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The Effects of First-Generation Status and Race/ Ethnicity on Students' Adjustment to College

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UNIVERSITY OF MIAMI

THE EFFECTS OF FIRST-GENERATION STATUS AND RACE/ETHNICITY ON
STUDENTS' ADJUSTMENT TO COLLEGE

By

Cornelia T. Splichal

A DISSERTATION

Submitted to the Faculty
of the University of Miami
in partial fulfillment of the requirements for
the degree of Doctor of Philosophy

Coral Gables, Florida

December 2009

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STUDENTS' ADJUSTMENT TO COLLEGE

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The Effects of First-Generation Status
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Little is known about the college adjustment of first-generation students, particularly those from various racial/ethnic groups. This study sought to describe the college adjustment of first-generation students from three different racial/ethnic backgrounds (White/non-Hispanic, Black and Hispanic) and to determine whether generational status and race/ethnicity jointly or separately affect college adjustment as measured by responses to the Student Adaptation to College Questionnaire (SACQ). A sample of 418 students (208 first-generation, 210 non-first-generation; 140 White, 138 Black, and 140 Hispanic) was drawn from a population of 4,718 degree-seeking, self-identified undergraduates at a research university in the Southeast. A 2 X 3 factorial ANOVA was used to assess the effects of generational status and race/ethnicity on college adjustment. There was no significant interaction between the independent variables on adjustment to college, nor were there significant main effects. Despite follow-up data collection efforts, a low response rate (34%) to the online administration of the instrument and consequent low number of respondents in each cell may have obscured existing differences. Other implications are discussed, including the question of SACQ sensitivity to racial/ethnic differences and difficulties of web-based survey administration in an institutional setting.

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CHAPTER 1

Introduction

Background of the Problem

Many college and university students are “first generation,” defined as those for whom neither parent has more than a high school education. About 34% of the new students enrolling in four-year institutions are first-generation; 53% of those starting at two-year schools are first-generation (Choy, 2001). In 2008, the proportion of first-generation students among high school seniors taking the SAT was 36%, an increase over the preceding decade (College Board, 2008). Being first generation often means the student will have scarce information about postsecondary education, from preparing academically in high school, assembling college applications, and seeking financial aid to entering, adjusting, and succeeding in college (Berkner & Chavez, 1997; Berkner, Horn, & Clune, 2000; Kojaku & Nunez, 1998; London, 1989; Stage & Hossler, 1989; Warburton, Bugarin, & Nunez, 2001; York-Anderson & Bowman, 1991). Studies have shown that first-generation students frequently come from lower socioeconomic homes and thus may be lacking in social and cultural capital (London, 1992; Terenzini et al., 1994). These studies also indicate that first-generation students may lack family and peer understanding and support in terms of college attendance, and they are more likely to be minority (e.g., Bui, 2002; Choy, 2001; Harrell & Forney, 2003; London, 1989, 1996; Terenzini et al., 1994; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996).

Consequently, first-generation students are more likely than their counterparts to leave college before graduation (Berkner, Horn & Clune, 2000; Horn, 1998; Nunez, Cuccaro-Alamin, & Carroll, 1998; Riehl, 1994; Warburton, Bugarin, & Nunez, 2001).

National Center for Educational Statistics longitudinal survey data also have consistently indicated that first-generation students are more likely to drop out of college before the second year (Choy, 2002; Horn, 1998); less likely to persist in college after three years (Choy, 2002; Warburton, Bugarin, & Nunez, 2001; Berkner, Horn, & Clune, 2000); and less likely to attain a bachelor's degree after five years (Choy, 2002; Berkner, He, & Cataldi, 2002). A recent study revealed that among students enrolled in four-year colleges, first-generation students had a graduation rate of 44.9% while the rate for non-first-generation students was 59% (College Board, 2008). However, when first-generation students do earn bachelor's degrees, they achieve similar early career earnings as their peers (Nunez, Cuccaro-Alamin, & Carroll, 1998). Nevertheless, four to five years after graduation, first-generation students are less likely than students whose parents have college degrees to pursue graduate or professional studies (Choy, 2000).

