs prior to fall enrollment as an opportunity for students of color to become acclimated to campus life. TRIO, Summer Bridge, and other enrichment programs typically include a range of programming activities that focuses on academic support, time management, study strategies, college expectations, and career counseling, all aimed at addressing many of the underpinning issues associated with the exclusion of students of color from higher education.

Unexpected cultural and social discomforts may continue to threaten the success of students of color once on campus; therefore, colleges are encouraged to provide interventions at least through the first year to mediate cultural, bureaucratic, and social obstacles for students of color. Jacobs and Archie (2008) discussed the need for students of color to develop a sense of belonging and to establish a sense of membership as an important factor in influencing persistence. Grier-Reed et al. (2011) suggested that faculty and staff should search for means to assist students in overcoming the initial cultural shock that is often experienced on predominately White campuses, thereby alleviating additional distractions and allowing the students to thrive in an unfamiliar cultural context that historically has disadvantaged students of color. Jacobs and Archie (2008) discussed several institutional programs established to connect Black male undergraduates with Black faculty members and staff as mentors to establish trust and gain students’ commitment through programs such as The Black Men’s Think Tanks at the University of Cincinnati, 100 African American Men at Washington State University, The Faculty Mentor Program at the University of Louisville, and The Meyerhoff Program at the University of Maryland, Baltimore County. Where institutions do not
have the luxury of a sizeable professional staff of color population, some institutions have relied on White mentors who have established a relationship built on helping students feel welcomed, respected, and supported prior to coming to campus, such as *The Bridge* at Georgia State University and *Project BEAM* (Being Excited About Me) at West Virginia University. Additionally, there are university programs that heavily rely on community and business leaders to serve as mentors for college students, such as *The Black Male Initiative* at Texas Southern University, the *Student African American Brotherhood* at Georgia Southwestern University, North Carolina Central University, the University of Texas at Austin, and Albany State University in Georgia. Many of these programs have expanded to or have been adopted by other institutions. Mentoring programs for underrepresented students are uniquely positioned to acknowledge and be attentive to the experiences of college students of color. The common thread among mentoring programs is the objective to facilitate students’ transition through a possibly unfamiliar and alienating environment to promote the campus as a nurturing, welcoming, and supportive environment and to help establish a sense of membership or commitment to the institution.

The variety of precollege and post-enrollment academic success programs that serve students of color generally has positively influenced the enrollment and graduation rates of historically under-represented student populations. While most student success programs developed at college show evidence of increasing graduation rates for students of color, it is unclear what elements of the programs were most effective and what elements had little or no impact on student outcomes. The goal of increasing enrollments
and graduation rates for under-represented populations is complex, and by all accounts, interventions must be tailored to the needs of specific cultural background groups and the demographics of the population that an institution serves. Institutions are frequently asked to do more with less; therefore a greater understanding of the relevant factors contributing to the success of students of color will better equip them in adjusting to the college environment, thereby better utilizing of institutional resources.

Students of Color Academic Success Programs and Research

The rapid growth in Latino enrollment in colleges and universities in the United States has stimulated scholarly interest in examining the experiences of Latinos in higher education. Research into the experiences of Latinos in higher education (beyond general demographic trend analysis) is in its infancy, and therefore the limited body of literature appears exploratory with little scholarly synergy from one researcher to another. Until recently, the majority of research regarding Latinos in higher education has either relied on the U.S. Department of Education, National Center for Educational Statistics (2010, 2011, 2012) to analyze demographic trends or has focused on racial campus climate issues (Edman & Brazil, 2009; Hurtado & Carter, 1997; Hurtado, Milem, Clayton-Pedersen, & Allen, 1998; Rankin & Reason, 2005). As many institutions of higher education are enrolling a critical mass of Latino students, there is increasing need for scholarly research that moves beyond demographic and campus climate reports to better prepare student affairs practitioners and faculty to meet the student success needs of Latino students in a culturally responsive fashion.
Few researchers have examined non-demographic factors that influence the persistence rates of African American and Latino students. Notwithstanding, a few researchers have examined a variety of educational persistence issues within the Latino community. Focusing solely on academically successful students, Cerna et al. (2009) researched the influence of precollege perceptions, values, and behaviors on bachelor degree attainment for Latino students. Arana et al. (2011) conducted a qualitative exploration of successful Latino undergraduates who persisted to graduation at a private, not-for-profit Hispanic-serving institution. Recognizing the socioeconomic mobility that higher education can provide minorities and females, Cardoza (1991) studied a variety of cultural, financial, and individual factors associated with college attendance and persistence for Hispanic women. Longerbeam et al. (2004) studied differences in attitudes about diversity, academic preparation and financial situations among Latino and non-Latino college students. Oseguera et al. (2009) conducted an extensive literature review on the factors contributing to the educational attainment of Latino students, including a discussion of institutional practices reported to increase the persistence of minority college students. The research shift to analyze individual and cultural factors that influence academic performance and persistence decisions has contributed to the growing body of literature exploring Latino students’ experiences in higher education.

While a substantial body of literature reports on the demographic data regarding African Americans in higher education, similar to Latinos, the examination of sociocultural experiences and its influence on college persistence and degree attainment for African Americans has only been undertaken by a few researchers. Grier-Reed et al.
(2011) studied whether the availability of an undergraduate African American student group, providing a “safe space” and networking with other supportive African American students, faculty and staff, would increase retention and graduation rates for African American students. Adams (2005) conducted a mixed-methods study, where the Black Ideology Scale was administrated to a sample of Black and White students enrolled in a variety of Pan-African Studies courses, and focus groups were conducted based on students’ enrollment history in a Pan-African Studies course to examine the impact that a Pan-African Studies course had on the identity, intellectual development, and academic success of African American college students. Furr and Elling (2002) conducted a longitudinal study, where African American students were surveyed during the first six weeks of their freshmen year and tracked over the course of seven semesters to examine the relationships of early identified factors, campus involvement, financial aid, and academic performance, on the persistence of African American students at a predominately White institution. All of these studies are institution or program-specific with small participant sizes which limit the generalizability of the results; nevertheless, a review of the their findings can provide rich insight into the issues or themes that are most relevant to African American and Latino college students.

Common Themes That Influence Academic Performance and Persistence Decisions

Financial concerns. The recognition of financial pressures, both the cost of attending college and a sense of obligation to contribute to family resources, continues to be one of the most common factors examined when conducting persistence research with students of color. Furr and Elling (2002) found that the ability to budget money and the
number of hours worked per week were significant factors in predicting the retention of African American students. Furr and Elling reported that students who were retained by the institution had better financial budgeting skills and worked an average of 18 hours per week, whereas students that did not persist were more likely to report that the availability of financial aid was critical to their decisions and worked an average of 25 hours per week (pp. 93-95). Longerbeam et al. (2004) provided an extensive discussion on the financial pressures that contributed to Latino students’ decisions for working and leaving college. Several researchers have found that Latino students experience significant financial concerns (Cardoza, 1991; Cerna et al., 2009), that access to financial aid was critical to their ability to persist (Arana et al., 2011), and that Latino students were more likely to leave college due to financial concerns than other students (Longerbeam et al., 2004). Furthermore, Hurtado, Carter, and Spuler (1996) reported that successful management of resources (time and financial) in the first year had a strong impact on academic adjustment in the first and second year of college. Future research on the financial concerns for students of color should examine if students in good academic standing are departing college due to financial concerns and if programs that increase students’ financial management skills are negating students’ financial concerns.

**Establishing a sense of community and campus involvement.** Multiple researchers reported on forms of involvement on campus and with family as being a significant predictor of persistence for students of color, albeit noticeably more complex than that described by Tinto’s Student Involvement Model. Regarding involvement on campus, Jacobs and Archie (2008) studied the effects that various first year college
student characteristics had on establishing a sense of community and intentions to persist for students of color. The researchers administered the Sense of Belonging Scale to a sample of 305 first-year college students at a university in the Western United States. Jacob and Archie’s findings corroborated both Berger’s (1997) findings and Tinto’s model, stating that college students’ sense of community had a significant and positive influence on intention to return to college (Jacob & Archie, 2008, p. 284). The authors recommended that programing for first-year students designed to increase persistence should include components to foster and promote a sense of community, such as joining Greek Life, campus clubs, residing on campus, and providing ethnic-specific programming. A consistent concern with articles that promote the traditional examples of institutional involvement as community-building and persistence factors for minorities students is that while Jacob and Archie mentioned “ethnicity” as a factor that significantly influenced sense of community, the authors failed to examine students of color experiences in establishing a sense of community in what would be typically a new cultural environment that consisted of norms, activities, and values that potentially would be unfamiliar or unwelcoming to students of color.

The research that examines the impact of minority cultural centers and of establishing a sense of membership specifically for students of color is not extensive, but the available research suggests that the relationship between social integration on campus and persistence for African American and Latino students is more complex then simply displaying school spirit and campus involvement. Cerna et al. (2009) found that successful Latino students were more likely to report high levels of civic and social
engagement, and Arana et al. (2011) found that Latino students who did not persist reported an inability to connect with the institution. Fleming (1984) found that African American students who attended predominantly Black colleges reported less difficulty establishing a sense of membership and community on campus, which was stated to be an important factor of social support for the retention of African American students. Whereby campus involvement can promote a sense of member and persistence, campus involvement may be more likely when students can better relate to an organization’s members and issues.

At institutions that do not have a critical mass of students of color, the creation of organizations specifically for students of color may promote a sense of community and empowerment to become involved that otherwise might be lacking for students of color at predominately White institutions. Grier-Reed et al. (2011) found that the one-year retention rates for African American students who participated in a culturally-specific student group were seven points higher than those of non-participants, and the four-year retention rate for participants (at 53%) was 60% higher than that of non-participants (at 33%; p. 26). These findings support anecdotal comments that suggest that minority centers on college campuses create a comfortable and safe space on campus for students of color and promote student success, rather than resulting in socio-cultural isolation. Several researchers have concluded that minority students that join sanctioned race and ethnic-centric student groups or subcultures on campus tend to have the best educational outcomes (Grier-Reed et al., 2008; Jones, 2004; Utsey, Ponterotto, Reynolds, & Cancelli, 2000; Watt-Jones, 2002). The findings suggest that such groups provide minority
students a source of support and the tools for coping with minority cultural-shock and allow students to develop a sense of social membership and attachment to the institution.

In contrast to Tinto, other researchers have found that involvement in more mainstream organizations on campus may not have the same results for all groups and that maintaining strong family involvement may promote persistence for students of color. Furr and Elling (2002) found that African American students who belonged to social fraternities or religious-affiliated student groups on campus were less likely to persist. Arana et al. (2011) reported that successful Latino students said that their family and first generation status were strong motivators for educational attainment. According to Tinto’s model, decreased reliance on home communities and more involvement in campus groups should increase student success, rather than contribute to academic departure. These studies suggest that involvement in social organizations may distract students of color from their goal of educational attainment, whereas a student’s family may provide support, encouragement, and culturally-relevant and effective strategies to cope with stresses induced by the social microcosm replicated on college campuses. Like all students, students of color bring to campus aspects of their cultural and family beliefs and values to use as resources to make sense of, navigate, and respond to the college campus environment. Traditional campus involvement activities and programs often strive to exclude or ignore the role that families play in students’ adaptation to the demands of college, which can be counterproductive for students of color. Future research on campus involvement and establishing a sense of membership should disaggregate the data by race/ethnic-groups to better understand the influence and
importance of campus involvement and family engagement on the persistence and academic performance of students of color and should explore the barriers to establishing a sense of community on campus for them.

**Role of mentors and faculty interactions.** Establishing a connection with a mentor or supportive faculty member has been reported to enhance the academic performance and increase persistence rates of minority college students. Grier-Reed et al. (2011) suggested that for many African American students, a predominately White campus is akin to “uncharted territory” and that staff and administrators should search for means to help students overcome their discomfort so that they may thrive despite being in an unfamiliar setting. Mentoring in higher education is often the process of matching students with a faculty or staff member with a similar background or interest, to increase enrollment and retention of students, as well as to increase general satisfaction with the academic experience. Formal mentoring programs for students of color may be initiated even prior to a student’s first term of college, and informal mentoring may occur serendipitously or as the result of purposeful determination on the part of the mentor or mentee (Jacobs & Archie, 2008; Mayo, Murguia, & Padilla, 1995; O’Brien, 1988). Many mentoring programs targeting students of color are guided by the premise that students of color are not failing out because of academic preparedness but rather because they lack the social capital and institutional awareness to be successful while studying at predominately White institutions (Jacobi, 1991). Additionally, mentoring programs may assist students of color to establish a sense of membership and commitment to an
environment that may look and feel significantly different from their prior educational and community setting.

The implementation of mentoring programs for students of color and the impact of positive interactions with faculty members on the academic outcomes of students of color have been explored by a few authors. Cerna et al. (2009) found that compared to White students, successful Latino students were more likely to report that a mentor had contributed to their enrollment in college, leading to the conclusion that higher numbers of Latinos on campus (also known as critical mass) would provide a cultural reinforcement and role models for the next generation of college students. Cardoza (1991) discussed that having a strong female Hispanic role model was an important factor for the mobility and academic attainment of young Hispanic women. Jacobs and Archie (2008) provided a review of seven intervention programs that incorporated mentoring to promote the educational success of African American males at predominately White institutions. While student participation in mentoring programs is typically voluntary, due to the general positive outcomes associated with mentoring, Jacobs and Archie found that some institutions proactively identified and enrolled students of color in programs upon enrollment at the institution.

Similar to the impact of mentors and role models on campus, the nature and quality of interactions with faculty has been reported to have a significant impact on the academic performance and persistence of students of color. Students who perceived their instructors as enthusiastic, trustworthy, and caring (many of the qualities of a mentor) were more likely to persistence in college (Arana et al., 2011; Wheeless, Witt, Maresh,
Bryand, & Schrodt, 2011). In contrast, students who did not persist to graduation reported that a lack of academic direction and lack of support from faculty and staff contributed to their decision not to continue in college (Arana et al., 2011). Furr and Elling (2002) found that having the experience of working with a faculty member on a project contributed to successful African American students’ decisions to persist. These studies demonstrate that the benefits of mentoring and positive faculty interactions for students of color include increased persistence and academic performance, knowledge of institutional resources to overcome obstacles, and the opportunity to participate on projects that enhance social capital on campus.

**Gender difference in persistence.** Researchers have reported notable sex differences in research findings and the extent of literature that focuses on male or female educational outcomes by race. Since 1990, enrollments for female college students have exceeded male students in degree-granting programs, and the rate of growth in female students continues to outpace male students nearly five to one from 1976-2009 (NCES, 2010). Additionally, when comparing the graduation rates for college students at four year institutions in the 2000 to 2007 cohorts, the four-year graduation rates for female students were 29.1% higher than those of male students, the five-year graduation rates for females were 13.2% higher than males, and the six-year graduation rates were 10.1% higher than males (NCES, 2011). Female students across all races are enrolling and graduating at a higher rate than male students. That withstanding, African American males and Latino females/Latinas have received different and unique attention as compared with any other groups in the student persistence and retention literature.
While there is an overwhelmingly large body of literature on the devastatingly low educational attainment rates for African American males, there is very limited literature and research on the educational outcomes of African American females. African American female students are typically addressed with regards to their enrollment and graduation rates relative to African American males. Despite emphasis on increasing the recruitment of college-ready African Americans, troublesome graduation rate disparities have emerged between African American male and female college populations (Cuyjet, 2006). LaVant et al. (1997) suggested that African American women are benefiting from and responsible for the gains of African Americans in higher education, in so much as African American men only made up 28.9% of the African Africans enrolled at four year institutions in 2009 (NCES, 2010) and have the lowest reported graduation rate of all racial/ethnics groups in the U.S. (NCES, 2011). Harper (2005) stressed that the stories and examples of successful African American male college students are rarely discussed in academic literature. Instead, African American males are portrayed as challenging, problematic, and a dilemma for educators, suggesting that either African American males are incompatible with predominantly White learning environments or institutions are decidedly racist and hostile to non-Whites. However, several programs and research projects (Cuyjet, 2006; Harper, 2005) have demonstrated that a nurturing educational environment that purposefully recognized the unique educational experiences of African American males and strove to promote their achievement were able to greatly increase the success rates of African American men in college.
Conversely, there is significantly more research on the aspirational educational intentions and positive outcomes of Latina students, but a void remains in the literature regarding the unique higher educational experiences of male Latino students. In addition to a 40% higher enrollment rate of Latinas compared to Latino males (NCES, 2010), the four-year graduation rates of Latinas are 34.7% higher than those of Latino males, the five-year rates are 21.4% higher than Latino males, and the six-year rates are 17.3% higher. The literature that examines the higher educational experiences of Latinos has increased its prominence in the last decade. This growing body of literature recognized the critical need to examine the unique factors influencing the graduation rates of Latinos, including examination of precollege characteristics (Cerna et al., 2009), first year retention factors, and academic and social integration into college (Hurtado et al., 1996; Hurtado & Ponjuan, 2005; Kraemer, 1997; Otero, Rivas, & Rivera, 2007), and indicators of persistence and educational outcomes (Arana et al., 2011; Bordes-Edgar, Arredondo, Kurpius, & Rund, 2011; Oseguera et al., 2009; Solberg, O’Brien, Villareal, Kennel, & Davis, 1993). While the majority of these studies included both male and female Latino students either due to participation rates in the sample or participation rates in higher education, the results of these studies largely reflect the experiences of Latinas and discuss the limited generalizability of male Latinos.

A few studies have explored factors that contribute to persistence specifically as the factors pertain to Latinas, while other studies that include both sexes have only reported significant findings for Latinas. Cardoza (1991) and Gloria et al. (2003) examined influence of psychological well-being, coping strategies, and perceptions of
educational barriers on the educational outcomes of Latinas. Cardoza (1991) described Latinas as a “triple minority,” given their demographic status as women, members of an ethnic minority group, and often among the lowest socioeconomic stratum (p. 134), as well as historically underrepresented in college. Gloria et al. (2003) found that academically motivated and successful Latinas who reported high cultural identity congruity perceived fewer educational barriers and were more likely to have enacted positive plans based on past experiences and sought the support of cultural group members (who likely were not college graduates) to cope with stressful college situations. Gloria et al. also reported that contrary to established negative myths, the study found that Latinas placed a high value on their education and many participants in the study had aspirations for advanced degrees. Cardoza found that Latinas who subscribed to traditional cultural sex-roles (getting married and starting a family) were not attending college at the same rate as Latinas who delayed married and childbearing, whereas Latinas whose mothers were college-educated and had a strong female Hispanic role model were more likely to attend and persist in college. Examining successful Latino students, Cerna et al. (2009) found that living close to family was significant for female students, while not significant for Latino males. Generally, the Latino persistence literature overwhelmingly reflects the factors and educational aspirations of successful Latinas but has a tendency to overlook the educational realities of Latino males.

Psychological factors. Several researchers have examined a limited set of psychological factors in the pursuit to better understand college student persistence and academic performance. According to Oseguera et al. (2009), research historically has
ignored the impact of psychological factors (such as social context ethnic identity, and gender identity) on students of color perceptions of campus climate and their response to a racialized educational environment that has “a historical legacy of inclusion and exclusion” (Hurtado et al., 1998, p. 282). That said, researchers have examined the impact of a few psychological factors on the academic performance and persistence decisions of minority college students, including the impact of stress and psychological well-being associated with being a social minority in an unfamiliar environment (Gloria et al., 2003; Fleming, 1984; Francis, Kelly, & Bell, 1993; Hurtado et al., 1996), coping with being the target of racial and social bias (Hurtado & Ponjuan, 2005; Mendoza-Denton & Aronson, 2007; Nora & Cabrera, 1996; Steele, 1997), the under-appreciation of the social and psychological needs of academically high-achieving students of color (Bridglall & Gordon, 2004; Mendoza-Denton & Aronson, 2007), the influence of academic self-efficacy (Cardoza, 1991; Cerna et al., 2009; Chartrand, Camp, & McFadden, 1992; Edman & Brazil, 2009; Longerbeam et al., 2004; Solberg et al., 1993), and the influence of students’ time-orientation and the value that is placed on academic performance (Adams, 2005). Exploring how psychological factors are uniquely experienced by students of color and the impact such factors have on academic outcomes is important if researchers and practitioners are to develop holistic and culturally relevant college retention initiatives.

There has been limited examination of the influence of stress related to being a minority in a new environment and African American and Latino college students’ ability to cope with that stress. Bean and Eaton (2000) discussed that college is a stressful
experience for most students and the ability to cope (or adapt strategies to relieve stress) is a psychological factor proposed to promote college student retention. Students who perceive that they are the target of prejudice or bias on college campuses due to their racial, socioeconomic, and gender identity (Hurtado & Ponjuan, 2005; Nora & Cabrera, 1996) or fear the threat of being viewed through the lens of a negative stereotype (Steele, 1997) have been found to have difficulty adjusting cognitively, emotionally, and socially, which ultimately may lead to decisions to depart from college to relieve that stress.