Given that a disproportionate number of first-generation students have racial/ethnic minority backgrounds (e.g., Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; Zalaquett, 1999), minority student degree attainment rates afford additional evidence of challenges for first-generation students. Compared to White students (40% of whom complete college in four years, 67% in six years), 21% of Black, non-Hispanic¹ students and 25% of Hispanic students finish in four years, and 46% and 47%, respectively, finish in six (Berkner, He, & Cataldi, 2002).² Hispanics are much more likely to attend two-year rather than four-year colleges as compared to White and Asian students, and much less likely to earn degrees (e.g., Hurtado, Inkelas, Briggs & Rhee,

¹ "Black" will be used throughout this paper to describe non-Hispanic Blacks for consistency and because it is the term used by the university that was the setting for this study.

² "Hispanics" are persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race (U.S. Department of Commerce, 2008).

1997; Rendon & Garza, 1996). Further, Hispanics remain the most likely group to be first-generation students (38.2%) at four-year colleges (The Foundation for Independent Higher Education & UCLA, 2007). In essence, being a minority student is an additional risk factor for first-generation students in earning a college degree.

These statistics imply that higher education is not experienced monolithically by students in colleges and universities, and that college environments that have fostered success among “traditional” college students may be less likely to do so with diverse students. Therefore, the college adjustment of first-generation college students is of concern to colleges and universities whose mission includes the preparation of mature, effective and productive individuals. Students who have successfully integrated into the academic and social environment of the institution, who possess a personal sense of belonging and of well-being, and who have developed a commitment to the institution have a better chance of graduating with a degree, which translates into multiple benefits for the institution, individuals and society (e.g., Baum & Payea, 2004).

However, surprisingly little is known about the college experiences that lead to success for first-generation students (Pascarella, Pierson, Wolniak, & Terenzini, 2004). Further, research suggests that a variety of cultural and psychological issues are involved in their adjustment to college (see Literature Review). Based on a review of the literature, Gibbons and Shoffner (2004) concluded that: “Evidence is clear that this portion of the population needs specific skills, information, and direction that other college-bound students may already possess” (p. 93). Novelist and first-generation college graduate Roland Merullo (2002) has observed that the backpacks of first-generation college students carry the extra weight of cultural dislocation, economic hardship, and navigation

of an alien landscape without a map. The implications are worrisome. Americans with bachelor's degrees achieve higher earnings, greater occupational status, and more career mobility and attainment than individuals with only high school diplomas, and these differences have grown significantly over time (Carnevale & Rose, 2003; Tierney, 2000; Stage, 1996; Pascarella & Terenzini, 1991). The relationship between education and income continues to grow, clustering Americans into families with both high-parental education and income level and families with neither high parental education nor high income (Carnevale & Rose, 2003). It has become more important than ever for first-generation college students "to gain equal footing with their peers" (McCarron & Inkelas, 2006, p. 534).

Relevant Concepts and Theoretical Frameworks

Theories and concepts useful in understanding the issues that first-generation students might have when they attend college are described below.

"Integration." Astin (1984, 1985, 1993) proposed that students learn by becoming involved; the more involved or "integrated" with the academic and social aspects of campus life, the more likely a student will be successful and stay in college. For Astin, integration means involvement that requires the investment of both psychological and physical energy in tasks, people, or activities; thus, college's effect on students has as much to do with student effort as the college's provision of resources (Pascarella & Terenzini, 2005). Studies based on Astin's input-environment-outcome college impact model (I-E-O) attempt to explain the effects of environmental influences on students, focusing more on factors over which the college exerts some control (Pascarella & Terenzini, 2005). For example, certain institutional environments, termed

“involving colleges,” were found to promote integration and foster student development (Kuh et al., 1991). Further, interactions with faculty and other students are primary influences on student satisfaction and persistence (Astin, 1985, 1993). While Astin’s propositions may not technically constitute a theory (Pascarella & Terenzini, 2005), the I-E-O model is the basis of a large body of research that has yielded practical guidelines for higher education administrators.

Integration also is central to the work of Tinto (1975, 1987, 1988, 1993). For Tinto, integration is “the extent to which the individual shares the normative attitudes and values of peers and faculty in the institution and abides by the formal and informal structural requirements for membership in that community” (Pascarella & Terenzini, 2005, p. 54).³ He theorizes that students enter college with varying personal, family and academic characteristics, including intentions and goals, and that these intentions and goals are modified through interactions with the college’s academic and social systems. Tinto says that ultimately these interactions—critical in the first six weeks of college—affect persistence, which is defined as completing a program and earning a degree (Berkner, Horn & Clune, 2000). Tinto-based research has indicated students are more likely to withdraw from college when these interactions are not positive; further, when students are unable to “separate” from their home communities and attachments, they therefore do not become academically and socially integrated into the college community

³ Tierney (1992, 1996) and others have criticized the notion that students must break with their home context to assimilate into a new culture (college) because it implies that minority students must abandon their ethnic identities and cultural influences to succeed at predominantly White colleges. In addition, Attinasi (1989) posited that for first-generation and minority students, “social integration,” rather than indicating adoption of the “norms” of the institution, signals the extent to which students can cognitively “navigate” the campus.

(Billson & Brooks-Terry, 1982; Braxton, Sullivan, & Johnson, 1997; Cabrera, Nora, & Castaneda, 1993).

The predictive validity of a central principle of Tinto's model—that departure from college is related to the student's integration into its academic and social systems—was partially supported in research with mostly White undergraduates (Terenzini & Pascarella, 1977). However, results also suggested that informal interactions with faculty play an important role in the social integration of students; this was not specified in the model, which delineated separations between academic and social experiences. Subsequent research has suggested these experiences should not be viewed separately; for example, studies suggest that peers influence student success as much, and possibly more, than formal classroom experiences (Astin, 1993; Terenzini, Springer, Pascarella, & Nora, 1995; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996), and that involvement in college clubs and organizations positively influence critical thinking skills (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). Similarly, Bean (1980, 1982, 1983) posited that student “involvements” both on and off campus affect commitment to the institution and ultimately persistence; among his findings was that students' lack of time for campus interactions because of working at a job contributes to their departure from college.

“Adjustment.” While the elements of “integration” and “adjustment” are similar (and at times researchers have used the terms interchangeably), a difference exists in the literature in the way in which they have been studied. “Integration” as reflected in Astin- and Tinto-influenced research indicates physical as well as psychological investment in specific social and academic activities; for example, measures of integration seek hours

of study per week and time spent in the library in addition to perceptions that indicate “acceptance” of and satisfaction with the college’s academic and social systems. The researchers are essentially interested in integration within their studies of attrition or persistence, not in integration per se. On the other hand, Baker and Siryk (1984, 1989, 1999) sought to study college adjustment as an end in itself so that, if needed, students could actually be assisted by the institution, and they developed an instrument for that purpose. Their view of “college adjustment” is as a multifaceted process in which components influence each other but are equally important; it is based in students’ psychological and physical aspects, but most importantly in their perceptions of those aspects. College adjustment in this case emanates from academic adjustment (motivation to learn, taking action to meet academic demands, a clear sense of purpose, and general satisfaction with the academic environment of the college); social adjustment (extent and success of social activities and social functioning in general, relationships with other people on campus, dealing with relocation from home and significant others there, and satisfaction with the social environment of the college); personal/emotional adjustment (a sense of well-being, both psychological and physical); and attachment (general satisfaction with college-going, and degree of commitment to the current institution and to earning a degree) (Baker & Siryk, 1989; Gerdes & Mallinckrodt, 1994).

It is important to note that Tinto’s model has been critiqued as better describing the college process for “traditional” (e.g., non-first-generation) rather than “non-traditional” (e.g., first-generation) students (Braxton, 2000; Rendon, 1994; Rendon, Jalomo, & Nora, 2000; Tierney, 1992). “Traditional” students receive academic preparation for college in high school, enter college immediately after high school, enroll

in college full time, and are continuously enrolled (Berkner, He, & Cataldi, 2002). Typically, traditional students are single and dependent on parents for financial support (Berkner, Horn, & Clune, 2000), and they work part time, if at all. Today, only about 40% of four-year college students fit this traditional mold (Choy, 2002). Data suggest that even students whose parents have only minimal familiarity with college may fare differently in higher education because of the information, guidance, mentoring and implicit encouragement passed along from parents to their children (Pascarella, Pierson, Wolniak, & Terenzini, 2004). Therefore, the following theories also are relevant to the study of the college adjustment of first-generation students, especially those of minority status.