Exploring the challenges that Latino student experience when transitioning to college, Hurtado et al. (1996) proposed new methods for institutions to assess the success of students’ academic and social adjustment to college. For many students of color, who come from communities where their cultural group was in the majority, entering college could be the first time when they perceived themselves as a minority and experienced significant stress and psychological discomfort from their status as a minority. Hurtado et al. reported that Minority Status Stress can jeopardize social adjustment and academic success for students of color at predominately White institutions. Accounting for precollege academic measures (such as high school GPA or SAT score; Longerbeam et al., 2004), once enrolled in college, success for Latino students was primarily determined by their perceptions of the college environment. Fleming (1984) found that African American students who attended predominantly Black colleges experienced less stress than their peers who attended predominantly White institutions, and Francis et al. (1993) reported African American students who experienced the college campus as supportive were better able to employ coping strategies and more likely to utilize institutional
resources to overcome barriers. Therefore, a unique experience of students of color is that their status as a minority can be a significant source of stress at predominately White institutions, and a student’s strategy to cope with that stress could either lead to persistence behaviors or the decision to depart from college.

The over-prediction phenomenon is the tendency for educational administrators and practitioners to assume that academically high-achieving students of color are impervious to stress induced by experiencing negative racial bias, overt and discrete discrimination, or feelings of cultural alienation. The over-prediction phenomenon is a documented trend in which standardized tests and prior academic performance is used to over-predict the resiliency of high-achieving students of color (Bridglall & Gordon, 2004; Mendoza-Denton & Aronson, 2007), only to discover after the fact that students of color, regardless of academic aptitude, can have negative outcomes due to racially charged intercultural shock and distress (Oseguera et al., 2009). Academic performance may suffer (even for academically well-prepared students) if students are unable to employ productive strategies to reduce their added stress of being a minority in college, such as being the only person of their cultural background in a larger discussion course, dealing with other’s negative beliefs and attitudes towards their cultural group, or perceiving that their culturally-specific knowledge and experiences are devalued in the college environment. Students of color who have a history of academic success likely have developed a substantial repertoire of strategies and resources to reduce academic-related stress (such as overcoming test-taking anxiety) prior to coming to college, but the typical first year minority college student may not have had the opportunity or need to develop
strategies to deal with the stress of being a minority in a new environment. As a result, even academically well-prepared students may exhibit signs of struggling academically and of being a potential retention risk if they are unprepared to cope with unanticipated minority status stress. Oseguera et al. (2009) suggested that the over-prediction phenomenon and minority status stress are indications that traditional academic measures are insufficient factors to predict the academic success of minority college students.

Academic self-efficacy, a student’s perceived ability to successfully complete academic tasks, is a student persistence factor that is not sufficiently researched for African American and Latino college students. Academic self-efficacy has more readily been included in research regarding the persistence and academic performance of Latino college students (e.g., Cardoza, 1991; Cerna et al., 2009; Chartrand et al., 1992; Edman & Brazil, 2009; Longerbeam et al., 2004; Solberg et al., 1993). However a similar search of multiple research databases only returned two peer-reviewed research articles that examined self-efficacy and persistence for African American college students (Fife, Bon, & Byars-Winston, 2011; Thile & Matt, 1995) and one article that discussed the application of Bean and Eaton’s (2000) Psychological Model of College Student Retention to the persistence behaviors of African American college students (Rodgers & Summers, 2008). Directly considering the impact of self-efficacy on academic persistence, Cerna et al. (2009) found that successful Latino students were more likely to report higher self-efficacy than non-successful students. In contrast, Longerbeam et al. (2004) found that Latino students that did not persist were more likely to report perceived low academic ability. Thile and Matt (1995) examined the effectiveness of a mentoring
program targeted at racially/ethnically under-represented students (which included 59% Latinos and 31% African American students) in health services majors to increase factors associated with academic performance, institutional adjustment, and self-efficacy. While students who had declared a major by the end of their first year had higher self-efficacy than students that had not declared their majors, there were no significant findings to support that the program increased self-efficacy for participants. Fife et al. (2011) examined the relationship between religiosity, academic self-efficacy, and ethnic identity among African American STEM college students. Contrary to common practices to include spirituality as an element in intervention programs for African American students, the study found that there were no significant relationships between academic self-efficacy and religiosity (neither organized nor non-organized religious participation). The studies validated that academic self-efficacy is a factor in actual academic performance and persistence for African American and Latino students.

Mendoza-Denton and Aronson (2007) suggested that Latino and African American students are particularly vulnerable to negative suspicions about their intelligence (Oseguera et al., 2009), which may be an impediment to students of color in developing a high level of academic self-efficacy, regardless of their true academic aptitude.

A student’s time orientation/time perspective is a psychological factor proven to be related to academic performance and achievement of academic goals, but the influence of time orientation on the academic persistence of African American and Latino college students has been insufficiently researched. Time orientation is an individual’s temporal framework of processing and interpreting personal and social experiences from an
orientation grounded in the past, present, or future, which can influence decision-making and the development of expectations and goals (Horstmanshof & Zimitat, 2007). An individual with a past-orientation would consider the historical significance of current experiences and are often the keepers of historical knowledge. A present-oriented individual would seize the day and live in the now and would have little faith in future possibilities, therefore likely not to set and strive for long-term goals. And a future-oriented individual would be able to imagine future possibilities and what efforts would be necessary to achieve those goals, as well as being willing to make sacrifices today with the expectation of achieving future goals. It therefore becomes apparent how a student’s time orientation can influence his or her decisions and behaviors that either promotes or distracts from academic success and college persistence.

Studies have found that a significant relationship exists between future oriented students and the extent of effort and importance directed towards academics, resulting in higher levels of academic performance, and future orientation was conversely related to hedonistic and fatalistic approaches to life decisions (Barber, Munz, Bagsby, & Grawitch, 2009; Horstmanshof & Zimitat, 2007; Phan, 2009; Shell & Husman, 2001). Phan (2009) suggested that students who have the cognitive capacity to envision the long-term impacts of outcomes for completing tasks are more likely to engage in thoughtful processing strategies and to commit meaningful effort in completing their academic tasks. The capability for individuals to approach life decisions from a future-orientation framework may be critical in setting long term goals and developing intrinsic motivation to persist to those goals. Cardoza (1991) found that students who aspired to attend
college and believed that they could be successful attended college at a higher rate than those that did not aspire to attend college. Adams (2005) discussed that students who placed a high importance on academic success were also able to describe “where they would be in five years,” “Where the U.S. would be in five years,” and “Feeling socially successful” (p. 289). Adams elaborated that successful students had well-developed plans for the future and were better able to critically ponder future events than students who did not place high importance on academic performance, which suggests a future-orientation. The majority of the research on future-time-perspective does not include a racially/ethnically diverse sample, and therefore, it is uncertain how time orientation influences the persistence and academic performance of African American and Latino students. Nevertheless, the existing research findings strongly suggest that a student’s time orientation/perspective has a significant influence on academic performance and persistence. Regarding students who are not future-oriented, similar to Bean’s (2000) suggestion that students can develop an intrinsic locus of control with the appropriate intervention, it may be possible to assist students in developing strategies to nurture more future-orientated academic related beliefs and behaviors.

**Campus Climate**

Campus climate is another essential factor in understanding the persistence and academic performance of historically underrepresented racial and ethnic college students. Campus climate studies are intended to provide institutions with a sense of the experiences and perceptions of various social identity groups on campus (e.g., racial/ethnic, gender, and sexual orientation groups). Students’ perceptions of the
campus climate as being safe and supportive or hostile and unwelcoming are important predictors of academic success for marginalized student groups (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999; Rankin, 2006; Salter & Persaud, 2003; Whitt, Edison, Pascarella, Terenzini, & Nora, 2001). Hall and Sandler’s (1982) report on female students’ psycho-socio perceptions of college life was the first to refer to the campus environment in climate terms (such as “chilly”). Since that initial study on a sub-population’s unique perceptions of and experiences on campus, researchers that followed further explored and defined the language of campus climate. Susan Rankin’s (2005) widely accepted definition of campus climate as “the cumulative attitudes, behaviors, and standards of employees and students concerning access for, inclusion of, and level of respect for individual and group needs, abilities, and potential” (p. 17), has become a guide for the critical examination of how the college aggregates perceptions of a particular social group influences the unique challenges a group faces on campus; the disparate treatment and impact on a social group by faculty, staff, students, and institutional policy and practices; and the impact those perceptions have on individual’s potential to fully participate in the campus community. Research findings strongly suggest that perceptions influence both how individuals and groups are treated on campus and an individual’s ability to be successful, engaged, and feel valued and safe on campus (Bensimon & Soto, 1997; Brazzell, 2001; Strange & Banning, 2001).

A substantial body of literature suggests that a student’s perception of the campus climate has an influence on his or her intellectual and identity development (Bensimon & Soto, 1997; Brazzell, 2001; Strange & Banning, 2001). In a three decade longitudinal
study, Pascarella and Terenzini (1991, 2005) found that students’ perceptions of the campus climate in which they lived and learned influence both learning and developmental outcomes. Students who experienced harassment, discrimination, and lack of support on campus perceived more obstacles to their educational attainment and developmental growth (Reason & Rankin, 2006). Cabrera et al. (1999) found that students’ academic experience, academic and intellectual development, institutional commitment, and persistence to degree attainment diminished when the learning environment was perceived to be “racist.” In contrast, a supportive climate has been shown to promote greater levels of student engagement, positive emotional and identity development, and indicators of academic success (Pascarella & Terenzini, 1991; Reason & Rankin, 2006). Salter and Persaud (2003) found that the encouragement and perception of fit that female students received from the learning environment influenced their degree of academic engagement. There is overwhelming agreement in the literature that students’ perceptions of the campus climate have a significant influence on their intellectual and developmental growth and success as students.

**Differences in perceptions.** Different social groups often perceive the same environment in different and unique ways, therefore it is highly recommended to disaggregate campus climate data to clearly understand the experiences and perceptions of marginalized groups on campus. Reason and Rankin (2006) found that students experienced campus climate differently based on their social identity group (e.g., gender, race/ethnicity, sexual orientation, and gender but may also include physical and mental ability, parenting status, non-traditional age, and veteran status). Groups that perceived
themselves as marginalized on campus due to negative stereotypes, disruptive discourse, harassment, alienation, and powerlessness generally rated campus climate lower than the dominant group (Rankin, 2005, 2006). Multiple climate studies have validated Hall and Sandler’s (1982) landmark study that depicted a chilly climate for female students on college campuses (Allan & Madden, 2006; LaRocca & Kromrey, 1999; Reason & Rankin, 2006; Salter & Persaud, 2003). Sequential studies have reported similar “chilly” examples when assessing students of color perception of campus climate. A large body of literature described a hostile and unwelcoming climate for racial and ethnic minorities (Cabrera et al., 1999; Edman & Brazil, 2009; Hurtado et al., 1998; Maramba, 2008; Nunez, 2009; Rankin & Reason, 2005; Seggie & Sanford, 2010). Additionally, an increasing body of literature described a hostile and intolerant climate for Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ) students (Rankin 2005, 2006) and evidence of a few colleges with warmer climates for LGBTQ students and staff (Yost & Gilmore, 2011). The available literature on campus climate studies has now spanned several decades and consistently describes a climate that is less than warming for students of color, sexual minorities, and female students.

**Racial differences in campus climate.** Differences in the perception of campus climate formed by various racial and ethnic-groups have been found to negatively influence group-specific persistence rates and academic performance. Relative to students of color, White students generally report campus climate to be more positive and give higher ratings to the efforts of administrators and faculty to include diverse viewpoints into the college environment (Miller, Anderson, Cannon, Perez, & Moore,
In contrast, students of color generally describe the campus climate as less friendly and reported having been the target of racism, race-based derogatory comments and graffiti, physical and verbal assaults, and being ignored or tokenized by faculty and administrators (Bensimon & Soto, 1997; Maramba, 2008; Rankin & Reason, 2005; Seggie & Sanford, 2010).

A negative campus climate for students of color is often not the result of overt racism, sexism, or heterosexism, but rather the result of being the target of frequent experiences of micro-aggressions. Micro-aggressions are described as the everyday or commonplace experiences of subtle discrimination or negative prejudice such as the avoidance of eye contact, mocked culturally-specific behaviors or experiences, questioning if a student should be on campus or in a specific course, or telling a person that they are doing well despite their race or gender (Feagin, Hernan, & Imani, 1996; Grier-Reed et al., 2011; Sue et al., 2007). Students of color are generally more experienced at recognizing when they are subjected to a subtle negative indiscretion and more sensitive to micro-aggressions due to the frequency and cumulative effects of such occurrences (Rankin & Reason, 2005; Reason & Rankin, 2006). The motivation to alleviate the stress of being the frequent target of micro-aggressions and an increasing institutional dissatisfaction may contribute to the college departure decisions of many African American and Latino college students. Researchers have found that providing students of color a safe space on campus to receive support, encouragement, and to reflect on their experiences would offer them the opportunity and resources to explore and cope with the devastating effects of racial micro-aggressions which frequently
contributes to low retention and graduation rates of students of color (Adams, 2005; Grier-Reed, 2010).

**Gender differences in campus climate.** There are significant differences in how male and female students perceive and rate factors that influence campus climate. Hall and Sandler’s (1982) initial report on the experiences of female students in higher education was critical in establishing the language that described college campuses as having a “climate,” that perceptions of the climate may vary by group, and that there was a “chilly” climate for female students in higher education. Hall and Sandler’s examples in higher education that contributed to a “chilly” climate included attending more to the educational needs and contributions of male students, physical and sexual objectification of women in the classroom, and discounting the achievements of women. Reason and Rankin (2006) found that 25% of females and 38% of males reported race was the basis for the harassment they experienced (p. 16). Furthermore, a larger proportion of women (69%) than men (21%) reported that gender was the basis for harassment they experienced (Reason & Rankin, 2006, p. 16). Examining the difference in perceptions of sexual harassment, female students were found to be more likely to perceive sexual harassment in a scenario than male students (LaRocca & Kromrey, 1999; Rankin, 2006; Reason & Rankin, 2006). In a large study involving 10 colleges and universities, Reason and Rankin (2006) found that a significantly greater proportion of female students perceived campus climate as “hostile,” “sexist,” and “disrespectful,” whereas male students were more likely to report that campus climate was not an issue (p. 15). Interestingly, the same study found that male students reported the college climate to be
“less accepting of males,” while both male and female students reported that college environment to be accepting of females. These findings suggest, much like racial difference, that gender also influences how students perceive campus climate.

Campus climate interventions. Despite efforts by Chief Diversity Officers and institutions to raise awareness of diversity and inclusion issues on campus through climate studies, marginalized groups on college campuses continue to report concerns for their safety, to experience harassment, and to feel unwelcomed on college campuses (Rankin, 2005). Many under-represented or marginalized groups on campus feel that the college environment only attempts to tolerate their presence rather than truly value their contributions. The disconnect between institutional efforts to be more inclusive and the negative campus climates that continue to be reported suggests a lack of understanding of how different groups experience the campus environment and what factors are most important for influencing the perceptions of various social identity groups. Beyond raising awareness, Rankin (2005) argued that institutions ought to combat bias-related harassment and violence in order to increase the perception that campus is a safe and supportive environment where all people can reach their true potential. Additionally, Reason and Rankin (2006) argued that campus climate perceptions have an impact on educational success of groups; therefore colleges and universities should strive to understand different groups’ perceptions of campus climate and customize interventions to ensure that all students overcome the unique obstacles that exist in higher education.

Rankin (2006) proposed the question, “If students of different social identity groups perceive campus climate differently, and campus climate has a direct influence on
academic and intellectual development and persistence, then are faculty, staff,
administrators, and researchers in higher education obliged to intervene accordingly?” (p. 113). Acknowledging the literature that supports the notion that a diverse student body promotes intercultural knowledge and multicultural skills, Reason and Rankin (2006) cautioned that striving for diversity without an educational intervention to improve interpersonal and intergroup relations will likely result in an environment latent with tension and perceptions of marginalization and victimization. Considering that college students are largely the perpetrators of harassment on campus and that derogatory comments are the most frequent form of harassment, Rankin suggested the need for anti-harassment strategies and education for student populations to address verbal harassment of other students (Rankin & Reason, 2005; Reason & Rankin, 2006). Beyond simply mixing people with diverse values, beliefs, and backgrounds together and hoping for the best, institutions should find purposeful interventions to assist students to improve their inter-group relationship skills.

The campus climate literature illustrated that students of different cultural backgrounds perceive campus climate differently and that there is relationship between campus climate and academic success for minority and marginalized students. Considering the strong evidence that suggest that a group’s perception of their treatment on campus has an influence on that group’s ability to be successful, to be engaged, and to feel valued and safe on campus (Bensimon & Soto, 1997; Brazzell, 2001; Strange & Banning, 2001), institutions should strive to better understand the unique perspectives of different socio-cultural groups rather than viewing climate simply from a campus-wide
aggregate that is often overly reflective of the dominant group’s perceptions. The conclusion of this campus climate literature review is that in order to improve students of color persistence and degree attainment, it is important to recognize and understand the unique ways in which different socio-cultural groups experience and perceive campus climate and how institutions can most efficiently focus their resources on addressing the factors most important to students of color.

**Institutional Satisfaction**

Researchers have consistently found a connection between perceptions of campus climate, institutional satisfaction, and the persistence behaviors of college students. Longitudinal studies have found that students of color who persisted reported that a welcoming, diverse, and engaging campus climate contributed to their ability to graduate (Arana et al., 2011; Oseguera et al., 2009), whereas students who did not persist were more likely to report a situation in which they did not feel valued by the institution (Furr & Elling, 2002) and an inability to feel like members of the college (Arana et al., 2011). Adams (2005) found that institutional satisfaction for students of color was strongly related to having a positive relationship with administration, faculty, and students from other backgrounds, which suggested that the nature of interactions with others on campus is critical to the formation of perceptions regarding campus climate and institutional satisfaction for students of color. Where institutional satisfaction is low for students of color at predominately White institutions, Adams suggested that lower retention and graduation rates are, in part, the result of an overall institutional failure to promote healthy racial identity development. Instead, on campus students of color and their peers
continue to be subjected to “raw and flawed racial stereotypes perpetuated in the media and popular culture” (Adams, 2005, p. 285), rather than exposing all students to culturally-diverse scholarly works and professionals from diverse backgrounds. A multitude of factors may contribute to students of color levels of institutional satisfaction, including the perceived supportiveness and welcoming of the campus climate, the quality of academic programs and interactions with others on campus, and the extent to which the institution meets the students’ expectations of an ideal college experience. Factors of institutional satisfaction for students of color have insufficiently been explored by researchers, yet a clear understanding of the factors most relevant to students of color and the influence these factors have on academic performance and retention decisions of students of color may noticeably enhance the effectiveness of committed resources and interventions intended to increase the graduation rates of African American and Latino college students.

**Literature Review Summary**

The goal of the literature review was to raise awareness of the academic experiences and outcomes of students of color in higher education, in addition to the factors and efforts believed to contribute to the degree attainment of African American and Latino students. The demographic data for African American and Latino students clearly reveal that, despite a significant increase in enrollment rates, degree attainment for African Americans and Latinos remains dismally low in general and when compared to other racial/ethnic-groups. Additionally, what degree attainment gains that have been
achieved by African American and Latino college students have been disproportionately
due to the academic success of female students (Cuyjet, 2006).

College persistence programs and interventions based on the foundational
knowledge of Tinto and Astin have failed to produce results for students of color and are
frequently criticized as being assimilationist models and socially antiquated. Bean and
Eaton (2000) developed a college retention model that relies on psychological factors that
appears to be more compatible with the recent calls for more research to identify the
factors that are more relevant and that most contribute to the academic success of
students of color. The Psychological Model of College Student Retention (Bean &
Eaton, 2000) shows promise for helping to explain the relationship between student
outcomes and the factors reported to be most relevant to students of color, including
perceptions of campus climate, ability to cope with new stressful situations, establishing
supportive and positive relationships on campus, and institutional satisfaction.

The literature that examined the unique and relevant factors that influence
persistence for students of color is not extensive but nevertheless reveals that factors
significant for students of color is different and more complex than when students of
color are considered within the aggregate. It is ineffective and inefficient to piece
together all the factors found to be significantly related to persistence for African
American and Latino college students across different studies. Furthermore, the vast
differences in the studies’ objectives and scholarly assumptions reflected in the literature
demonstrated the need for a more comprehensive analysis of factors that contribute to the
academic performance and college persistence decisions of students of color. Cuyjet
(2006) suggested that higher education must become comfortable with the idea that what works for one group may not work for all groups, and therefore group specific student success interventions should be developed without the connotation that needs differing from the dominant group reflect a deficit. Conclusions derived from this literature review were that there is a need for a comprehensive, large scale scholarly examination of the unique factors that contribute to the academic performance and college persistence decisions of African American and Latino students.
CHAPTER III
RESEARCH METHODOLOGY

Introduction to Methods

The purpose of this study was to better understand factors that contributed to the successful bachelor degree attainment for African American and Latino students. This study used quantitative methods to examine the relationship of campus climate, institutional satisfaction, and academic adjustment with the academic performance and the intention to persist in college for African American and Latino students at traditional four-year colleges in the U.S.

A large existing dataset, collected by the Higher Education Research Institute (HERI), was accessed to examine the perceptions, experiences, and behaviors of students at the end of their first year of college. The study had three research questions: (a) what is the factors structure for the selected items from the YFCY survey for African American and Latino students at four-year colleges and universities; (b) What is the best predictive model for academic performance for African American and Latino students; and (c) What is the best predictive model for retention and persistence for African American and Latino students? The analysis utilized exploratory factor analysis, linear regression, and binary logistical regression to examine the research questions. The study aimed to identify factors that contributed to the academic success and persistence of African American and Latino college students to better inform student success programming and institutional policies and practices.
Definition of Terms
The following terms and definitions were used to frame this study:

- **Dependent Variables**: Reported academic performance and intentions to persist
  - **Academic Performance**—This dependent variable is the assessment of students’ academic performance, which has a direct influence on eligibility for federal financial aid and continued enrollment in a degree-granting program. For the purpose of this study, academic performance was solely determined by a student’s reported college grade point average (GPA). GPA is important because all students must maintain standards of academic progress to maintain eligibility for federal financial aid and many institutions require a minimal 2.0 GPA on a 4.0 scale to remain in good academic standing with the institution.
  - **Persistence or Intention to Persist**—This dependent variable identified individuals’ future educational plans to continue in college at their current institution or another institution. Conversely, expressed uncertainty in one’s educational future is the lack of educational plans to continue towards a degree (e.g., not attending an institution or have not decided yet to continue in school). Literature addressing degree attainment in higher education has used the terms persistence and retention, which refer to different educational outcomes. In the literature, persistence is used to describe an individual student’s continued enrollment and progress...
towards graduation, whereas retention is an institutional assessment of the rate that first-time students continue their enrollment at their first institution. As such, a student who transfers may be described as persisting towards a degree, but not retained by their original institution. This study examined both educational outcomes of institutional retention and college persistence.

- **Main Independent Variables:**
  - *Campus Climate*—This independent variable referred to the extent that various social groups perceived the campus environment as welcoming and supportive versus hostile and unfriendly (Hall & Sandler, 1982; Hurtado et al., 1998). Researchers who have examined students’ experiences and perceptions on campus have found significant differences in the extent that groups (based on racial, sex, sexual identity, and religion) perceived college campuses as welcoming, supportive, and friendly, versus hostile, alienating, and intolerant (Cabrera et al., 1999; Edman & Brazil, 2009; Hurtado et al., 1998; Maramba, 2008; Nunez, 2009; Rankin & Reason, 2005; Seggie & Sanford, 2010).
  - *Institutional Satisfaction*—This independent variable referred to the extent that individuals perceived that the institution had met their expectations, an indicator of student morale as discussed by Strange and Banning (2001). Organizational morale is often conceptually considered to impact the productivity and level of commitment of members in an organization.
or, in this case, students at a college. Student morale may similarly affect students’ desire and motivation to be successful in their role as a student and participate holistically with a college or university. This variable may also be an indication of a student’s sense of regret with their decision to enroll at an institution, which has been seen to negatively effective academic performance.

- **Academic Adjustment**—This independent variable referred to the extent that students engaged in practices and behaviors considered to enhance the overall academic experience of college students. Students in higher education are expected to adopt certain educational norms to develop a higher sense of self-agency and personal accountability. For example, upon enrolling in college students are granted greater autonomy to manage their own time and academic progress, such as taking the personal responsibility to attend classes, ask questions in class, and seek support from instructors and staff as needed. Academic adjustment assessed the extent that students recognized and adopted the hidden curriculum, rules, norms, and expectations thought to promote academic success.

- **African American/Black**—The U.S. Census Bureau (2011) defined “Black or African American” as a person having origins in any of the Black racial groups of Africa. This definition would include anyone who self-identified as Black, African American, and Negro or identify as having ancestry from African countries such as Kenya, Nigeria, or Haiti. Terms used to identify
and self-identify with this category have varied and continue to evolve in
the U.S. (including African, Negro, African American, Afro-American, and
Black to name a few). For the purposes of this study, African American
referred to anyone who self-identified with the category of Black or
African American on the YFCY survey.

- *Latino*—As reported by the U.S. Census Bureau (2011), the U.S. Office of
Management and Budget, which oversees the Revisions to the Standards
for the Classification of Federal Data on Race and Ethnicity, has defined
“Hispanic or Latino” as a person of Cuban, Mexican, Puerto Rican, South
or Central American, or other Spanish cultures or origins regardless of
race. An important clarification is that the term Latino or Hispanic refers
to a person with ancestral or ethnic origins from the regions of Central and
South America, and is not a U.S. racial category. Furthermore, it is
increasingly more common for individuals from these regions who reside
in the U.S. to identify with the term “Latino” rather than identifying with
the term Hispanic, which has historical origins to colonization by Spain
and Portugal. For the purposes of this study the term Latino was used to
identify individuals who self-identify as “Mexican American/Chicano,
Puerto Rican, or Other Latino” as reported on the YFCY survey.

**Data Sources**

Data for this study were retrieved from a national aggregate of student responses
on the *Your First College Year* survey collected in spring of 2008 and 2009 during
participants’ first year of college and corresponding ACT/SAT scores collected on The Freshmen Survey (TFS). The survey was administered on behalf of colleges and universities in the U.S. by the Cooperative Institutional Research Program (CIRP, a service of HERI). The sample for this study was limited to African American and Latino students at traditional four-year colleges and universities. The current study focused on students in pursuit of bachelor degrees (hence four-year institutions) due to the socioeconomic mobility associated with a four-year college degree (Cardoza, 1991). As the intent of the study was to identify factors that contributed to academic success and persistence for African American and Latino students (and not identify between-group comparisons), there was no relevance for this study to include other racial groups (such as White, Asian, or Native American students) in the study sample.

The *Your First College Year* (YFCY) survey was selected as the instrument of choice due to the availability of a national dataset, coverage of all major variables in this study, and the ability of combining multiple years of data to achieve a sufficient sample size to have power to conduct the analyses. In order to enhance the generalizability of any findings, the national data included a range of institutional sizes, public and private institutions, and geographical locations across the United States. The survey structure captured multiple dimensions on each of the major independent variables, which was conducive to applying quantitative analyses to identify significant factors and allow for the generation of recommendations. Lastly, obtaining a large sample size for both groups was a concern given combined African Americans and Latinos regularly only represent 12% to 14% of the total enrolled college student population during the time period
included in this study. The standardized administration of the YFCY survey over multiple years allowed for obtaining a larger sample size.

**Research Variables**

The study examined the influence of three constructs (Campus Climate, Institutional Satisfactions, and Academic Adjustment) on two dependent variables (Academic Performance and Intention to Persist) for a sample of African American and Latino students at four-year colleges and universities. Items in the dataset addressed constructs including (a) Academic Adapting, (b) Campus Community and Residency, (c) Faculty-Staff Campus Support, (d) Family Encouragement and Support, (e) First-year Programs, (f) Institutional Satisfaction, and (g) Racial Campus Climate (see Appendix A for list of variables). Additionally, the study considered the influence of race and ethnicity, sex, full-time/part-time student status, institution type, and ACT/SAT scores on educational outcomes. Dependent variables included students’ grade point average and students’ enrollment plans for the next term. All variables were self-reported on the YFCY survey.

**Ethical Considerations**

The research design for this study presented minimal risk to participants in the sample. The Cooperative Research Institute Program (CRIP, 2010), the principal researcher for data collection, obtained human subjects approval from the Institutional Review Board at the University of California, Los Angeles (UCLA). The principal researcher for the present study obtained human subjects approval from the Institutional
Review Board at Kent State University on October 3, 2012 (Protocol #12-316). Research procedures consisted solely of statistical analyses of existing data.

**Data Collection**

The Cooperative Research Institute Program (CRIP), a unit of the Higher Education Research Institute (HERI), is an interdisciplinary center for research, evaluation, information, policy studies, and research training in postsecondary education. HERI facilities and its research resources have been available to scholars and researchers since its affiliation with UCLA in 1973. National aggregated survey data collected by CRIP was made available approximately three years after the dataset was originally collected. The YFCY survey was administrated annually by a staff of trained educational practitioners and researchers to first year college students during the timeframe of March to mid-June following a student’s first year of college. Completion of the YFCY survey took approximately 25 minutes and could be administered by paper format in large group settings or individual advising sessions, or administered online via a website hyperlink provided in a campus email notification. Participants were provided informed consent prior to starting the survey. CRIP assumed full responsibility for collecting the dataset and maintaining the confidentiality of participants.

The researcher obtained access to the 2008 and 2009 dataset years of YFCY survey, with corresponding standardized aptitude assessment results reported on the Freshmen Year Survey (TFS). CRIP required a three to four page research proposal and monetary fee to obtain access to available datasets (HERI, 2012). CRIP granted the primary researcher access to the dataset in June 2013.
Data Management

Data obtained from CRIP was maintained in a secure electronic storage device and password protected computer. In order to protect confidentiality of participants and institutions, CRIP datasets did not contain individual and institutional identifiers. Only the principal researcher and dissertation committee had access to the dataset. The dataset remains the property of HERI.

Data Analysis

Quantitative analysis methods were applied to the dataset using SPSS software. There were three analyses conducted with the data, including an exploratory factor analysis, linear regression analysis, and binary logistical analysis. A Persistence variable and a Retention variable were derived to conduct the binary logistical regression. All procedures were duplicated where unique demographic differences in race/ethnicity and sex were found to be statistically significant.

Exploratory factor analysis methods. Using data from the YFCY survey and IBM’s SPSS Version 21, an Exploratory Factor Analysis was conducted to reduce the number of items included in later analyses and identify the simplest structure to categorize latent variables. This analysis did not assume any prior constructs or hypotheses; as such a Confirmatory Factor Analysis was not utilized. Both Principle Components Analysis (PCA) and Principle Axis Factoring (PAF) were run to compare extraction methods. PCA, accompanied with Varimax rotation, was ultimately utilized as the extraction method because it allowed for the retention of more items (i.e., appropriate for exploratory purposes). Additionally, the correlations between factors reported in the
PAF extraction were low, which necessitates the use of PCA. The SPSS default delta of zero was used (i.e., Varimax rotation). Missing values were addressed by excluding cases listwise. Four factors were identified with eigenvalues above 1.0. Factor Totals were used for the series of stepwise regression analyses.

**Linear regression methods.** Linear Regression Analyses were conducted using IBM’s SPSS Version 21 to construct regression models that best predicted academic performance for study participants. GPA at the end of students’ first year (as reported on the YFCY survey) was used as the dependent variable to assess academic performance. The independent variables included demographic data, exploratory campus experiences, YFCY construct total scores, and factor totals from the EFA. The demographic data included race/ethnicity, sex, survey year, institution type, student status, standardized test percentile rank, participation in first year programming, and on/off campus housing status. The exploratory campus experiences included family support to succeed, interaction with family, feelings of isolated from campus, feeling unsafe on campus, feelings of being overwhelmed, asking questions in class, and seeking feedback on academic work. The YFCY constructs included Academic Adjustment score, Student-Faculty Interaction score, Academic Self-Concept score, and Overall Satisfaction score. The factor totals included Felt Discrimination, Sense of Belonging, Faculty and Staff Concern for Students, and Satisfaction with Campus Diversity. For the demographic categorical covariates in the regression analyses, sex was coded as Male = 0 and Female = 1, race/ethnicity was coded as African American = 0 and Latino = 1, institution type was coded private college = 0 and large university = 1, student status was
coded as not first time full time = 0 and first time full time = 1, participated in first year programming was coded as not participated = 0 and participated = 1, and on/off campus housing status was coded off-campus = 0 and on-campus = 1. The remaining variables included in the EFA were coded on four-point Likert scales (e.g., from Strongly Agree to Strongly Disagree, Often to Never, Dissatisfied to Very Satisfied, Very Difficult to Very Easy, and Never to Weekly). All items were coded into the positive direction as indicated by the literature for interpretation purposes.

Logistic regression methods. Logistic Regression Analyses were conducted using IBM’s SPSS Version 21 to construct regression models that best predicted retention and persistence for study participants. Two binary variables were created using the future PLAN item in the YFCY survey to reflect retention and non-retention, and persistence and uncertainty. Respectively, these variables were used in separate analyses to identify the best predictive model for students that plan to be return to their current institution and best predictive model for students that plan to persist in college at their current institution or another institution. Separate binary logistic analyses were conducted on each dependent variable using the same set of variables used in the linear regression analysis. The Retention dependent variable was coded as Retention = 1 (fall plan is “Attending your current [or most recent] institution”) and Not Retained = 0 (fall plan is “Attending another institution,” “Don’t know/have not decided yet,” or “Not attending any institution”). The Persistence dependent variable was coded as Persisting = 1 (fall plan is “Attending your current [or most recent] institution” or “Attending another institution”)
and Not Persisting = 0 (fall plan is “Don’t know/have not decided yet” or “Not attending any institution”).

**Reliability/Validity**

**Addressing internal validity.** Creswell (2009) described internal validity threats as experimental procedures, treatments, or experiences of participants that impede the researcher or jeopardize the generalizability of the findings to the general population (p. 162). Because data collection did not include a treatment protocol, pre-post testing, or compensation, many internal threats were not likely to be present (such as maturation, diffusion of treatment, compensatory rivalry, or testing). The study may have been susceptible to internal validity threats of Selection and Mortality. Selection threat results from unintentional bias when selecting participants for a study. While this study did not utilize random sampling to avoid selection bias, the objective when administering the survey was to capture as much of the targeted population across various institutions and not employ a selection procedure that would likely result in a selection bias. Mortality threats results from participants not completing the full research protocol, in this case, failing to complete the survey. The mortality threat may be present in any research study. The short duration of the survey and administering the survey in a manner convenient for participants (such as online or during class) may have lessened the potential impact of participant mortality.

**Addressing external validity.** Creswell (2009) described external validity threats as assigning incorrect inferences or overextending the significance of findings to different people, settings, or time periods. A sample with characteristics that are more
similar than not or overwhelmingly from one setting type may fail to be a reasonable sample of the general population resulting in a selection or setting threat. In order to overcome the effects of a narrowly constructed sample and setting, the dataset consisted of participants from multiple institutions, representing several geographical regions and institutional classifications (private, public, religious, liberal arts, and research institutions). The diversity in institution-types should have increased the representative nature of the sample, as well as the institutional settings in which the survey was administered. History is the external validity threat that questions if the findings were unique to a specific period of time or whether the findings can be replicated sometime in the future. The data in the sample was collected in two separate years at the end of students’ first year of college. A comparison of the sample by year found that the two survey administration years were more similar than not.

**Research Limitations**

This study has limitations associated with the institutions that choice to administer the YFCY survey and the items included on the YFCY survey. The Cooperative Research Institute Program (2010) reported that 457 four-year colleges and universities (N = 26,758 students) participated in the YFCY survey in the 2009 (2008 numbers were not reported). While the sample was large, that sample represents a fraction of the total number of U.S. four-year institutions and the number of first year students. Nevertheless, the sample provided a significant sample size, which conceptually provided diversity in institutional type and size, regional location, and student characteristics. There are additional limitations associated with the questions included on the YFCY survey.
Survey instruments are constrained by the theoretical orientation and subjective bias of the survey developer. As the objective of this study was to identify factors related to student success and persistence, the principal researcher recognized that findings of this study would be limited by the survey instrument, which was not exhaustive of factors that may have an influence or have a relationship with the dependent variables in this study. Furthermore, this study was specifically interested in (and therefore only included) factors that promoted academic success. As a result the regression models in this study over predict academic success outcomes and are not good predictors of academic failure. This study would most accurately be described as identifying the factors on the YFCY survey that have a relationship with academic performance, institutional retention, and persistence among institutions similar to those in this sample (albeit an intentionally broad sample).
CHAPTER IV
RESEARCH RESULTS

The following chapter reports findings from this study regarding student and institutional variables that have a significant relationship with academic performance and intentions to persist for African American and Latino college students. It is believed that the low national college retention and graduation rates for African Americans and Latinos who enrolled at four-year colleges represent a substantial barrier to socioeconomic mobility and financial burden for those that amassed hefty student debt without earning a college degree (Cardoza, 1991). Furthermore, institutional reputations and sources of state funding are increasingly attached to graduation rates, making the issue of retention and graduation of all students ever more critical (Carey, 2009; Nelson, 2010).

Several demographic characteristics have been shown to be related to retention and graduation risk factors (e.g., racial classification, gender, parents’ education level, socioeconomic status, and quality of K-12 education system, see Braxton, 2000; Nunez, 2009), which are characteristics beyond students’ and institutions’ ability to control without negatively impacting educational access. Scholarly research and literature on practices to improve college retention and graduation rates for African American and Latino students is limited; nevertheless many institution-specific programs have proven to be effective at increasing the graduation rates of this population (Nguyen et al., 2012a, 2012b). Furthermore, many African American and Latino college students are academically successful, retained, and persist regardless of their participation in a formal college retention intervention program (NCES, 2012). This study was exclusively
concerned with the institutional and student experiences, perceptions, and behaviors that can be acted upon during a student’s first year of college that has a relationship with the educational realities and outcomes for African American and Latino college students.

The variables analyzed in this study were initially derived from the literature pertaining to academic adjustment, institutional satisfaction, and campus climate for African American and Latino college students at four year institutions. Items for this study were identified on the *Your First College Year* (YFCY) survey and *The Freshmen Survey* (TFS), including four composite scores (see Appendix A). The YFCY and TFS survey are products of the Higher Education Research Institution, a department of UCLA and were administrated in 2008 and 2009. Thirty-six items were identified on the YFCY survey to be included in this analysis. Standardized test scores were collected from TFS and were converted to percentile rank to standardize scoring between ACT and SAT scales (ACT, 2007, 2008; College Board, 2007, 2008). Covariate or control items were collected from the YFCY survey including race/ethnicity, sex, first-time full-time status, institution type, and survey administration year. Dependent variables included two items from the YFCY survey: “What is your current grade average (as of your most recently completed academic term)?” to assess academic performance and “What do you think you will be doing in the fall?” to assess retention and persistence intentions.

The analysis involved three research questions and three analytical methods. The first research question asked what is the factor structure derived from academic adjustment, institutional satisfaction, and campus climate items for African American and Latino students. Exploratory factor analysis was utilized to examine the first research
question involving data from all participants. The second research question asked for the best predictive model for academic performance of African American and Latino students. Linear Regression Analysis was utilized to examine the second research question. The third research question asked for the best predictive model for retention and separately persistence for African American and Latino students. Logistic Regression Analysis was used to examine the third research question.

**Exploratory Factory Analysis Outliers and Descriptive Statistics**

The proceeding analysis first identified and removed outliers to enhance the statistical validity of the factor structure. A total of 324 cases were excluded from the analysis due to missing data. The final analysis sample ($N = 5,559$) included 45.6% ($n = 2,533$) African American students and 54.4% ($n = 3,026$) Latino students, 29.8% ($n = 1,656$) male students and 70.2% ($n = 3,903$) female students. The proportion of males to females across both African American and Latino students were relatively consistent at 30% males to 70% females. Nearly all students were first time full time students (98.8%).

The majority of the respondents reported more favorable experiences and perceptions of their college experience than not favorable perceptions. With regards to sense of belonging, 79.1% agreed they felt part of the campus community and 75.7% reported being satisfied with interactions with other students. With regards to perceiving that faculty and staff care about students, 89% reported faculty and 81.4% reported staff were interested in students’ academic problems, and 63.6% reported staff were interested in students’ personal problems. Respondents indicated that 74.7% were satisfied with
class sizes and 89.4% felt campus services were easy to utilize. Students most frequently interacted with their academic advisor one to two times per term (51.2%), followed by one to two times per month (26.7%) and weekly interactions at 16.0%.

Perceptions of campus diversity and inclusion were not as favorable as other aspects of campus. Respectively, only 45.7% and 48.3% were satisfied with the diversity of the faculty and the study body. With regards to felt discrimination, 15.1% agreed they had felt discriminated based on gender, 26.8% agreed they had felt discrimination based on race/ethnicity, 19.8% agreed they had felt discrimination based on socioeconomic status, 19.8% felt insulted or threatened because of their race/ethnicity, and 29.6% agreed they heard a faculty express stereotypes about racial/ethnic-groups. While these numbers do not indicate the majority of African American and Latino students have felt discriminated against, these are understandably high percentages to report simply within the first year of college.

**Assumption Checking**

Assumptions were tested prior to conducting the final factor analysis. Bartlett’s Test of Sphericity was run to confirm the existing correlational matrix (R) is not an identity matrix, making the factor analysis inappropriate. Bartlett’s test confirmed that R is not an identity matrix ($x^2=29746.052, DF= 136, p < .000$). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy confirmed that the sample size was sufficient to conduct the factor analysis (KMO = .817). These tests confirmed a low likelihood that any assumptions were violated.
Exploratory Factor Analysis Results

The EFA indicated that there were four factors with Eigenvalues greater than 1.0, with values ranging from 1.115 to 4.398 (see Table 1: Total Variance Explained for Exploratory Factor Analysis of Continuous Variable). A fifth factor was identified with an Eigenvalue greater than 1.0 but consisted of a single item (Frequency of interaction with family) and therefore was excluded from the factor structure. A visual inspection of the scree plot suggested that the factors structure could be limited to three factors, but given the exploratory nature of the analysis the four factors with Eigenvalues greater than 1.0 and consisted of two or more items were retained. Combined, the four factors explain 55.09% of the variance in the data.

Table 1

**Total Variance Explained for Exploratory Factor Analysis of Continuous Variable**

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
<td>Cum %</td>
</tr>
<tr>
<td>4</td>
<td>1.115</td>
<td>6.561</td>
<td>55.484</td>
</tr>
<tr>
<td>5</td>
<td>1.007</td>
<td>5.922</td>
<td>61.406</td>
</tr>
</tbody>
</table>

*Note. Performed 17 Extractions, 5 Extractions with Eigenvalues above 1.0*
The four-factor structure is displayed in Table 2 (Exploratory Factor Analysis Loading With Varimax Rotation of Continuous Survey Items). Factor one includes five items that consisted of the “felt discrimination” items, the “heard faculty express stereotypes about my racial/ethnic-groups,” and “felt insulted or threatened because of your race/ethnicity.” Respondents considered these items to be similar or responded to these items in a similar fashion. This factor was named “Felt Discrimination” because this category of items all relate to perceiving or observing some form of discrimination on campus based on race/ethnicity, sex, or socioeconomic status. Factor two includes three items that consisted of “I see myself as part of the campus community,” “I feel a sense of belonging to this campus,” and “Satisfaction with interactions with other students.” Factor two was named “Sense of Belonging” because this category of items all relate to an existing construct in the literature most often referred to as a sense of belonging (Schlossberg, 1989). Factor three includes three items that consisted of “Staff here are interested in students’ academic problems,” “Faculty here are interested in students’ academic problems,” and “Staff here are interested in students’ personal problems.” Factor three was named “Faculty/Staff Concern for Students” because each item relates to a student’s perception that faculty and staff are concerned about a student’s wellbeing. Lastly, factor four includes two items that consisted of “Satisfaction with racial/ethnic diversity of study body” and “Satisfaction with racial/ethnic diversity of faculty.” Factor four was named “Satisfaction with Campus Diversity” because the two items clearly relate to the extent that students are satisfied with the racial/ethnic profile of the campus community.
## Table 2

**Exploratory Factor Analysis Loading With Varimax Rotation of Continuous Survey Items**

<table>
<thead>
<tr>
<th></th>
<th>Felt Discrimination</th>
<th>Sense of Belonging</th>
<th>Faculty/Staff Concern for Students</th>
<th>Satisfaction w/ Campus Diversity</th>
<th>Family Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Felt discriminated against based on my race/ethnicity</td>
<td>.847</td>
<td>.087</td>
<td>.025</td>
<td>.145</td>
<td>-.012</td>
</tr>
<tr>
<td>Felt discriminated against based on my socio-economic status</td>
<td>.825</td>
<td>.110</td>
<td>.021</td>
<td>.072</td>
<td>.018</td>
</tr>
<tr>
<td>Felt discriminated against based on my gender</td>
<td>.799</td>
<td>.090</td>
<td>.010</td>
<td>.011</td>
<td>.066</td>
</tr>
<tr>
<td>In class, I have heard faculty express stereotypes about racial/ethnic-groups</td>
<td>.647</td>
<td>.026</td>
<td>.077</td>
<td>.057</td>
<td>-.053</td>
</tr>
<tr>
<td>Felt insulted or threatened because of your race/ethnicity</td>
<td>.623</td>
<td>.064</td>
<td>.061</td>
<td>.091</td>
<td>-.057</td>
</tr>
<tr>
<td>I see myself as part of the campus community</td>
<td>.042</td>
<td>.756</td>
<td>.245</td>
<td>.010</td>
<td>-.119</td>
</tr>
<tr>
<td>I feel a sense of belonging to this campus</td>
<td>.097</td>
<td>.754</td>
<td>.257</td>
<td>.071</td>
<td>-.087</td>
</tr>
<tr>
<td>Campus Satisfaction: Interaction with other students</td>
<td>.099</td>
<td>.702</td>
<td>.025</td>
<td>.322</td>
<td>.094</td>
</tr>
<tr>
<td>Utilize campus services available to students</td>
<td>.113</td>
<td>.576</td>
<td>.125</td>
<td>.028</td>
<td>.147</td>
</tr>
<tr>
<td>Campus Satisfaction: Class size</td>
<td>.057</td>
<td>.499</td>
<td>.084</td>
<td>.366</td>
<td>.215</td>
</tr>
<tr>
<td>The Staff here are interested in students’ academic problems</td>
<td>.076</td>
<td>.160</td>
<td>.867</td>
<td>.083</td>
<td>.068</td>
</tr>
<tr>
<td>The Staff here are interested in students’ personal problems</td>
<td>.017</td>
<td>.147</td>
<td>.818</td>
<td>.053</td>
<td>.048</td>
</tr>
</tbody>
</table>

*(table continues)*
Table 2 (continued)

**Exploratory Factor Analysis Loading With Varimax Rotation of Continuous Survey Items**

<table>
<thead>
<tr>
<th>Factor Description</th>
<th>Felt Discrimination</th>
<th>Sense of Belonging</th>
<th>Faculty/Staff Concern for Students</th>
<th>Satisfaction w/ Campus Diversity</th>
<th>Family Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty here are interested in students’ academic problems</td>
<td>.103</td>
<td>.307</td>
<td>.722</td>
<td>.087</td>
<td>.053</td>
</tr>
<tr>
<td>Campus Satisfaction: Racial/ethnic diversity of student body</td>
<td>.149</td>
<td>.181</td>
<td>.052</td>
<td>.866</td>
<td>.015</td>
</tr>
<tr>
<td>Campus Satisfaction: Racial/ethnic diversity of faculty</td>
<td>.151</td>
<td>.138</td>
<td>.133</td>
<td>.857</td>
<td>-.006</td>
</tr>
<tr>
<td>Frequency of family interaction</td>
<td>.096</td>
<td>-.055</td>
<td>-.018</td>
<td>.053</td>
<td>.805</td>
</tr>
<tr>
<td>Frequency of Academic advisors/counselors interaction</td>
<td>-.147</td>
<td>.143</td>
<td>.135</td>
<td>-.013</td>
<td>.555</td>
</tr>
</tbody>
</table>

*Note. Factor loading > .60 are in boldface.*

Internal consistency reliability was evaluated for each factor. Coefficient (Cronbach’s) Alpha (α) for each factor included: Felt Discrimination = .811, Sense of Belonging = .740, Faculty/Staff Concern for Students = .789, and Satisfaction with Campus Diversity = .806. All Coefficient Alphas were considered high and indicated strong internal consistency and reliability (Nunnally & Bernstein, 1994).

**Linear Regression Outliers and Descriptive Statistics—All Participants**

The proceeding analysis first identified and removed outliers to enhance the statistical conclusion validity of the linear model. Nine hundred and thirty-six cases were removed from the analysis due to missing data in one or more independent variables.
This dataset was used for all proceeding analysis. Mahalanobis Distance was examined for cases that exceeded the outer acceptable limits of 33.924, which resulted in the identification and removal of 65 cases from the analysis. Next, residual diagnostics were reviewed to identify cases with large studentized residuals (beyond +/-3.0), which indicate poor prediction for Y values in the regression model. Fifteen cases were flagged with extreme studentized residuals. Cook’s D values for the 15 flagged cases had values close to zero, indicating the cases were not problematic (i.e., values close to 1 or 2 indicate potential problems). The final analysis sample ($N = 4,882$) included 44.2% ($n = 2,158$) African American students and 55.8% ($n = 2,724$) Latino students, 28.8% ($n = 1,406$) male students and 71.2% ($n = 3,476$) female students. The sample comprised 63.3% ($n = 3,090$) from 4-Year Colleges, 36.7% ($n = 1,792$) from Large Universities, and all respondents were first time full time students.

**Linear regression descriptive statistics of main variables.** GPA was reported on a six-point Likert scale corresponding to ranges of GPAs on a 4.0 scale (i.e., 1 = “C- or less [below 1.75],” 2 = “C [1.75-2.24],” 3 = “B-/C+ [2.25-2.74],” 4 = “B [2.75-3.24],” 5 = A-/B+ [3.25-3.74],” and 6 = “A [3.75-4.0]”). The average response for GPA was 5.07 ($SD = 1.305$), which corresponded with a response of “A- to B+ (3.25-3.74)” on the YCFY survey. This indicates that reported GPA distribution is negatively skewed, consistent with the tendency to inflate grades when reporting academic performance.

The majority of respondents participated in a first year program (69.7%) and lived on campus (79%). Among respondents, 62.3% reported frequently feeling support from family to succeed and 37.7% reported occasional support, and 82.6% reported interacting
with family once or more a week with the more frequent response was interacting daily with their family (44.2%). Among respondents, 47.8% reported not feeling isolated from campus life and 52.2% reported occasionally feeling isolated. Among respondents, 56.9% reported occasionally feeling overwhelmed by all they had to do and 43.1% reported frequently overwhelmed. Among respondents, 78.7% reported not feeling unsafe on campus and 21.3% reported occasionally feeling unsafe. Among respondents, 35.1% reported frequently asking questions in class and 64.9% reported occasionally asking questions. Among respondents, 44.6% reported frequently seeking feedback on academic work and 55.4% reported occasionally seeking feedback.

Four constructs created by HERI were included in the analysis and yielded the average scores of 50.063 (SD = 8.562) on YFCY Student-Faculty Interaction, 48.433 (SD = 9.234) on YFCY Academic Adjustment, 47.147 (SD = 8.928) on YFCY Academic Self-Concept, and 48.173 (SD = 8.615) on YFCY Overall Satisfaction. All YFCY construct means are in the upper range, indicating that respondents have reported more frequent positive related interactions with faculty, have high academic adjustment and academic self-concept, and have higher overall institutional satisfaction. Factor total averages were 15.821 (SD = 3.237) for the Felt Discrimination factor, 8.957 (SD = 1.863) for the Sense of Belonging factor, 8.815 (SD = 1.695) for the Faculty and Staff Concern for Students factor, and 4.821 (SD = 1.727) for the Satisfaction with Campus Diversity factor. The factor means indicate that respondents are in the upper range for sense of belonging, not feeling discrimination, and feeling faculty and staff care about their well-being, but lowest in range for satisfaction with campus diversity.
**Linear regression assumption checking.** The basic assumptions of linear regression were examined to improve statistical conclusion validity prior to examining the linear model. The residual scatterplots output indicated that linearity was met. Independence was confirmed with the Durbin-Watson Test. Examination of scatterplots of the predictors indicated fairly constant dispersion of all values around the regression line indicating that the assumption of Homoscedasticity has been satisfied. The histogram of the standardized residuals for GPA appeared to be within acceptable standards of normal distribution. Viewing a correlation matrix, multicollinearity was found to not be present. Finally, the collinearity statistics did not indicate any overlap in the contribution of the percentages to the model and the variance inflation factors (VIFs) indicated that tolerances for all the predictors were within acceptable limits.

**Linear regression results—all participants.** Stepwise methods went through nine models using a stepping criterion set at probability of F is .01 and removal is .10. The final model was significant ($R^2 = .298$, $F[9, 4,872] = 230.288$, $p < .001$). Together the predictors accounted for 29.8% of the variance in GPA. In the full model, the standardized beta for the YFCY Academic Self-Concept score ($\beta = .342$), YFCY Academic Adjustment score ($\beta = .250$), race/ethnicity ($\beta = .118$), sex ($\beta = .105$), YFCY Overall Satisfaction score ($\beta = .125$), Felt isolated from campus life ($\beta = -.055$), Frequency of interaction with family ($\beta = -.048$), Asking questions in class ($\beta = .045$), and Sense of Belonging factor ($\beta = -.057$) were significant predictors ($p < .001$; see Table 3, *Academic Performance Linear Regression Model—All Participants*).
Table 3

*Academic Performance Linear Regression Model—All Participants*

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S. E.</th>
<th>β</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.282*</td>
<td>.131</td>
<td></td>
<td>2.149</td>
</tr>
<tr>
<td>YFCY Academic Self-Concept Score</td>
<td>.050***</td>
<td>.002</td>
<td>.342</td>
<td>25.724</td>
</tr>
<tr>
<td>YFCY Academic Adjustment Score</td>
<td>.035***</td>
<td>.002</td>
<td>.250</td>
<td>19.163</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>.310***</td>
<td>.032</td>
<td>.118</td>
<td>9.648</td>
</tr>
<tr>
<td>Your sex</td>
<td>.303***</td>
<td>.035</td>
<td>.105</td>
<td>8.571</td>
</tr>
<tr>
<td>YFCY Overall Satisfaction Score</td>
<td>.019***</td>
<td>.003</td>
<td>.125</td>
<td>7.110</td>
</tr>
<tr>
<td>Felt: Isolated from campus life</td>
<td>-.144***</td>
<td>.034</td>
<td>-.055</td>
<td>-4.245</td>
</tr>
<tr>
<td>Frequency of family interaction</td>
<td>-.049***</td>
<td>.012</td>
<td>-.048</td>
<td>-3.965</td>
</tr>
<tr>
<td>Ask questions in class</td>
<td>.124***</td>
<td>.034</td>
<td>.045</td>
<td>3.650</td>
</tr>
<tr>
<td>Sense of Belonging Factor</td>
<td>-.040**</td>
<td>.012</td>
<td>-.057</td>
<td>-3.314</td>
</tr>
</tbody>
</table>

*R² = .298, adjusted R² = .297

*p < .05, **p < .01, ***p < .000

**Linear Regression Outliers and Descriptive Statistics—African American**

The proceeding analysis contains only African American respondents to understand their unique experiences and outcomes. First outliers were identified and removed to enhance the statistical conclusion validity of the linear model. Mahalanobis Distance was examined for cases that exceeded the outer acceptable limits of 33.924, which resulted in the identification and removal of three cases from the analysis. Next, residual diagnostics were reviewed to identify cases with large studentized residuals.
(beyond +/-3.0), which indicate poor prediction for Y values in the regression model.

There were no cases with extreme studentized residuals. Furthermore, Cook’s D values were examined and all values were close to zero, indicating no additional problematic cases (i.e., values close to 1 or 2 indicate potential problems). The final analysis sample \( (N = 2,193) \) included 26.9\% \( (n = 589) \) male students and 73.1\% \( (n = 1,604) \) female students. The sample comprised 70.5\% \( (n = 1,547) \) from 4-Year Colleges and 29.5\% \( (n = 646) \) from Large Universities, and 98.7\% \( (n = 2,165) \) were first time full time students.

**Linear regression descriptive statistics of main variables.** GPA was reported on a five-point Likert scale corresponding to ranges of GPAs on a 4.0 scale (i.e., 1= “C- or less [below 1.75],” 2= “C [1.75-2.24],” 3= “B-/C+ [2.25-2.74],” 4= “B [2.75-3.24],” 5= “A-/B+ [3.25-3.74],” and 6= “A [3.75-4.0]”). The average response for GPA was 4.89 \( (SD = 1.336) \), which corresponded with a response of “A- to B+ (3.25-3.74)” on the YCFY survey. This indicates that reported GPA distribution is negatively skewed, consistent with the tendency to inflate grades when reporting academic performance.

The majority of respondents participated in a first year program (74.5\%) and lived on campus (83.3\%). Among respondents, 60.1\% reported frequently feeling support from family to succeed and 39.9\% reported occasional support, and 84\% reported interacting with family once or more a week with the more frequent response was interacting daily with their family (42.5\%). Among respondents, 49.9\% reported not feeling isolated from campus life and 50.1\% reported occasionally feeling isolated. Among respondents, 56.3\% reported occasionally feeling overwhelmed by all they had to do and 43.7\% reported frequently overwhelmed. Among respondents, 74.9\% reported
not feeling unsafe on campus and 25.1% reported occasionally feeling unsafe. Among respondents, 38.9% reported frequently asking questions in class and 61.1% reported occasionally asking questions. Among respondents, 45.7% reported frequently seeking feedback on academic work and 54.3% reported occasionally seeking feedback.

Four constructs created by HERI were included in the analysis and yielded the average scores of 50.751 (SD = 8.497) on YFCY Student-Faculty Interaction, 48.635 (SD = 9.220) on YFCY Academic Adjustment, 46.998 (SD = 8.804) on YFCY Academic Self-Concept, and 46.882 (SD = 8.607) on YFCY Overall Satisfaction. All YFCY construct means are in the upper range, indicating that respondents have reported more frequent positive related interactions with faculty, have high academic adjustment and academic self-concept, and have higher overall institutional satisfaction.

Factor total averages were 15.226 (SD = 3.358) for the Felt Discrimination factor, 8.826 (SD = 1.862) for the Sense of Belonging factor, 8.762 (SD = 1.727) for the Faculty and Staff Concern for Students factor, and 4.568 (SD = 1.761) for the Satisfaction with Campus Diversity factor. The factor means indicate that respondents are in the upper range for sense of belonging, not feeling discrimination, and feeling faculty and staff care about their well-being, but lowest in range for satisfaction with campus diversity.

**Linear regression assumption checking.** The basic assumptions of linear regression were examined to improve statistical conclusion validity prior to examining the linear model. The residual scatterplots output indicated that linearity was met. Independence was confirmed with the Durbin-Watson Test. Examination of scatterplots of the predictors indicated fairly constant dispersion of all values around the regression
line indicating that the assumption of Homoscedasticity has been satisfied. The histogram of the standardized residuals for GPA appeared to be within acceptable standards of normal distribution. Viewing a correlation matrix, multicollinearity was found to not be present. Finally, the collinearity statistics did not indicate any overlap in the contribution of the percentages to the model and the variance inflation factors (VIFs) indicated that tolerances for all the predictors were within acceptable limits.

**Linear regression results—African American.** Stepwise methods went through nine models using a stepping criterion set at probability of F is .01 and removal is .10. The final model was significant \( (R^2 = .284, F[8, 2,184] = 108.429, p < .001) \). Together the predictors accounted for 28.4% of the variance in GPA. In the full model, the standardized beta for the YFCY Academic Self-Concept score \( (\beta = .346) \), YFCY Academic Adjustment score \( (\beta = .216) \), sex \( (\beta = .112) \), Frequency of Family Interaction \( (\beta = -.089) \), YFCY Overall Satisfaction score \( (\beta = .152) \), Sense of Belonging factor \( (\beta = -.084) \), Asking questions in class \( (\beta = .052) \), and Felt isolated from campus life \( (\beta = -.052) \) were significant predictors \( (p < .001; \text{see Table 4, Academic Performance Linear Regression Model African American}) \).
Table 4

**Academic Performance Linear Regression Model—African American**

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S. E.</th>
<th>β</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.468*</td>
<td>.198</td>
<td>.346</td>
<td>2.361</td>
</tr>
<tr>
<td>YFCY Academic Self-Concept Score</td>
<td>.052***</td>
<td>.003</td>
<td>.346</td>
<td>17.208</td>
</tr>
<tr>
<td>YFCY Academic Adjustment Score</td>
<td>.031***</td>
<td>.003</td>
<td>.216</td>
<td>10.858</td>
</tr>
<tr>
<td>Your sex</td>
<td>.337***</td>
<td>.056</td>
<td>.112</td>
<td>6.063</td>
</tr>
<tr>
<td>Frequency of family interaction</td>
<td>-.095***</td>
<td>.020</td>
<td>-.089</td>
<td>-4.819</td>
</tr>
<tr>
<td>YFCY Overall Satisfaction Score</td>
<td>.024***</td>
<td>.004</td>
<td>.152</td>
<td>5.882</td>
</tr>
<tr>
<td>Sense of Belonging Factor</td>
<td>-.060**</td>
<td>.018</td>
<td>-.084</td>
<td>-3.324</td>
</tr>
<tr>
<td>Ask questions in class</td>
<td>.145**</td>
<td>.052</td>
<td>.053</td>
<td>2.812</td>
</tr>
<tr>
<td>Felt: Isolated from campus life</td>
<td>-.138**</td>
<td>.052</td>
<td>-.052</td>
<td>-2.656</td>
</tr>
</tbody>
</table>

*R² = .284, adjusted R² = .282

*p < 0.05, **p < 0.01, ***p < 0.000

**Linear Regression Outliers and Descriptive Statistics—Latino**

The proceeding analysis contains only Latino respondents to understand their unique experiences and outcomes. First outliers were identified and removed to enhance the statistical conclusion validity of the linear model. Mahalanobis Distance was examined for cases that exceeded the outer acceptable limits of 33.924, which indicated no cases beyond the outer limits. Next, residual diagnostics were reviewed to identify cases with large studentized residuals (beyond +/-3.0), which indicate poor prediction for Y values in the regression model. There were 18 cases with extreme studentized residuals...
residuals and were removed. Lastly, Cook’s D values were examined and all cases had values close to zero, indicating no additional problematic cases (i.e., values close to 1 or 2 indicate potential problems). The final analysis sample \((N = 2,732)\) included 30.6\% \((n = 835)\) male students and 69.4\% \((n = 1,897)\) female students. The sample comprised 58.0\% \((n = 1,585)\) from 4-Year Colleges and 42.0\% \((n = 1,147)\) from Large Universities, and 99.3\% \((n = 2,712)\) were first time full time students.

**Linear regression descriptive statistics of main variables.** GPA was reported on a six-point Likert scale corresponding to ranges of GPAs on a 4.0 scale (i.e., 1 = “C- or less [below 1.75],” 2 = “C [1.75-2.24],” 3 = “B-/C+ [2.25-2.74],” 4 = “B [2.75-3.24],” 5 = A-/B+ [3.25-3.74],” and 6 = “A [3.75-4.0]”). The average response for GPA was 5.24 \((SD = 1.238)\), which corresponded with a response of “A- to B+ (3.25-3.74)” on the YCFY survey. This indicates that reported GPA distribution is negatively skewed, consistent with the tendency to inflate grades when reporting academic performance.

The majority of respondents participated in a first year program (65.6\%) and lived on campus (74.9\%). Among respondents, 64.2\% reported frequently feeling support from family to succeed and 35.8\% reported occasional support, and 81.5\% reported interacting with family once or more a week with the more frequent response was interacting daily with their family (45.7\%). Among respondents, 46.5\% reported not feeling isolated from campus life and 53.5\% reported occasionally feeling isolated. Among respondents, 57.5\% reported occasionally feeling overwhelmed by all they had to do and 42.5\% reported frequently overwhelmed. Among respondents, 81.6\% reported not feeling unsafe on campus and 18.4\% reported occasionally feeling unsafe. Among
respondents, 32.5% reported frequently asking questions in class and 67.5% reported occasionally asking questions. Among respondents, 43.6% reported frequently seeking feedback on academic work and 56.4% reported occasionally seeking feedback.

Four constructs created by HERI were included in the analysis and yielded the average scores of 49.554 ($SD = 8.591$) on YFCY Student-Faculty Interaction, 48.339 ($SD = 9.279$) on YFCY Academic Adjustment, 47.229 ($SD = 9.044$) on YFCY Academic Self-Concept, and 49.199 ($SD = 8.514$) on YFCY Overall Satisfaction. All YFCY construct means are in the upper range, indicating that respondents have reported more frequent positive related interactions with faculty, have high academic adjustment and academic self-concept, and have higher overall institutional satisfaction.

Factor total averages were 16.295 ($SD = 3.091$) for the Felt Discrimination factor, 9.048 ($SD = 1.876$) for the Sense of Belonging factor, 8.840 ($SD = 1.702$) for the Faculty and Staff Concern for Students factor, and 5.031 ($SD = 1.682$) for the Satisfaction with Campus Diversity factor. The factor means indicate that respondents are in the upper range for sense of belonging, not feeling discrimination, and feeling faculty and staff care about their well-being, but lowest in range for satisfaction with campus diversity.

**Linear regression assumption checking.** The basic assumptions of linear regression were examined to improve statistical conclusion validity prior to examining the linear model. The residual scatterplots output indicated that linearity was met. Independence was confirmed with the Durbin-Watson Test. Examination of scatterplots of the predictors indicated fairly constant dispersion of all values around the regression line indicating that the assumption of Homoscedasticity has been satisfied. The
histogram of the standardized residuals for GPA appeared to be within acceptable standards of normal distribution. Viewing a correlation matrix, multicollinearity was found to not be present. Finally, the collinearity statistics did not indicate any overlap in the contribution of the percentages to the model and the variance inflation factors (VIFs) indicated that tolerances for all the predictors were within acceptable limits.

**Linear regression results—Latino.** Stepwise methods went through nine models using a stepping criterion set at probability of F is .01 and removal is .10. The final model was significant ($R^2 = .322$, $F[8, 2,723] = 161.635, p < .001$). Together the predictors accounted for 32.2% of the variance in GPA. In the full model, the standardized beta for the YFCY Academic Self-Concept score ($\beta = .373$), YFCY Academic Adjustment score ($\beta = .280$), sex ($\beta = .096$), YFCY Overall Satisfaction score ($\beta = .094$), Frequency of Family Interaction ($\beta = -.089$), Felt isolated from campus life ($\beta = -.063$), Faculty & Staff Concern Students factor ($\beta = -.048$), Asking questions in class ($\beta = .045$), and Felt unsafe on campus ($\beta = -.042$) were significant predictors ($p < .001$; see Table 5, *Academic Performance Linear Regression Model—Latino*).
Table 5

**Academic Performance Linear Regression Model—Latino**

<table>
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<th></th>
<th>B</th>
<th>S. E.</th>
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<tbody>
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<td>Constant</td>
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<td>YFCY Academic Self-Concept Score</td>
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<td>YFCY Academic Adjustment Score</td>
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<td>Your sex</td>
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<td>.096</td>
<td>5.904</td>
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<tr>
<td>Faculty &amp; Staff Concern for Students</td>
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<tr>
<td>Ask questions in class</td>
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<td>.045</td>
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<tr>
<td>Felt: Unsafe on this campus</td>
<td>-.135**</td>
<td>.052</td>
<td>-.042</td>
<td>-2.620</td>
</tr>
</tbody>
</table>

$R^2 = .322$, adjusted $R^2 = .320$

*p < .05, **p < .01, ***p < .000

**Linear Regression Outliers and Descriptive Statistics—Males**

The proceeding analysis contains only male respondents to understand their unique experiences and outcomes. First outliers were identified and removed to enhance the statistical conclusion validity of the linear model. Mahalanobis Distance was examined for cases that exceeded the outer acceptable limits of 33.924, which indicated no cases beyond the outer limits. Next, residual diagnostics were reviewed to identify cases with large studentized residuals (beyond +/-3.0), which indicate poor prediction for Y values in the regression model. There were nine cases with extreme studentized
residuals and were removed. Lastly, Cook’s $D$ values were examined and all cases had values close to zero, indicating no additional problematic cases (i.e., values close to 1 or 2 indicate potential problems). The final analysis sample ($N = 1,436$) included 58.7% ($n = 838$) Latino male students and 41.3% ($n = 589$) African American male students. The sample comprised 61.0% ($n = 871$) from 4-Year Colleges and 39.0% ($n = 556$) from Large Universities, and 98.5% ($n = 1,405$) were first time full time students.

**Linear regression descriptive statistics of main variables.** GPA was reported on a five-point Likert scale corresponding to ranges of GPAs on a 4.0 scale (i.e., 1 = “C- or less [below 1.75],” 2 = “C [1.75-2.24],” 3= “B-/C+ [2.25-2.74],” 4 = “B [2.75-3.24],” 5 =A-/B+ [3.25-3.74],” and 6= “A [3.75-4.0]”). The average response for GPA was 4.94 ($SD = 1.301$), which corresponded with a response of “A- to B+ (3.25-3.74)” on the YCFY survey. This indicates that reported GPA distribution is negatively skewed, consistent with the tendency to inflate grades when reporting academic performance.

The majority of respondents participated in a first year program (67.8%) and lived on campus (80.0%). Among respondents, 57.5% reported frequently feeling support from family to succeed and 42.5% reported occasional support, and 77.9% reported interacting with family once or more a week with the more frequent response was interacting daily with their family (33.2%). Among respondents, 51.6% reported not feeling isolated from campus life and 48.4% reported occasionally feeling isolated. Among respondents, 65.9% reported occasionally feeling overwhelmed by all they had to do and 34.1% reported frequently overwhelmed. Among respondents, 87.2% reported not feeling unsafe on campus and 12.8% reported occasionally feeling unsafe. Among
respondents, 35.5% reported frequently asking questions in class and 64.5% reported occasionally asking questions. Among respondents, 40.3% reported frequently seeking feedback on academic work and 59.7% reported occasionally seeking feedback.

Four constructs created by HERI were included in the analysis and yielded the average scores of 50.103 (SD = 8.455) on YFCY Student-Faculty Interaction, 47.946 (SD = 9.121) on YFCY Academic Adjustment, 48.641 (SD = 9.082) on YFCY Academic Self-Concept, and 47.879 (SD = 8.709) on YFCY Overall Satisfaction. All YFCY construct means are in the upper range, indicating that respondents have reported more frequent positive related interactions with faculty, have high academic adjustment and academic self-concept, and have higher overall institutional satisfaction.

Factor total averages were 15.922 (SD = 3.340) for the Felt Discrimination factor, 8.950 (SD = 1.902) for the Sense of Belonging factor, 8.809 (SD = 1.728) for the Faculty and Staff Concern for Students factor, and 4.913 (SD = 1.712) for the Satisfaction with Campus Diversity factor. The factor means indicate that respondents are in the upper range for sense of belonging, not feeling discrimination, and feeling faculty and staff care about their well-being, but lowest in the range for satisfaction with campus diversity.

**Linear regression assumption checking.** The basic assumptions of linear regression were examined to improve statistical conclusion validity prior to examining the linear model. The residual scatterplots output indicated that linearity was met. Independence was confirmed with the Durbin-Watson Test. Examination of scatterplots of the predictors indicated fairly constant dispersion of all values around the regression line indicating that the assumption of Homoscedasticity has been satisfied. The
histogram of the standardized residuals for GPA appeared to be within acceptable standards of normal distribution. Viewing a correlation matrix, multicollinearity was found to not be present. Finally, the collinearity statistics did not indicate any overlap in the contribution of the percentages to the model and the variance inflation factors (VIFs) indicated that tolerances for all the predictors were within acceptable limits.

**Linear regression results—males.** Stepwise methods went through nine models using a stepping criterion set at probability of F is .01 and removal is .10. The final model was significant ($R^2 = .304$, $F[9, 1,417] = 68.757, p < .001$). Together the predictors accounted for 30.4% of the variance in GPA. In the full model, the standardized beta for the YFCY Academic Self-Concept score ($\beta = .325$), YFCY Academic Adjustment score ($\beta = .216$), race ($\beta = .122$), YFCY Overall Satisfaction score ($\beta = .125$), Faculty & Staff Concern Students factor ($\beta = -.085$), Asking questions in class ($\beta = .084$), Institution Type ($\beta = .070$), Frequency of Family Interaction ($\beta = -.063$), and Survey Year ($\beta = -.060$) were significant predictors ($p < .001$; see Table 6, *Academic Performance Linear Regression Model—Males*).
Table 6

Academic Performance Linear Regression Model—Males

<table>
<thead>
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<th>B</th>
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<td>YFCY Academic Adjustment Score</td>
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<td>Race/Ethnicity</td>
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<td>-2.707</td>
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$R^2 = .304$, adjusted $R^2 = .300$

*p < .05, **p < .01, ***p < .000

Linear Regression Outliers and Descriptive Statistics—Females

The proceeding analysis contains only female respondents to understand their unique experiences and outcomes. First outliers were identified and removed to enhance the statistical conclusion validity of the linear model. Mahalanobis Distance was examined for cases that exceeded the outer acceptable limits of 33.924, which indicated 26 cases beyond the outer limits and were removed. Next, residual diagnostics were reviewed to identify cases with large studentized residuals (beyond +/-3.0), which
indicate poor prediction for Y values in the regression model. There were nine cases with extreme studentized residuals and were removed. Lastly, Cook’s $D$ values were examined and all cases had values close to zero, indicating no additional problematic cases (i.e., values close to 1 or 2 indicate potential problems). The final analysis sample ($N = 3,476$) included 54.4% ($n = 1,890$) Latino female students and 45.6% ($n = 1,586$) African American female students. The sample comprised 64.5% ($n = 2,241$) from 4-Year Colleges and 35.5% ($n = 1,235$) from Large Universities, and all were first time full time students.

**Linear regression descriptive statistics of main variables.** GPA was reported on a five-point Likert scale corresponding to ranges of GPAs on a 4.0 scale (i.e., 1 = “C- or less [below 1.75],” 2= “C [1.75-2.24],” 3= “B-/C+ [2.25-2.74],” 4= “B [2.75-3.24],” 5=A-/B+ [3.25-3.74],” and 6= “A [3.75-4.0]”). The average response for GPA was 5.14 ($SD = 1.288$), which corresponded with a response of “A- to B+ (3.25-3.74)” on the YCFY survey. This indicates that reported GPA distribution is negatively skewed, consistent with the tendency to inflate grades when reporting academic performance.

The majority of respondents participated in a first year program (70.4%) and lived on campus (29.6%). Among respondents, 64.3% reported frequently feeling support from family to succeed and 35.7% reported occasional support, and 84.4% reported interacting with family once or more a week with the most frequent response was interacting daily with their family (48.6%). Among respondents, 46.5% reported not feeling isolated from campus life and 53.5% reported occasionally feeling isolated. Among respondents, 53.4% reported occasionally feeling overwhelmed by all they had to
do and 46.6% reported frequently overwhelmed. Among respondents, 75.2% reported not feeling unsafe on campus and 24.8% reported occasionally feeling unsafe. Among respondents, 35.2% reported frequently asking questions in class and 64.8% reported occasionally asking questions. Among respondents, 46.4% reported frequently seeking feedback on academic work and 53.6% reported occasionally seeking feedback.

Four constructs created by HERI were included in the analysis and yielded the average scores of 50.075 (SD = 8.610) on YFCY Student-Faculty Interaction, 48.665 (SD = 9.297) on YFCY Academic Adjustment, 46.503 (SD = 8.818) on YFCY Academic Self-Concept, and 48.293 (SD = 8.603) on YFCY Overall Satisfaction. All YFCY construct means are in the upper range, indicating that respondents have reported more positive scores related to interactions with faculty, have high academic adjustment and academic self-concept, and have higher overall institutional satisfaction.

Factor total averages were 15.769 (SD = 3.228) for the Felt Discrimination factor, 8.952 (SD = 1.858) for the Sense of Belonging factor, 8.808 (SD = 1.704) for the Faculty and Staff Concern for Students factor, and 4.787 (SD = 1.738) for the Satisfaction with Campus Diversity factor. The factor means indicate that respondents are in the upper range for sense of belonging, not feeling discrimination, and feeling faculty and staff care about their well-being, but lowest in range for satisfaction with campus diversity.

**Linear regression assumption checking.** The basic assumptions of linear regression were examined to improve statistical conclusion validity prior to examining the linear model. The residual scatterplots output indicated that linearity was met. Independence was confirmed with the Durbin-Watson Test. Examination of scatterplots
of the predictors indicated fairly constant dispersion of all values around the regression line indicating that the assumption of Homoscedasticity has been satisfied. The histogram of the standardized residuals for GPA appeared to be within acceptable standards of normal distribution. Viewing a correlation matrix, multicollinearity was found to not be present. Finally, the collinearity statistics did not indicate any overlap in the contribution of the percentages to the model and the variance inflation factors (VIFs) indicated that tolerances for all the predictors were within acceptable limits.

**Linear regression results—females.** Stepwise methods went through nine models using a stepping criterion set at probability of F is .01 and removal is .10. The final model was significant ($R^2 = .312, F[6, 3,469] = 261.866, p < .001$). Together the predictors accounted for 31.2% of the variance in GPA. In the full model, the standardized beta for the YFCY Academic Self-Concept score ($\beta = .366$), YFCY Academic Adjustment score ($\beta = .266$), race ($\beta = .119$), YFCY Overall Satisfaction score ($\beta = .084$), Felt isolated from campus life ($\beta = -.077$), Frequency of Family Interaction ($\beta = -.049$) were significant predictors ($p < .001$; see Table 7, *Academic Performance Linear Regression Model—Females*).
Table 7

*Academic Performance Linear Regression Model—Females*

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S. E.</th>
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<td>17.470</td>
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<td>Race/Ethnicity</td>
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<td>8.305</td>
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<td>.084</td>
<td>5.334</td>
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<tr>
<td>Felt: Isolated from campus life</td>
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<td>.038</td>
<td>-.077</td>
<td>-5.198</td>
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<td>Frequency of family interaction</td>
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<td>.014</td>
<td>-.049</td>
<td>-3.482</td>
</tr>
</tbody>
</table>

*R² = .312, adjusted R² = .311*

*p < .05, **p < .01, ***p < .000*

Logistic Regression Descriptive Statistics of Main Variables—Retention

The dependent variable (retention status) was coded into a binary relationship (i.e., Retention = 1, and Not Retained = 0). The majority of respondents (90.4%, n = 4,464) reported plans to return to their current institution (i.e., Retention), while 9.6% (n = 476) reported plans not to return to their current institution (i.e., Not Retained). The disproportion of respondents that reported intentions to return to their current institution raised concerns that the results of the analysis may not be a good predictor of students that would not be retained.

The majority of respondents participated in a first year program (69.6%) and lived on campus (78.7%). Among respondents, 62.3% reported frequently feeling support
from family to succeed and 37.7% reported occasional support, and 82.7% reported interacting with family once or more a week with the most frequent response being interacting daily with their family (44.3%). Among respondents, 48% reported not feeling isolated from campus life and 52% reported occasionally feeling isolated. Among respondents, 56.9% reported occasionally feeling overwhelmed by all they had to do and 43.1% reported frequently overwhelmed. Among respondents, 78.6% reported not feeling unsafe on campus and 21.4% reported occasionally feeling unsafe. Among respondents, 35.4% reported frequently asking questions in class and 64.9% reported occasionally asking questions. Among respondents, 44.6% reported frequently seeking feedback on academic work and 55.4% reported occasionally seeking feedback.

Four constructs created by HERI were included in the analysis and yielded the average scores of 50.092 ($SD = 8.576$) on YFCY Student-Faculty Interaction, 48.455 ($SD = 9.259$) on YFCY Academic Adjustment, 47.155 ($SD = 8.960$) on YFCY Academic Self-Concept, and 48.169 ($SD = 8.644$) on YFCY Overall Satisfaction. All YFCY construct means are in the upper range, indicating that respondents have reported more positive scores related to interactions with faculty, have high academic adjustment and academic self-concept, and have higher overall institutional satisfaction. Factor total averages were 15.806 ($SD = 3.261$) for the Felt Discrimination factor, 8.948 ($SD = 1.873$) for the Sense of Belonging factor, 8.809 ($SD = 1.695$) for the Faculty and Staff Concern for Students factor, and 4.826 ($SD = 1.733$) for the Satisfaction with Campus Diversity factor. The factor means indicate that respondents are in the upper range for sense of
belonging, not feeling discrimination, and feeling faculty and staff care about their well-being, but lowest in range for satisfaction with campus diversity.

**Logistic regression assumption checking—retention.** Three assumptions were checked prior to conducting the logistic regression. First, the linearity in the logit among the continuous variables, namely the YFCY constructs and the factor scores derived from the EFA, were examined by conducting a Box-Tidwell test. The Omnibus test indicated that the assumption was violated \( \chi^2 = 609.464, df = 30, p < .001 \), whereby a significant alpha indicates at least one predictor has violated the assumption. Examination of the individual coefficients for each predictor revealed that YFCY Overall Satisfaction score appeared to potentially violate the assumption of linearity in the logit for the Box-Tidwell variable included for motivation \( \beta = .964, S.E. = .277, df = 1, Wald = 12.152, p < .000 \), resulting in removal of YFCY Overall Satisfaction variable from the proceeding analysis. Box-Tidwell test was again examined and the Omnibus test was not significant \( \chi^2 = 7.003, df = 7, p = .429 \), which indicate the assumption of linearity in the logit has been satisfied.

Secondly, the assumption of multicollinearity among predictor variables was examined. No predictor variables exceeded a correlation at .80. The highest correlations were between the Sense of Belonging factor score and Academic Self-Concept scores \( r = .203, p < .001 \) and between the Sense of Belonging factor score and Felt Discrimination factor \( r = .216, p < .001 \). For all predictor variables, the tolerance levels were between .917 and .992 and variance inflation factor levels were between 1.008 and
1.091. The values were not beyond acceptable limits for Tolerance and VIF. It was determined that variables did not pose a threat to the assumption of multicollinearity.

The final assumption regards independence of outcomes. The data collection methods implemented by the Cooperative Institutional Research Program for the Your First College year survey minimized the possibility that students could have taken the test more than once. Furthermore, the test constraints were such that no respondents could be both in the retained and not retained category. There is high confidence that the outcome variables for this study were independent.

**Logistic regression analysis results—retention.** The results of the logistic regression analysis are as follows. The omnibus test (deviance test) ($\chi^2 = 465.575, df = 24, p < .001$) indicated that the null hypothesis should be rejected and that at least one parameter was not equal to zero (i.e., one parameter was helpful in predicting the outcome variable). The Hosmer and Lemeshow test of goodness-of-fit ($\chi^2 = 13.108, df = 8, p = .108$) indicates the model is a good predictor of the dependent variable, although there remains concerns regarding the model’s relevance to predicting Not Persisting students. Nevertheless, there are indications that the model accounts for 9% to 19.2% of deviance (Cox and Snell $R^2 = .090$, Nagelkerke $R^2 = .192$). The significant items in the model include the Sense of Belonging factor ($\beta = .471, SE = .033$, Wald’s $= 204.727$, $df = 1, p < .001$), Felt Discrimination factor ($\beta = .037, SE = .017$, Wald’s $= 4.898$, $df = 1, p = .027$), Academic Self-Concept ($\beta = .013, SE = .006$, Wald’s $= 3.935$, $df = 1, p = .047$), Institutional Type ($\beta = -.781, SE = .125$, Wald’s $= 39.151$, $df = 1, p < .001$), and Survey Year ($\beta = .299, SE = .105$, Wald’s $= 8.167$, $df = 1, p = .004$).
Interpretation of the odds ratios for the five significant predictors is as follows. For each one-unit increase in Sense of Belonging (sample range 3 to 12), Felt Discrimination (sample range 5 to 20), and Academic Self-Concept (sample range 14.47 to 69.73), a student’s odds of intending to continue at his or her current institution increased by a factor of 1.601, 1.038, and 1.013, respectively. Similarly, for each student enrolled at a four-year institution and each student completed the survey in 2009 their odds of intending to continue at their current institution increased by a factor of .458 and 1.349, respectively. Therefore, students will be more likely to be retained who reported a higher level on the Sense of Belonging factor, Felt Discrimination factor (indicating fewer experiences of discrimination), and Academic Self-Concept score. Furthermore, students at four-year institutions (and students that completed the survey in 2009) were more likely to be retained at their current institution.

**Logistic Regression Descriptive Statistics—Persistence**

The final sample for the Persistence Logistical Regression analysis \((N = 4,940)\) included 44.4% \((n = 2,192)\) African American students and 55.6% \((n = 2,748)\) Latino students, 29% \((n = 1,431)\) male students and 71% \((n = 3,509)\) female students. Seven cases were removed from the sample due to missing data for the dependent variable. The sample comprised 63.5% \((n = 3,136)\) from 4-Year Colleges, 36.5% \((n = 1,804)\) from Large Universities. Nearly all respondents were first time full time students (99%). Cook’s \(D\) and Leverage values were analyzed to identify outliers. Cases were identified as outliers based on their standardized residuals being more extreme than +/- 2.0. After examining each outlier, considering the exploratory nature of the analysis and the
disproportion of results in the dependent variable, it was not practical to determine that these cases represented abnormal data or legitimate findings which ought to be accounted for by the model. As a result, none of the identified cases were removed from the data.

**Logistic regression descriptive statistics of main variables—persistence.** The dependent variable (persistence status) was coded into a binary relationship (i.e., Persisting = 1, and Not Persisting = 0). The majority of respondents (95.4%, \( n = 4,714 \)) reported plans to continue in college in the fall term at their current institution or another institution (i.e., Persisting), while 4.6% (\( n = 226 \)) reported no certain plans to continue in college (i.e., Not Persisting). The disproportion of respondents that reported intentions to persist raised concerns that the results of the analysis may not be a good predictor of students that do not intend to persist in college.

The following descriptive statistics are identical to those reported in the Retention Logistical Regression. The majority of respondents participated in a first year program (69.6%) and lived on campus (78.7%). Among respondents, 62.3% reported frequently feeling support from family to succeed and 37.7% reported occasional support, and 82.7% reported interacting with family once or more a week with the more frequent response was interacting daily with their family (44.3%). Among respondents, 48% reported not feeling isolated from campus life and 52% reported occasionally feeling isolated. Among respondents, 56.9% reported occasionally feeling overwhelmed by all they had to do and 43.1% reported frequently overwhelmed. Among respondents, 78.6% reported not feeling unsafe on campus and 21.4% reported occasionally feeling unsafe. Among respondents, 35.4% reported frequently asking questions in class and 64.9%
reported occasionally asking questions. Among respondents, 44.6% reported frequently seeking feedback on academic work and 55.4% reported occasionally seeking feedback.

Four constructs created by HERI were included in the analysis and yielded the average scores of 50.092 (SD = 8.576) on YFCY Student-Faculty Interaction, 48.455 (SD = 9.259) on YFCY Academic Adjustment, 47.155 (SD = 8.960) on YFCY Academic Self-Concept, and 48.169 (SD = 8.644) on YFCY Overall Satisfaction. All YFCY construct means are in the upper range, indicating that respondents have reported more positive score related to interactions with faculty, have high academic adjustment and academic self-concept, and have higher overall institutional satisfaction. Factor total averages were 15.806 (SD = 3.261) for the Felt Discrimination factor, 8.948 (SD = 1.873) for the Sense of Belonging factor, 8.809 (SD = 1.695) for the Faculty and Staff Concern for Students factor, and 4.826 (SD = 1.733) for the Satisfaction with Campus Diversity factor. The factor means indicate that respondents are in the upper range for sense of belonging, not feeling discrimination, and feeling faculty and staff care about their well-being, but lowest in range for satisfaction with campus diversity.

**Logistic regression assumption checking—persistence.** Three assumptions were checked prior to conducting the logistic regression. First, the linearity in the logit among the continuous variables, namely the YFCY constructs and the factor scores derived from the EFA, were examined by conducting a Box-Tidwell test. The Omnibus test indicated that the assumption was violated ($\chi^2 = 19.351, df=8, p = .013$), whereby a significant alpha indicates at least one predictor has violated the assumption. Examination of the individual coefficients for each predictor revealed that YFCY
Academic Self-Concept score appeared to potentially violate the assumption of linearity in the logit for the Box-Tidwell variable included for motivation ($\beta = .826$, $S.E. = .222$, $df = 1$, Wald’s $= 13.780$, $p < .000$), resulting in removal of YFCY Academic Self-Concept score variable from the proceeding analysis. Box-Tidwell test was again examined and the Omnibus test was not significant ($\chi^2 = 6.811$, $df = 7$, $p = .449$), which indicates the assumption of linearity in the logit has been satisfied.

Secondly, the assumption of multicollinearity among predictor variables was examined. No predictor variables exceeded the acceptable limit of a correlation at .80. The highest correlation was between the Student Status and Institution Type ($r = .040$, $p = .005$). For all predictor variables, the tolerance levels were between .998 to .999 and variance inflation factor levels were between 1.001 and 1.002. The values were not beyond acceptable limits for Tolerance and VIF. It was determined that variables did not pose a threat to the assumption of multicollinearity.

The final assumption regards independence of outcomes. The data collect methods implemented by the Cooperative Institutional Research Program for the Your First College year survey minimized the possibility that students could have taken the test more than once. Furthermore, the test constraints were such that no respondents could be both in the persisting and not persisting category. There is high confidence that the outcomes variables for this study were independent.

**Logistic regression analysis results—persistence.** The results of the logistic regression analysis are as follows. The omnibus test (deviance test) ($\chi^2 = 209.679$, $df = 25$, $p < .001$) indicated that the null hypothesis should be rejected and that at least one
parameter was not equal to zero (i.e., one parameter was helpful in predicting the outcome variable). The Hosmer and Lemeshow test of goodness-of-fit ($\chi^2 = 4.366, df = 8, p = .823$) indicates the model has good prediction of the dependent variable, although there remains concerns regarding the models relevance to predicting Not Persisting students. Nevertheless, there are indications that the model accounts for 4.2% to 13.4% of deviance (Cox and Snell $R^2 = .042$, Nagelkerke $R^2 = .134$). The significant items in the model include Overall Satisfaction ($\beta = .094, SE = .013, \text{Wald's} = 53.663, df = 1, p < .001$), Institutional Type ($\beta = -.484, SE = .169, \text{Wald's} = 8.209, df = 1, p = .004$), and Student Status ($\beta = -1.257, SE = .446, \text{Wald's} = 7.947, df = 1, p = .005$).

Interpretation of the odds ratios for the three significant predictors is as follows. For each one-unit increase in Overall Satisfaction (sample range 22.75 to 62.77), a student’s odds of intending to persist in college (at their current institution or other) increased by a factor of 1.099. Similarly, for each student enrolled at a large university and each first-time full-time student their odds of intending to persist increased by a factor of .616 and .285, respectively. Therefore, students will be more likely to persist in college who reported higher Overall Satisfaction, attended a large university, and was a first-time full-time student. It is possible that students may not have understood the difference between institution type when choosing either “4-Year College” or “University.” Students pursuing a four-year bachelor’s degree at a large university may have also selected the “4-Year College” option. Additionally, as first-time full-time students represented 99% of the respondents, caution should be applied when interpreting the significance of this finding.
CHAPTER V
DISCUSSION

Imagine a higher education system where students of color are provided upfront evidence that points to a college’s willingness to and effectiveness in meeting the students’ academic and social needs and underscore the probability of students like themselves graduating from that institution. This research found that college environments have a significant influence on students of color retention and persistence decisions. Furthermore, the standard retention initiatives, such as mandatory residency requirements, first year seminar courses, participating in learning communities, elevated ACT/SAT cutoffs, and forced involvement in student life activities have little to no influence on persistence for students of color, unless the initiatives deliberately embrace a culturally relevant pedagogy. Retention and persistence rates for students of color will increase only when colleges recognize that traditional interventions are, in many ways, not relevant to the factors that contribute to academic success and retention for students of color and then develop and genuinely value initiatives that are relevant to the academic performance and persistence of students of color.

College student retention and student persistence to degree attainment are critical priorities for colleges and imperative for the socio-economic mobility of communities of color; considerable evidence however suggests that higher education institutions have failed to embrace the academic and cultural needs of students of color as much as they value their tuition dollars. Thirty years of student retention initiatives have not resulted in higher retention and graduation rates. In fact, they have proven to be especially
ineffective and inappropriate interventions meant to promote the college degree attainment of African American and Latino students. Since 1996 the national graduation rate for all first-time full-time students has increased by less than five percentage points. Latino students’ graduation rates increased by 5.8 percentage points, while the graduation rates for African American students increased by only 1.3 percentage points. Additionally, the graduation rates of public institutions (where African American and Latino students are more concentrated) continue to lag behind those of private (nonprofit) institutions by 20 percentage points. Many colleges are in a rush to declare that higher education and their campuses are race-neutral and post-racism, an institutional form of micro-aggression that devalues students’ cultural identity and denies the actual experiences of students of color on most college campuses. This study found that sense of belonging, extent of discrimination experienced, and academic self-concept are the primarily predictors of retention. It is very likely that campus experiences during the first year of college inadvertently erode sense of belonging in college and desire to return to specific colleges for students of color. The ill-fated assumption that campus programs serve all students equally, that celebrating diversity is an effective means of meeting the socio-cultural needs of students of color, and that traditional retention predictors are relevant to all students has resulted in three decades of ineffective student retention strategies.

As competition among institutions of higher education intensify for a finite pool of qualified college students, colleges are faced with the ongoing challenge of retaining students beyond the first year of college. Private colleges feel the pain of student
attrition, as smaller (possibly more selective) freshmen classes leave little margin when sources of revenue decide to pursue other institutions or alternative career paths. The cost of attrition is perhaps even more significant for public institutions where state financial appropriations are increasingly attached to the graduation rates of first-time full-time students. College attrition is costly to students and often results in a substantial financial burden and a failure to attain the educational credentials necessary to obtain meaningful employment and financial security. It is a national tragedy that higher education in the U.S. is among the most expensive in the world, yet institutions are effective in meeting the academic (and social) needs and graduating in four-years only approximately one third of the students that were admitted to college (NCES, 2011).

African American and Latino students provide the greatest opportunity for increasing student retention and advancing the socio-economic mobility of historically financially insecure communities. Such outcomes will be realized only when the development of programs and policies to promote retention and persistence in higher education include the strategies and perspectives of successful African American and Latino students, rather than focusing only on factors that contributed to academic failure. This study found that the standard student retention intervention, such as mandatory residency requirements and housing satisfaction (which often creates financial obstacles and obligate students to reside in environments where they experience substantial discrimination), segmenting students by standardized test scores (ACT/SAT), and mandatory first year seminars, learning community participation, and high interaction with academic advisors (unless applying culturally relevant pedagogy) had no influence
on retention or academic performance of African American and Latino students.

Furthermore, students clearly view poorly developed student satisfaction initiatives (e.g., limited-time only discounted classes, free tee-shirts, raffling off electronics, and luxury residence halls) as shallow gimmicks that do not result in sustained student satisfaction. Driving student satisfaction, and ultimately retention, comes through addressing students’ expectations and needs rather than developing programs and procedures that only serve to meet the college’s desires and make procedures easier for the institution to administer.

African Americans have represented a significant percentage of college student enrollments for several decades and Latino Americans are the fastest growing segment of the college student population. However, the conversation on factors and correlations related to academic failure for minority students has overshadowed and depleted energy that would have been more effectively utilized to develop strategies that promote academic success. The K-16 educational system in the U.S. has failed to acknowledge the unique educational experiences of African American and Latino students and to develop interventions that are tailored to promote this populations’ academic success. Instead, programs continue to be developed that mostly serve those students that more easily assimilate to an educational culture and norms that were established prior to the period in U.S. history when African Americans and Latinos cultures were accepted and valued.

The results of this study validated that the decisions to persist or leave college for African American and Latino students have been considerably influenced by the students experiencing of discrimination, being treated as an outsider, and not mattering on
campus, threats to their academic self-efficacy, and overall dissatisfaction as a consumer of higher education. Higher education must recognize that interventions that are developed to meet the needs and expectations of the majority of students on campus have in many ways failed to equably meet the educational needs, expectations, and address the realities of African American and Latino students (let alone majority). It is fully appreciated that institutional financial resources are limited and that creating new programs would create a strain on existing programs. As fewer students are able to identify with and easily assimilate to stagnated campus cultures and traditions and are effectively served by traditional notions of campus services and retention interventions, there are opportunities to eliminate or re-mission programs to better align student intervention strategies with what is most meaningful and matters for students. This chapter discusses interventions that are meaningful and tailored to the educational realities of successful African American and Latino college students.

**Understanding the Experiences of African American and Latino College Students**

The first essential intervention is for college administrators, policy-makers, and academic program developers to increase their understanding of African American and Latino students’ experiences on their campus. Institutions that resist assessing their campus climate for students of color and the education inequities between student groups do so out of fear of discovering that they are among the worst offenders and lack the commitment to act upon the results. The responsibility and accountability for influencing the academic outcomes for students of color are frequently assigned to offices that address minority affairs or multicultural centers and are typically a part of Student Life
(rather than Academic Affairs). Therefore, the educational outcomes for students of color are not assumed to be the responsibility of all faculty and staff on campus. As a result, such offices have minimal influence on campus-wide policy and procedures. College administrators who strive to develop culturally neutral policies and programs (by not considering the impact of culture) naively run the risk of catering to that administrator’s ideal college student profile, which is often not imagined as a historically marginalized student. This study and others (see Hurtado et al., 1996; Rankin & Reason, 2005; Rendón et al., 2000) revealed there is either a clear lack of understanding regarding the experiences of African American and Latino students on college campuses or a deliberate unwillingness to foster an educational environment that is welcoming and promotes success for all students rather than most students.

Understanding and validating the experiences of African American and Latino college students is a critical first step in addressing the causes of student college attrition. Despite popular impulse to declare that race and ethnicity no longer matter in current day U.S. society, African American and Latino college students continue to report distinctively different experiences and outcomes than do White and Asian students while on college campuses (Mayo et al., 1995; Nora & Cabrera, 1996; Rankin & Reason, 2005). This study found four factors across four-year colleges and large universities that illustrated the experiences and perceptions of African American and Latino students, including: (a) Felt Discrimination based on Race; Gender, or Socio-economic Status; (b) Staff & Faculty Concern for Students; (c) Sense of Belonging; and (d) Satisfaction with Campus Diversity. Presumably, some of these factors are important to all students
(including majority students), while some factors are more distinctively relevant to the experiences of students of color and have a unique influence on academic performance and decisions to persist in college.

**Pervasive Perceptions of Discrimination on Campus**

U.S. colleges must acknowledge that discrimination exists on their campuses and develop an initial strategy aimed at increasing the intercultural competencies of its faculty, staff, and students and establishing zero tolerance for discrimination based on race/ethnicity, sex, sexual identity, socioeconomic status, and nation of origin.

Experiencing and feeling discriminated on the basis of race/ethnicity, sex, or socioeconomic status was the number one factor among respondents, explaining 17.5% of variance in the data. In this study, 57.5% of respondents \((n = 2,843)\) reported experiencing some form of discrimination, threats, insults, and faculty members expressing negative stereotypes based on race/ethnicity, sex, or socioeconomic status. Particularly alarming was that 29.6% of respondents reported that they had heard a faculty member express negative stereotypes and 26.8% reported they had felt discriminated based on their race/ethnicity. These reports suggest that the perpetuating of negative stereotypes and the resulting discrimination may be widespread if faculty members in freshmen level classes are among the most frequently reported perpetrators.

Unfortunately, two decades of “Inclusive Excellence” has evolved into superficial celebrations of diversity (oftentimes minimizing the impact of cultural identity), cultural tolerance slogans, and deceptive portrayals of campus life as a post-racial environment. Concurrently, the negative impacts of discrimination are still very much present on
college campuses, yet college administrators can now point to Inclusive Excellence to deny the presence and extent of discrimination that truly exists. The standard approaches to addressing discrimination on campus, conducting a cultural-tolerance program only after a significant event on campus or making diversity the responsibility of a single office, is woefully inadequate.

College administrators and faculty members may not fully appreciate the impact of campus climate and their influence on campus climate for students of color. Multiple studies have reported that based on students’ race and ethnicity, differences in the perceptions and experiences of campus climate arise (Miller et al., 1998; Rankin, 2006; Reason & Rankin, 2006). Specifically, students of color generally describe a campus environment where they are more likely to be the target of racism, including derogatory comments and graffiti, physical and verbal assaults, more severe student conduct sanctions, and being ignored or tokenized by faculty and administrators (Bensimon & Soto, 1997; Maramba, 2008; Rankin & Reason, 2005; Seggie & Sanford, 2010). In the spring of 2013, for example, an incident was reported at a large public mid-western university where on the first warm and sunny day of the spring semester approximately 75 students of color were in the quad area behind their residence hall. The students were reportedly listening to music, having picnics, and playing volley ball on the provided university constructed court. Their picturesque afternoon, however, was interrupted by the city police in full riot gear and a SWOT helicopter. The students were dispersed because an anonymous person had reported a disturbance. This single event sent shockwaves through the student of color population on that campus, but university
officials reportedly made no attempt to address the situation. Minority Status Stress (or being treated in a marginalizing manner and devaluing one’s contributions to society) has been found to jeopardize social adjustment and academic success for students of color at predominately White institutions (Hurtado et al., 1996). It is quite possible that college is the first time in a student’s educational career that he or she is conscious of direct hostility based on their race, gender, or socio-economic status.

While attempting to combat discrimination, colleges should readily provide services to support students who have been the target of discrimination, including a hotline to report discrimination and procedures for addressing alleged offenses. Students of color, who have not previously experienced or realized that they were the target of discrimination, may likely not have developed coping strategies to respond effectively to stress induced by marginalization, hostility, and alienation. Furthermore, out of fear of acknowledging the presence of discrimination, most colleges do not provide an institutional mechanism for reporting discrimination and seeking restorative justice. Bean and Eaton (2000) described college as a stressful environment for all students and suggested that success hinges on a student’s ability to cope with that stress. In addition to the typical stress associated with transitioning to the expectations of college, however, many students of color have the added burden of needing to cope with an unfriendly and unwelcoming environment that the student expected would be supportive.

Research has found that a student’s perception of the campus climate has an influence on his or her intellectual and identity development (Bensimon & Soto, 1997; Brazzell, 2001; Pascarella & Terenzini, 1991, 2005; Strange & Banning, 2001). Students
who experienced harassment, discrimination, and lack of support on campus perceived more obstacles to their educational attainment and developmental growth (Reason & Rankin, 2006), contributing to less favorable outcomes regarding academic experiences, academic and intellectual development, institutional commitment, and persistence to degree (Cabrera et al., 1999). These findings suggested that students of color are investing a substantial amount of intellectual time and resources developing strategies to cope with a hostile and discriminatory environment, that distracts students from solely focusing on their academic growth and other college student developmental milestones (see Strange & Banning, 2001). As such, colleges and universities should pay particular attention to the campus climate for students of color before expecting high levels of student engagement and institutional commitment. Research has found that a supportive climate promotes greater levels of student engagement, positive emotional and identity development, and indicators of academic success for students of color (Pascarella & Terenzini, 1991; Reason & Rankin, 2006).

Promoting Coping Behaviors, the cognitive process of adapting or responding to stressful or threatening situations (Lazarus, 1966; Lazarus, Averill, & Opton, 1974), would increase a student’s ability to thrive despite a hostile campus climate. Bean and Eaton (2000) suggested that student adaptation is the process or strategy of coping with stressful situations in college (such as final exams, large independent research projects, or making new friends) and perceived threats from the campus environment (such as feeling isolated from one's community or encountering hostility from faculty, staff, or other students). Students of color who do not possess the strategies to counteract the stress
induced when experiencing the reality of discrimination on college campuses may find adjusting to the academic expectations of college more difficult. It is highly recommended that: (a) colleges acknowledge that discrimination on the basis of race, ethnicity, and socioeconomic status is present on their campus; (b) colleges develop programs that continuously aim to increase the cultural competency of faculty, staff, and students; and (c) colleges make available mechanisms to report and address discrimination and provide emotional support (via counseling centers or cultural centers) to assist students with coping with discrimination on campus.

**Dissatisfaction With Campus Diversity**

The present study found that 61.7% of respondents ($n = 3,053$) were dissatisfied with the racial and ethnic diversity of the campus community (including faculty, staff, and students). Higher education has experienced substantial increases in campus diversity over the past five decades, but the impacts of campus diversity are typically marketed to majority students, rather than leveraged to benefit African American and Latino student success. D. G. Smith and Schonfeld (2000) reported that over 90% of the public believed that campus diversity was important for preparing employees to work effectively and think critically with people different from themselves. Many of the reported benefits of campus diversity, however, have been at the expense of rather than a benefit to students of color. Scholars have suggested that colleges leverage campus diversity to provide an opportunity for White faculty and students to interact with people who are different from themselves, whereas such experiences are rarely novel for students of color (Gurin, Nagda, & Lopez, 2004; Milem, 2001). Alternatively, it is
highly recommended that colleges sponsor culture-specific groups for students of color to promote increased identity and intellectual development, both of which also promote greater psychological well-being, self-esteem, academic success, and openness to learning about other cultures.

While the vast majority of higher education opportunities in the U.S. consist of predominately White environments, the development of a healthy intellectual identity for students of color requires the ability to interact with peers and professionals in the college environment from backgrounds similar to their own. A coping strategy for the initial cultural shock often experienced by people of color when entering predominately White campuses is to seek a “safe space” and network with supportive others within their same cultural group, a practice which Grier-Reed et al. (2011) suggested would increase retention and graduation rates. Several researchers have concluded that minority students who join race and ethnic-centric student groups or subcultures on campus tend to have the best educational outcomes (Grier-Reed et al., 2008; Jones, 2004; Utsey et al., 2000; Watt-Jones, 2002). This is not to say, however, that students of color should self-segregate as a developmental and retention strategy. In fact, Gurin et al. (2004) found that students of color with meaningful diverse peer experiences had greater interest in learning about groups other than their own and perceived less division among different racial and ethnic-groups. Nevertheless, having culturally-specific spaces on campus that provide the feeling of a home-base on campus where students can feel at ease and a sense of belonging can assist students of color with adapting to what is initially an alienating and disorienting environment.
College is a critical period for identity development and often students of color enter this period starved and cut off from pathways that lead to a positive and constructive racial identity. Culture-specific groups and social interactions provide guidance with identity development, including racial/ethnic, socioeconomic status, gender, sexual identity, and intellect. Seaton, Sellers, and Scottham (2006) validated the four cluster model of racial identity development, diffused, foreclosed, moratorium, and achieved identity statuses (Marcia, 1966), and found that higher levels of racial identity commitment (achieved status) was associated with greater levels of psychological well-being and self-esteem. Adams (2005) found that racial identity exploration was associated with identity and intellectual development, and academic success for minority college students. Ford and Malaney (2012) suggested that students with greater racial identity development are more open to meaningful interaction within and across social identity groups in college, awareness that will also better prepare students of color for full participation in an increasingly diverse and global world. Additionally, greater intra-group interaction provides culturally-specific strategies for interrupting and responding to new environments, opportunities to discuss racially sensitive content in a safe and supportive environment, and a relaxed social and academic environment to release stress and be free of the burden of being hyper-conscious of one’s differentness.

**Sustaining a Sense of Belonging Once in College**

The present study found that a student’s sense of belonging has a profound impact on students’ academic performance and retention decision to remain in a campus environment despite academic rigor, financial demands, and social sacrifices. It is
important to differentiate a sense of belonging in college for African American and Latino students, presumably meaning a student has worked equally as hard if not harder and feels he or she rightfully has earned his or her admission to college, as a different concept from feeling isolated from campus, meaning feeling separate or outside of mainstream campus life. In the sample, 79.9% of respondents \( n = 3,953 \) reported a sense of belonging in college, yet 52% \( n = 2,573 \) reported feeling isolated from campus. Once in college a student’s sense of belonging may be influenced by personal interactions and shared group experiences with others on campus (or lack thereof), perceived degree of supportiveness or hostility, responsiveness to students’ needs and concerns, and infusion and valuing of the student’s culture throughout the curriculum and campus activities (Rodgers & Summers, 2008). Consequently, this researcher believes that the threats to institutional commitment and sense of belonging for students of color include: (a) campus services and programs that fail to meet student’s academic needs and expectations; (b) the inability of institutions and students to bridge their cultural differences; and (c) the excessive micro-aggressions experienced by student of color. Addressing these three threats are essential to sustaining a sense of belonging and institutional commitment for students of color.

It is important that institutions have academic services and programs available on campus that meet the unique needs and expectations of all students enrolled, including students of color. Predominately White institutions strive to address the needs and expectations of the largest group of students but may not have the support and structures in place to meet the needs of all students because many institutions do not recognize that
students of color may have different needs—not necessarily more needs; just different needs. Students of color who become frustrated and achieve academically at a lesser degree because campus services have failed to address their needs may conclude that people like them do not belong in college. Institutions should strive to identify the culturally-specific needs that may not be met through mainstream programs. Students of color often seek out mentors and try to develop small close-knit groups for support and encouragement. Students of color generally possess language skills and readily use dialects that are different from scholarly writing, which can lead to frustration and perceptions of being less prepared for college. Furthermore, students of color are more likely to be first generation college students and their families may not be able to provide assistance with navigating the complexity of higher education. An institution that actively identifies the unique needs of their students and develop meaningful, non-judgmental, interventions will enhance students’ sense of belonging and belief that they should continue at a given institution.

It is important that institutions strive to bridge the difference between students’ home culture and school culture to promote a sense of belonging and help students identify with the traditions and culture at a given college campus. College campuses are steeped in many traditions and customs that developed at a time when people of color were excluded from many college environments. Bean and Eaton (2000) attempted to derive greater parsimony between the terms “sense of belonging” and “institutional fit” by explaining that rather than expecting students to adopt the campus’s culture as an attempt to evolve greater goodness of fit with institutions, students who develop a
repertoire of strategies to provide a bridge between one’s self and the college campus are more likely to be successfully retained. Often students of color are expected to adopt new campus cultural norms and traditions that may conflict or not easily coincide with their cultural background and epistemologies. Institutional focus on student engagement has led to colleges offering many opportunities for social involvement and campus engagement. Nevertheless, campus events that cater to a narrow segment of the campus population exclude students of color from contributing to planning committees and fail to display true support for culturally inclusiveness, resulting in lower levels of campus engagement for students of color and greater difficulty to establish a sense of belonging (Fleming, 1984; Jacobs & Archie, 2008). Similar to majority students, students of color who are unable to connect to the institution are less engaged and are less likely to be retained and persist to graduation (Arana et al., 2011; Brazzell, 2001; Cerna et al., 2009; Grier-Reed et al., 2011; Hausmann et al., 2007). It is recommended that, rather than remaining static in traditions and customs of yesteryear, institutional culture must develop adaptability to meet the academic and social needs and wants of the changing demographics in higher education (Rodgers & Summers, 2008) as a means to increase sense of belonging and student retention.

Assisting students of color in enhancing their ability to coexist in a college culture and their home culture, without relinquishing their cultural characteristics and knowledge, may lead to a greater sense of integration with the institution and feeling of belongingness. Rodgers and Summers (2008) suggested that many African American college students experience cultural shock on predominately White campuses, feelings
which may lead to a lower sense of belonging, social and academic adjustment, and institutional commitment. Alternatively, an effective strategy to develop a sense of belonging for students of color is to build social capital and establish a supportive sub-culture by seeking out specific faculty, staff, and students on campus, and individuals in the surrounding community. Rodgers and Summers suggested that developing a bi-cultural identity (a degree of comfort with and understanding of the norms, values, and traditions in more than one culture) will better equip students of color to transition between the college environment and their ethnic community and would lead to higher self-efficacy and greater academic success. Bean and Eaton also noted that a student may not assimilate into the college culture (i.e., acquire institutional fit) but still may successfully develop coping strategies that reduce stress and produce positive outcomes such as academic achievement and a sense of membership with the institution.

The last identified major threat to sense of belonging for students of color is the constant and unaddressed presence of racial micro-aggressions on college campuses. Racial micro-aggressions are generally described as the frequent, commonplace, and often subtle forms of racism, sexism, or homophobias faced by marginalized groups. Micro-aggressions can appear in the form of *micro-invalidations* that nullify the feelings, thoughts, and experiences of a group, *micro-insults* such as subtle snubs that infer that groups are unknowledgeable, invisible, or marginal to society, and *micro-assaults* such as explicit discrimination or demeaning behavior (Ancis, Sedlacek, & Mohr, 2000; Grier-Reed, 2010; W. A. Smith, Hung, & Franklin, 2011). Typical examples of racial micro-aggressions that students of color have reported include being described as hostile
or a problem, giving White students the benefit of doubt when there are disputes between individuals of different races, allowing derogatory racial generalizations to propagate in the classroom, experiencing harassment by police and cited for behaviors for others, which received only a warning, and dismissing one’s life experiences as atypical and therefore not relevant in the classroom or in campus programming. A student of color is likely to perceive racial-undertones when being the only student questioned if he or she belongs in a senior level literature class, asked if he or she is supposed to be in a complex for honors students, or regularly cited by Resident Assistants for noise disturbance or having too many students in a dorm room when majority students are not cited for the same situation. Many students of color may not be prepared to cope appropriately with and respond to such personal assaults.

Because college may be the first experience of micro-aggression for some students of color, without effective coping strategies students are likely to become overwhelmed, depressed, or angry and choose to leave college. Ancis et al. (2000) shared that minority students were more likely to experience racial conflict, pressure to confirm to stereotypes, and less equitable treat than their White peers. Grier-Reed (2010) stated that micro-aggressions created additional stress for students of color. W. A. Smith et al. (2011) described micro-aggressions as *Mundane Excessive Environmental Stress* (or MESS) because of the individually minor environmental insults that are excessive when taken in totality. W. A. Smith et al. suggested that racial micro-aggressions are rare in homogeneous environments; therefore, students of color may not have developed coping strategies to deal with micro-aggressions prior to attending college.
Consequently, students may choose to leave college to alleviate the stress. W. A. Smith et al. discussed that minorities are fatigued by the constant micro-cognitive processing involved in: (a) contemplating whether they are “genuinely accepted or just tolerated;” (b) discerning between supportive Whites and the “destructive collective actions of Whites;” and (c) when to confront race-based stressors and by what means and when to accommodate race-based stressors and by what means (pp. 65-66).

To counteract the destructive nature of micro-aggressions, it is recommended that college increase the entire campus’s awareness of micro-aggressions and encourage open discussion on experiences and the means to address micro-aggressions. Grier-Reed (2010) found that students of color who discussed their experiences of micro-aggressions performed better academically than did students who do not discuss their micro-aggressions and further suggested that an essential academic survival intervention for students of color is to provide academic and social spaces on campus that facilitate processing and coping with racial micro-aggression. The inability to cope with race-related stress and institutions that ignore the impact of micro-aggressions will result in fewer students of color developing a sense of belonging and ultimately, their developing a perception of the college environment as a substantial source of race-related stress.

**Perceptions of Faculty and Staff Concern for Students**

The fourth factor in the present study involved respondents’ perceptions of faculty and staff concern for student. It was reported that 40.7% of respondents \( n = 2,016 \) felt that either faculty or staff were not concerned with students’ academic or personal needs.
Given the sufficient environmental stressors and challenges already discussed, it is no wonder that students of color may feel vulnerable on campus and question if anyone of authority is concerned with their well-being. Clearly, students of color want to feel that faculty and staff care about their academic growth and expect a supportive and nurturing relationship with faculty and staff. Likely, many students of color who attend college have developed supportive, and many times close relationships with teachers prior to college as a strategy for supporting and developing their educational self-agency and intellectual growth. As this strategy proved effective in their preparation for college, students are likely to pursue a similar experience in college.

It is recommended that students of color be connected with faculty and staff members, regardless of their race and ethnicity, that genuinely care about the well-being of students. Understandably, students of color value instructors who are enthusiastic about teaching, trustworthy, and care about their students (Arana et al., 2011; Wheeless et al., 2011). The nature and quality of interactions with college faculty and staff can either promote positive attitudes, enhance self-efficacy, and motivate students to finish college, or can lead to negative attitudes about college, decreased belief in one’s ability to complete college, and a decision to leave college. In short, faculty and staff actions have a significant influence on the overall assessment of a college on students of color and the student’s sense of belonging and ability to be successful in college.

Attitude-Behavior theory and Self-Efficacy theory provide insight on how faculty and staff actions can influence students of color perceptions of the college environment and their retention decisions. Attitude-Behavior Theory explained that beliefs develop
into attitudes and motivations which led to specific intentions and behaviors (Fishbein & Ajzen, 1975). Bean and Eaton (2000) adapted Attitude-Behavior Theory to explain how students can have beliefs about college and the campus environment that can either motivate students to strive academically and socially or leave college for other career choices. As such, students who perceived that faculty and staff cared about their academic and social growth developed positive attitudes about college and as a result had higher motivation and intentions to persist to graduation. In contrast, unpublished research by Bean found students’ negative attitudes toward education led to intention to depart from college, attitudes that proved to be the best predictor of actual departure decisions (Bean & Eaton, 2000, p. 50).

Establishing supportive relationships with faculty and staff can lead to an early sense of membership and desire to persist for African American and Latino students. Literature and research has advocated that faculty and staff should serve as mentors for students of color to promote college transition and retention. Researchers have found that faculty who mentor students of color have played a significant role in student persistence (Arana et al., 2011; Wheeless et al., 2011), whereas perceived lack of support by faculty contributed to decisions not to continue in college (Arana et al., 2011). Many first generation students may be reluctant to approach faculty or may be intimidated by faculty. Providing formal faculty-student matching or requiring first year students to attend faculty office hours may help overcome such reluctance. Having the experience of working with a faculty member on research or a project has been found to promote decisions to persist and provide much needed opportunities for building social capital on
campus and within future career fields (Furr & Elling, 2002). Upon reviewing several faculty mentoring programs, Jacobs and Archie (2008) reported that because of the positive academic outcomes for racially under-represented students, several colleges have proactively enrolled students in mentoring programs. They also suggested that race of the faculty mentor is less important than the faculty member’s ability to establish trust and be genuine with the student. The implementation of formal or informal faculty mentoring at predominately White institutions is not limited by faculty and staff diversity, but rather by the desire and willingness of faculty and staff to reach out and invest time with students of color. Faculty and staff are in a pivotal position to help students of color feel welcomed on campus, navigate and bypass institutional obstacles, interpret and build resiliency when faced with discrimination, and provide individualized guidance on course and career paths where the students are most likely to be successful.

**Influencing Academic Performance and Persistence Decisions**

There is considerable alignment between the variables that predict academic performance and the variables that predict intentions to persist. Not surprisingly, this alignment suggests that students who maintain good academic performance are also motivated to continue making progress towards a college degree. Therefore, the variables that relate to academic performance and intentions to persist are discussed in concert. This discussion aims to contribute to the discussion and the development of programs designed to decrease the achievement gap and promote persistence for African American and Latino students.
Predictors for Academic Performance

The objective of this study was to identify potential experiences and behaviors that students and institutions could act on to improve educational outcomes, actions that are distinctively different from and more proactive than simply examining the correlation between demographic information and educational outcomes. The items that predicted academic performance for African American and Latino students in this study could be grouped into four constructs, namely: (a) Academic Self-Efficacy, including academic adjustment and academic self-concept; (b) Institutional Satisfaction, including overall satisfaction and satisfaction with campus diversity; (c) Help-Seeking Behavior, including asking questions in class, frequency of family interaction, relationship with faculty and staff; and (d) Sense of Belonging, including feelings of isolation and unsafe, sense of belonging, and felt discrimination. Academic Self-Efficacy and Institutional Satisfaction had the highest and most similar influence on academic performance for all groups examined in this study. The nature of Help-Seeking Behavior varied across type of help. Generally, asking questions in class predicted higher academic performance, whereas more frequent interaction with family and more faculty and staff concern for students predicted lower academic performance. The Sense of Belonging findings were perplexing because as sense of belonging increased for all participants and specifically African Americans, it was predicted that academic performance would decrease. The constructs that predict academic performance are closely related to the constructs that predict retention and persistence and thus are discussed together, with the exception to Sense of Belonging which has been previously discussed in detail.
Predictors for Intentions to Persistence

This study revealed succinct models that predicted retention and persistence intentions, but also the need for further research. The variables that predicted retention included: (a) Sense of Belonging; (b) Felt Discrimination; (c) Academic Self-Concept; and (d) Institutional Type. Specifically, higher sense of belonging, fewer experiences of discrimination, higher academic self-concept, and attending a four-year college predicted higher retention. The variables that predicted persistence included: (a) Overall Satisfaction, (b) Institutional Type, and (c) Student Status. Specifically, higher overall satisfaction, attending a four-year college, and being a full-time first-time student predicted higher persistence. As Sense of Belonging and Felt Discrimination were both discussed at length as factors in the previous section, they are not further discussed. Therefore, the final discussion on predictors of academic performance and retention decisions is limited to Self-Efficacy, the significance of interaction with family, and Institutional Satisfaction.

Academic self-efficacy and academic performance. It is highly recommended that institutions focus interventions and academic advising with first year students to foster high levels of self-confidence and assist students in navigating institutional procedures. Colleges regularly make the false assumption that all students, particularly first time students, are informed and truly understand university policies and procedures and the often punitive consequences of not adhering to university procedures. Additionally, universities assume that all students can assess their academic preparation relative to the academic ability necessary to be successful in a college-level course.
Although avoidable, these two assumptions set up many students to feel frustrated, to be overwhelmed, and to question their ability to be successful as students. Ideally, colleges make admission decisions based on standards and criteria to admit students who are likely to be successful and capable of completing college level academic work.

Experiencing a smooth supportive transition with some early wins versus a turbulent start with several setbacks, however, could be the difference between high academic self-efficacy and doubting one’s capability to complete college. During the first year of college, institutions should make deliberate attempts to facilitate early academic success and teach students how to navigate institutional procedures. Doing so will require institutions to be more customer service oriented and to personalize first year schedules to capitalize on students’ strengths, rather than tackle their weaknesses.

Bandura’s (1986, 1997) Self-Efficacy Theory proposed that individuals develop a perception of their ability to perform a specific task in the future based on their past experiences and observations with a similar task. Bean and Eaton (2000) discussed that there are academic and social measures of efficacy, but that individuals are best at assessing their level of self-efficacy with tasks that are very specific. Researchers studying diverse student populations have reported that assessing student’s academic self-efficacy is important for predicting academic performance and persistence (Bean & Eaton, 2000; Chartrand et al., 1992; Solberg et al., 1993). Therefore, appropriate placement in courses and career guidance into fields where students can be successful should produce early encouragement and result in higher levels of academic self-efficacy.
Students who are placed in courses at the appropriate level of academic challenge and that cater to their intellectual curiosity are more likely to perform better in classes and have greater confidence in their ability to complete college successfully. It is highly recommended that colleges re-evaluate the effectiveness of standardized placement tests to assess the academic placement of African American and Latino students. Placement in courses where the content is either beyond a student’s current ability or considerably beneath a student’s ability will lead to undesirable outcomes. Furthermore, colleges should avoid overly rigid plans of study that require first year students to take courses that the student associates with high levels of anxiety or low levels of intellectual interest. Forcing students to enroll early into their weakest subjects could result in low GPAs, particularly since the student has relatively few overall credit hours, frustration, self-doubt, and possibly academic dismissal. Students are often particularly aware of courses that trigger feelings of anxiety where they are less likely to be successful. Implementing these recommendations may reduce the number of students that fail courses their first year and consequently develop a low degree of academic self-efficacy towards college level coursework.

Developing a healthy academic self-efficacy and attitude towards education, a process that begins far before college, may explain the relationship of academic self-concept, academic adjustment, and academic performance in college. The development of academic self-efficacy, a student’s perceived ability to complete academic tasks successfully, has not been sufficiently researched for African American and Latino college students. Several researchers have explored self-efficacy with regards
to persistence and academic performance for Latino college students (e.g., Cardoza, 1991; Cerna et al., 2009; Chartrand et al., 1992; Edman & Brazil, 2009; Longerbeam et al., 2004; Solberg et al., 1993), but a similar search returned only two peer-reviewed research articles that examined self-efficacy and persistence for African American college students (Fife et al., 2011; Thile & Matt, 1995). There was general agreement among these studies that students who have more confidence in their ability to be successful at academic tasks tend to set higher academic standards for themselves and are more academically accomplished. Successful students were more likely to report higher self-efficacy (Cerna et al., 2009); whereas, students who did not persist were more likely to report a self-perception of low academic ability (Longerbeam et al., 2004). The missing elements from these studies were the environmental conditions and individual characteristics that contributed to students’ developing a healthy academic self-efficacy versus a poor academic self-efficacy.

In addition to appropriate placement in classes, faculty and staff feedback and encouragement may contribute to higher levels of academic and social self-efficacy in students of color. Faculty should provide early and frequent constructive feedback to students, as well as encourage and, if necessary, require students to utilize the resources available to promote their success. Particularly with first generation college students, staff may need to be available to provide nurturing guidance (possibly hand-holding) to assist with how to navigate complex institutional and federal bureaucracy in order to foster students’ belief in their ability to overcome institutional obstacles in the future. Providing opportunities for early feedback and accomplishments and providing students
with the skills necessary to navigate institutional bureaucracy will likely increase self-efficacy and the likelihood that students will persist to graduation.

African American and Latino students, throughout all levels of education in the U.S., are particularly vulnerable to negative suspicions about their intelligence and are often portrayed as a dilemma or challenge for educators (Harper, 2005; Mendoza-Denton & Aronson, 2007; Oseguera et al., 2009), regardless of their true academic aptitude. This perception has had a devastating impact on the pipeline of African American and Latino students who are academically prepared and confident enough to be successful in college. These negative portrayals and stereotypes are often acted upon when determining academic placement and tracks for students of color and influence the perceived nature and quality of interactions with educational professionals as early as kindergarten. Conceptually, it has becomes easy to see how educational conditions can encourage and motivate students to excel academically and develop high academic self-efficacy or discourage students regarding their abilities which leads to low academic self-efficacy. Academic self-efficacy begins with developing beliefs and attitudes about their academic environment and their individual ability, which early on can create a self-fulfilling prophecy of academic accomplishment or academic failure. Reframing academic possibilities and educational equity in primary and secondary education for students of color will greatly benefit student’s academic self-efficacy prior to enrolling in college.

Institutions of higher education also play a role in nurturing the academic self-efficacy of the tens of thousands of students of color who, despite environment conditions, have achieved the academic requirements to attend college. Far too many
able and prepared African American and Latino students leave college, not because of lack of academic aptitude, but because the educational environment failed to embrace their academic needs as equally and judiciously as they did the needs of majority students. Enhanced cultural awareness should include a willingness on the part of institutions to nurture all students’ academic self-efficacy through effective academic and career advising, a willingness among student affairs staff to show students how to navigate the system, and a willingness of faculty members to engage actively with students from background different than their own. While many institutions have diversity sensitivity and equal opportunity statements, very few institutions require or certify the cultural competency of their faculty and staff. Quite the contrary, many institutions strive to treat all students equally (or the same), a practice that devalues students’ cultural uniqueness and cultural-specific educational needs.

Many students of color are also first generation college students and therefore may not have access to information and resources specific to higher education. Effective academic advising may include providing more information and clarity on majors and career fields to assist students in identifying a good career fit. Career clarity is particularly important for students of color who may not have the financial resources to explore many majors and may become discouraged when placed in courses that do not best capitalize on their strengths and abilities. Additionally, to build student self-efficacy in the first year of college, advisors should try to place students in classes where a student had prior success, high interest, and are more likely to be successful, rather than place them into a standardized first year schedule. To boost efficacy in navigating institutional
policies and procedures, student affairs staff must be willing to teach students how, rather than just telling them what they need to do. Institutions generally expect a level of bureaucratic know how that can be overwhelming and alienating to first time students, resulting in frustration and failure to meet institutional requirements. Because of time constraints, students are often told what they need to do (e.g., complete the FAFSA, provide an IRS tax transcript, apply for a private loan, complete a dependency verification form, and select required on-campus housing within their budget), but students may not know how to complete those tasks or lack of knowledge that adds to distractions, stress, delays, and uncorrectable mishaps. A deliberate focus on teaching students, particularly first year students, how to address institutional requirements will increase students’ self-efficacy that they can complete such tasks in the future and would likely increase overall satisfaction with their college experience. Lastly, the possibility of more out of class face-time between faculty members and students can go a long way toward encouraging and support students’ academic development. This study found that asking question in class had a positive influence on academic performance. It is important that faculty members foster a classroom environment where questions are welcomed and faculty members are perceived as genuine and caring. While students are encouraged to take an active role in their education, institutions also have a role in implementing strategies that nurture and promote the academic self-efficacy of students who are admitted.

**Leveraging students’ interaction with family.** Family plays an important role in providing support and encouragement for the educational experiences and goals of
African American and Latino students. The survey item “frequency of interaction with family” resulted in a significant factor load and explained 5.9% of the total variance. Higher education is accustomed to highly involved parents, frequently referred to as “Helicopter Parents,” “Stealth Parents,” and “Snow Plow Parents,” who leverage their prior knowledge of higher education and forceful sense of entitlement to advocate for their child. Generally, it is assumed that high levels of interaction between parents and their students would contribute to more academically successful students, but that also presumes that all parents possess knowledge of college resources and can effectively assist their child in navigating bureaucratic systems. To the contrary, more frequent interaction with family for African American and Latino student was a predictor of decreased academic performance and therefore may be an indicator of the amount of stress and difficulty students are experiencing on campus.

Given the high number of African American and Latino students who are first generation college students, their parents may not be knowledgeable of resources and procedures on campus and may not give beneficial guidance aligned with higher education culture and services. Parents may offer words of support and encouragement, but may not insist that their child maintain regular contact with faculty including attending office hours, regularly utilize campus tutoring services (and possibly shop around for a tutor that best meets their needs), avoid studying in residence halls where there are many opportunities for distractions, and network on campus to resolve issues rather than thinking issues, such as an unpaid tuition balance or inability to purchase school supplies. Additionally, African American and Latino students may discuss with
their parents experiences of stress and discrimination on campus. In turn, to alleviate and avoid those experiences, nurturing parents may encourage their students to drop classes or leave college altogether because the parents’ lack of knowledge of other options for their student. Higher education has an opportunity to provide parents of African American and Latino students with knowledge or resources and possibly a campus contact to better address such issues.

It is reasonable to infer that more involved parents of color could positively influence the academic outcomes of their student during the first year if the parents are equipped with the appropriate tools and resources. Highly involved parents most likely have invested considerable amounts of time and resources in their student throughout their education and would likely continue to be a source of encouragement and support in college. This finding creates both an opportunity and challenge for colleges. College departments with the specific mission to service underrepresented students generally work more closely with the parents of students or accommodate eager parents with resources on how to best help their student. The Family Educational Rights and Privacy Act (FERPA) limit many of these communications and partnerships. It is recommended that academic advisors assess the frequency of communication students have with their parents during appointments and educate parents on warning signs in their students’ communications and of the available academic support services on campus.

**Overall satisfaction and persistence decisions.** Overall satisfaction was a predictor of academic performance and the leading predictor for intentions to persist in college for both African American and Latino students in this study. Clearly colleges
should be concerned with student satisfaction and morale as both have an influence on academic outcomes. Students who experience high levels of discrimination, face hostile and unwelcoming classroom and housing environments, and find university procedures to be overly complicated, frustrating, and unforgiving are more likely to leave college. Institutions should seriously examine and redesign procedures with 18- and 19-year-old students in mind, and strive to meet the academic and social needs of all students, not simply those students who easily relate to existing campus culture. Framing college students as consumers of education is not always a population analogy, but has potential merit in interpreting the relationship between overall satisfaction and retention and persistence decisions.

Academics and educational policy-makers grapple with the thought of education being considered a commodity, a product that can be traded on the financial market, as opposed to serving a more idealistic purpose of advancing societal knowledge and wisdom (Doti, 2004). Nevertheless, the reality for most U.S. citizens and many others around the world is that pursuing higher education involves making many financial decisions about one’s present and future. Dervarics (2012) reviewed the Financial Aid Comparison Shopper (an online tool created by U.S. Federal Government) that allows students and their parents to compare tuition costs across different colleges and estimate incurred debt and average starting salary upon graduation. Schertzer and Schertzer (2004) suggested that students are becoming increasingly consumer-oriented and recommended that colleges treat students as “customers” and consider “student satisfaction” as a major contributor to institutional commitment and retention.
Furthermore, Schertzer and Schertzer insisted that a focus on student satisfaction and on identifying and addressing the needs and expectations of students are the best means to promote student recruitment, retention, and motivation.

The results of the present study and many others revealed that a sense of belonging and experiences of discrimination are crucial to institutional satisfaction for students of color, yet many institutions have failed to acknowledge and address these issues genuinely, particularly for students of color. While higher education has embraced the enrollment of students of color, the results of this study suggest that the students themselves, their presence, and their culture, have not been embraced by higher education. High levels of discrimination, diminishing levels of sense of belonging, and low satisfaction with higher education’s efforts to meet the needs and expectations of students of color have likely contributed to high national attrition rates of African American and Latino students.

Students of color must feel they matter and are equally valued at their colleges before they can fully achieve a sense of membership and embrace campus culture (Schlossberg, 1989). Repeatedly, items that involved faculty and staff caring about students, feeling a part of the campus community, feeling isolated, unsafe, and discriminated against emerged as significant in this study. Students of color, unaccustomed to a predominately White environment and the social norms of academia, are likely to feel isolated and alienated. When the same students encounter racial hostility and exclusion from faculty, staff, and other students based on negative stereotypes, those students are likely to feel threatened and unwelcomed. And when
those same students are unable to see their culture, needs, interests, and ways of relating to the world incorporated into campus programming, activities and traditions, those students will likely begin to question whether they are satisfied and would like to continue on college campuses. The bottom line is that students will make a decision on their continued patronage to colleges based on the quality of the service and their overall perception of the environment for which they have paid.

Increasing retention and persistence for students of color depends on a college’s ability to identify and address the needs and expectations of students from a customer service perspective. Students of color are clearly dissatisfied with their treatment, service, and the climate generally perceived at institutions of higher education (also discussed as student morale by Strange & Banning, 2001). Consumers display their dissatisfaction by not patronizing organizations where they have had a bad experience or poor customer service. Institutions will have to provide students a reason to stay at their institution as opposed to going someplace else. Given the saturation of higher education options (private, public, community colleges, universities, and vocational programs), all colleges are in competition to demonstrate to students why they should continue at their institution based on a more preferred environment and better services than provided someplace else. Institutions that ignore the need to address student satisfaction, from treatment of civility, to class size, to customer service, to cost, and much more, either assume students do not have other options or believe that they are immune to the negative consequences of student attrition. Considering that most institutions are negatively impacted when their customer-base diminishes, it is recommended that all colleges
immediately begin conducting student satisfaction surveys, disaggregating the data, and making changes that matter to students.

Assessments and Closing the Degree Attainment Gap

All is not grim regarding the graduation and degree complete rates for underrepresented students. Nguyen et al. (2012a, 2012b) reported findings that highlight improvements in the graduation rates and narrowing the graduation-rate gaps of Latino and African-American students at some four-year colleges. The importance of these reports is that they negate sentiments that increasing degree attainment for students of color is an unattainable goal and that closing the degree completion gap is possible only through more selective admissions criteria. The overall bachelor graduation rate in the U.S. improved by 3.3 percentages points from 2004 to 2010, while Latino graduation rates increased by 3.5 percentage points (Nguyen et al., 2012b, p. 2). African-American graduation rates, however, were reported to have stayed the same over that time period (Nguyen et al., 2012a, p. 2). A clear problem with these numbers is that 40% of Latino students (Nguyen et al., 2012b, p. 2) and 60% of African-American students (Nguyen et al., 2012a, p. 2) were concentrated in colleges that experienced no improvement in their overall graduation rates, a sign that many colleges are ineffective at meeting the needs and expectations of all students, not just underrepresented students.

Institutions that invested in countering the historical graduation rates of students of color set deliberate goals to either increase degree attainment or close the achievement gap between minorities and White students. Nguyen et al. (2012a, 2012b) suggested that, regardless of the assessment objective, transforming the experience of higher education
for all students is successful and sustainable only when policies and programs to improve graduation rates are institutionalized into the culture of the college. In other words, it is not the students who must change, but rather the institution must evolve to address the needs and expectations of today’s college students.

Higher education is faced with the daunting task of changing institutional culture from being simply a provider of higher educational opportunities to adapting a relationship of deliberate engagement and service to promote degree attainment for all students. Colleges must make the shift from programs and policies that advantage a diminishing racial majority and become more informed in how to facilitate academic success for a greater variety of students and support multiple pathways to student success. Nguyen et al. (2012a, 2012b) highlighted many public and private colleges as “Top Gainers” in improving graduation rates and “Top Gap-Closers” in narrowing the disparities in graduation rates for both African-American and Latino students.

It is possible to create institutional policies and programs that promote student success and are inclusive of students from various backgrounds. Stony Brook University, University of Kansas, Virginia Commonwealth University, and Texas Tech University were reported to have implemented institution-wide comprehensive programs that achieved notable improvements in graduation rates for both African-American and Latino students (Nguyen et al., 2012a, 2012b). Similarly, entire state systems, such as the University System of Georgia and the California State University System, were highlighted for achieving substantial gains in graduation rates, while serving a wide range of students in terms of pre-college preparation and cultural backgrounds and increased
access to higher education for minority students (Nguyen et al., 2012a, 2012b). When institutions apply an objective eye to the challenge of student retention and persistence, the potential for institutional results can be profound, particularly when institutions pay attention to what matters most to students rather than to outmoded student profiles and institutional policies.

Summary

The purpose of this study was to identify the academic performance and persistence factors most important to African American and Latino college students, which is particularly timely given the significant shifts in the U.S. demographics and in students enrolling at four-year colleges. The findings revealed and validated concerns that institutions of higher education have made gains in the recruitment, but not in the full inclusion and valuing of African Americans and Latinos in the college environment. Thirty years of culturally starved retention interventions that required students to fit into a mold in order to benefit from campus services have proved to be highly ineffective. College enrollment for students of color has increased significantly in the U.S., with respect to their representation in the larger U.S. demographics. Nevertheless, persistence to degree attainment continues to be far below desired levels (NCES, 2011). The myopic and limited focus on demographic variables that correlate with student departure has all but ignored the promotion of variables that contribute to academic success for students of color. Institutional policies and practices, such as increased institutional bureaucracy that serves only the institution’s benefit, mandatory on-campus residency, and generalized prescriptive treatment based on standardized test scores do very little to achieve
institutional satisfaction, to attain a sense of belonging, or to address the perceived and actual discrimination that students of color face on college campuses. The emerging Inclusive Excellence initiatives that simply celebrate diversity and provide marketing materials are ineffective at combating the institutionalized exclusion of the academic and social needs of students of color in campus services and procedures.

Like it or not, college students are consumers of education. The majority of students cannot afford to attend college simply for intellectual and cultural growth. Schertzer and Schertzer (2004) equated the rising cost of college and the decrease of grant sources to fund college as creating a mental shift to evaluate higher education from an economic perspective. Students may not always be savvy shoppers, possessing perfect information and the know-how to evaluate a sound life-long decision, but they do make decisions regarding their continued patronage based on whether or not their needs and expectations are being met by the institution. How might college-choice decisions for African Americans and Latinos be influenced if colleges were required to provide its graduation rates of students that share their culture? Would students and parents select a college where their outlook indicates a 15% chance of graduation and 57% chance of feeling discriminated against on campus? Once enrolled, would students continue to pay the staggering cost of tuition for services that do not meet their academic and social needs? It is no longer acceptable to suggest that low retention and graduation rates for students of color are the result only of poor preparation and lack of commitment or grit. To the contrary, it is far more accurate to declare that higher education has failed to provide the products and services to meet the needs and expectations of students of color.
Navigating college is very confusing for many, but when the environment also includes hostility, feeling unwelcomed, and poor service, students may decide college is not where they would prefer to spend their time and money. Students’ perception of campus has an influence on intellectual development and academic success and their ability to establish a sense of belonging on campus (Bensimon & Soto, 1997; Brazzell, 2001; Pascarella & Terenzini, 1991, 2005; Strange & Banning, 2001). Based on first-time full-time graduation rates, consistently since 1996, approximately 80% of African American and 74% of Latino students have decided to leave a college prior to earning a bachelor’s degree (NCES, 2011). This outcome represents a failing of institutions to meet the needs and expectations of the students it enrolls effectively, which is a clear indication of low student/customer satisfaction.

This study identified factors that African American and Latino students have identified that drive their perception of the college environment and variables that predict academic performance and persistence and retention decisions. The first step for any institution attempting to address the needs of African American and Latino students is to assess and understand students’ perceptions and experiences regarding: (a) discrimination on campus; (b) sense of belonging; (c) staff and faculty concern for students; and (d) satisfaction with campus racial and ethnic diversity. Institutions specifically concerned with increasing the academic performance of African American and Latino students should focus on enhancing students’ academic self-efficacy, improving students’ satisfaction with campus policies and procedures, and providing resources for the places students of color go for support, including multicultural centers and their parents. Lastly,
institutions that need to increase their retention and persistence of African American and Latino students must evaluate their policies, practices, and campus climate for the purpose of transforming into a student/customer oriented institution and combat aspects of existing campus culture (e.g., discrimination and micro-aggressions) that erodes students of color sense of belonging on campus. The most successful organizations in a consumer-economy are those that understand their customers’ needs and expectations, provide desired products and services, and strive to maximize the customers overall experience and satisfaction.

The following recommendations from this study have been informed and driven by data and are designed to enhance the academic performance and retention rates of students of color. College administrators, policy-makers, and academic program developers need to increase their understanding of African American and Latino students’ experiences on their campus. This can be facilitated by: (a) acknowledging that discrimination on the basis of race, ethnicity, and socioeconomic status is present on their campus; (b) developing programs that continuously aim to increase the cultural competency of faculty, staff, and students, and combat micro-aggressions on campus; and (c) making available support, via counseling centers or cultural centers, to assist students with coping with discrimination experienced on campus. Increase students’ sense of belonging, racial and intellectual identity development colleges by: (a) sponsoring culture-specific groups were students, faculty, and staff can come together, network, and provide support; and (b) connecting students of color with faculty and staff members regardless of their race and ethnicity, that genuinely care about the well-being of students
for mentoring and guidance. Strive to meet the academic needs and expectations of students of color, while fostering greater self-efficacy by: (a) re-evaluating the effectiveness of standardized placement tests to assess the academic placement of African American and Latino students; (b) avoiding overly rigid plans of study that may require students to take courses their first year that they associate with high levels of anxiety or low levels of intellectual interest; and (c) striving to place students at the appropriate level of academic challenge, which might not be best determined by ACT/SAT scores, and catering students’ intellectual curiosity for at least one or two courses during their first year. Lastly, colleges need to develop a means to assess accurately student morale and satisfaction with procedures, programs, products and services, and implement strategies to address dissatisfaction.

Higher education must understand and accept: (a) the needs of its changing demographics; (b) that consumer expectations determine the value of services; and (c) that good customer service is rewarded with retention and low student satisfaction drives attrition. Institutions are cautioned not to confuse student satisfaction with artificial happiness, which is often short term and produced by gimmicks such as one-time discounted classes, free handouts (e.g., tee-shirts and food), and luxury residence halls that are expensive and contribute to financial stress. Increased retention and persistence result from meaningful organizational cultural change, such as eliminating institutional obstacles that only exist out of convenience for the institution, creating new traditions and programs that allow greater numbers of students to feel reflected in campus culture, becoming customer service centered and solution-oriented, and proactively supporting
and resolving the concerns of students from diverse backgrounds and not simply
*celebrating diversity* while underrepresented groups are feeling alienated and intimidated on campus. Academic success is not achieved in a vacuum. No area in U.S. society is color-blind or ought to be. Bean and Eaton (2000) described the college environment as the context in which students learn and live, and this study revealed that enhancing academic performance and persistence for students of color will require colleges to evolve the context of learning into a product that is dynamic and responsive to all students.

**Opportunities for Future Research**

This study revealed several opportunities for future research to further the understanding and effective implementation of strategies to improve academic performance and persistence rates for African American and Latino college students. The first opportunity is to collect and analyze data that has a more equal distribution of respondents who plan to persist and continue at their current college or not persist or continue at their current institution. While this study was intended to identify the constructs that contributed to successful academic outcomes, the sample disproportionately represented students that had intentions for more favorable academic outcomes. A more balanced sample would improve the predictive ability of the regression models. The second opportunity is to develop an instrument to assess significant student satisfaction constructs. The current study was limited by a single overall satisfaction construct that included a narrow scope of assessable student satisfaction possibilities. Developing a more robust assessment tool would allow
institutions to better distinguish and evaluate their areas of strength and areas of needed improvement. The third opportunity for future research is to better understand the nature of sense of belonging for African American and Latino college students and its impact on academic outcomes and steps institutions can take to create an environment that fosters greater levels of sense of belonging and membership for historically marginalized groups at predominately White college classes.
APPENDIX
APPENDIX A

LIST OF VARIABLES AND CONSTRUCTS
Appendix A

List of Variables and Constructs

**Dependent Variable:**
What is your current grade average (as of your most recently completed academic term)?
What do you think you will be doing in the fall?

**Control Variable:**
- African American/Black
- Latino (consisting of Mexican American/Chicano, Puerto Rican, Other Latino)
- YFCY Year (used to test to sample years are statistically similar)
- Institution Type
- Your sex
- First-time Full-time Freshman status
- Standardized Aptitude Test Score (ACT/SAT Composite scores converted to percentile rank)

**Academic Adapting:**
- Utilize campus services available to students
- Felt overwhelmed by all you had to do
- Ask questions in class
- Seek feedback on your academic work
- YFCY Academic Adjustment Score
- YFCY Academic Self-Concept Score

**Campus Community & Residency:**
- Where did you primarily live while attending college this past year?
- Felt: Isolated from campus life
- Felt: Unsafe on this campus
- I feel a sense of belonging to this campus
- I see myself as part of the campus community
- Frequency of Academic advisors/counselors interaction

**Faculty-Staff Campus Support:**
- Faculty here are interested in student’s academic problems
- Staff here is interested in students’ academic problems
Staff here is interested in students’ personal problems
YFCY Student-Faculty Interaction Score

**Family Encouragement & Support:**
- Frequency of family interaction
- Family support to succeed

**First Year Programs:**
- Enrolled in a formal program where a group of students take two or more courses together (e.g., FIG, learning community, linked courses)*
- Participated in an academic support program*
- Taken a course or first-year seminar designed to help students adjust to college life*
  (*Item will be examined individually and as participated in any one of these first year activities)

**Institutional Satisfaction:**
- Satisfaction: Student housing (e.g., res. halls)
- Campus Satisfaction: Class size
- Campus Satisfaction: Interaction with other students
- Campus Satisfaction: Racial/ethnic diversity of faculty
- Campus Satisfaction: Racial/ethnic diversity of student body
- YFCY Overall Satisfaction Score

**Racial Campus Climate**
- Campus Satisfaction: Respect for the expression of diverse beliefs
- I have felt discriminated against based on my gender
- I have felt discriminated against based on my race/ethnicity
- I have felt discriminated against based on my socio-economic status
- In class, I have heard faculty express stereotypes about racial/ethnic-groups
- Felt insulted or threatened because of your race/ethnicity
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