Social capital theory. Bourdieu (1977, 1986) described social capital as resources based on group membership, networks and support. For example, parents may transmit social capital to their children through their attitudes toward college attendance and by providing knowledge required to succeed in college. Bourdieu also studied how social capital can be used to produce inequality in a society. Others have defined cultural and social capital as knowledge of the campus environment and campus values, access to human and financial resources, and familiarity with terminology and the general functioning of a higher education setting (Coleman, 1988; McConnell, 2000; McDonough, 1997). More recently, Yosso (2005) re-conceptualized social and cultural capital by focusing on how social networks and cultural knowledge nurture and empower individuals in “marginalized” groups (Yosso, 2005). In his view, social and cultural capital are not only derived from family, but also from extended family and peers.

Social cognitive theory: Self-efficacy, validation, and marginality. The concept of self-efficacy emanates from the social cognitive theory of Bandura (1994), which focuses on how individuals learn by identifying with and imitating others. He posited that people with high self-efficacy believe they can accomplish a task, and that belief alone can be an important key to achievement. The reinforcement of feelings/beliefs students have that they are in the place they need to be and are doing what they need to be doing has been described as “validation” (Rendon, 1992, 1994), an “enabling, confirming, and supportive process initiated by in- and out-of-class agents that fosters academic and personal development” (1994, p. 46). Agents of validation are family, friends, significant others, college faculty, and staff. On the other hand, “marginality” has been described in the literature on Hispanic and other minority students as the absence of a sense of belonging, which can lead to “not mattering”—with “mattering” meaning “our belief, whether right or wrong, that we matter to someone else” (Schlossberg, 1989, p. 86).

Further, London (1992) described first-generation students as living “on the margins.” Landry (2003) found that such students attempt “to live simultaneously in two worlds, while being accepted in neither” (p. 3), a situation that produces guilt, pain, and confusion. For first-generation students, marginality can mean having to straddle one culture of home, family and friends and the other culture of the college or university (Cuadraz, 1996; Hurtado & Carter, 1997; Hsiao, 1992; Rodriguez, 2002). Marginality also can engender feelings of alienation and “academic shock” (Rendon, 1992, 1994). In addition, in research on urban college students, Piorkowski (1983) identified “survivor

guilt⁴ as a barrier to academic success for first-generation students. The concepts of validation and marginality are especially relevant to the present study. Hamrick, Evans, and Schuh (2002) wrote:

Validation is particularly important for building self-confidence and self-esteem among first-generation students and those from an impoverished background who doubt their academic ability and potential. When students hear that they have the skills to succeed in college and are worthy of being there, self-esteem, self-confidence, and motivation are enhanced. Students are encouraged to take an active role in campus life and become involved in the learning process. (p. 87)

Purpose of the Study

A purpose of this study was to describe the college adjustment of first-generation students from three different racial/ethnic backgrounds (White/non-Hispanic, Black and Hispanic). The primary purpose was to determine whether, and to what extent, generational status and race/ethnicity jointly or separately affect college adjustment. College adjustment is crucial to the mission of institutions of higher education in that students who successfully adjust to college academically, socially and personally have a better chance of earning degrees and going on to lead productive, fulfilling lives.

Significance of the Study

The practical significance of this study lies in its relevance to higher education's growing concern over the success of first-generation students, especially those of minority status who are at even greater risk of departing from college before graduation. As described earlier, college adjustment is important to higher education and society at large because students who successfully adjust to college are more likely to persist and

⁴ Guilt, often combined with numb feelings and lack of interest in life, is often felt by those who have survived some catastrophe. It was first noticed among survivors of the Holocaust, who felt they did not do enough to save those who died or that they were unworthy of survival (Hirsch, Kett, & Trefil, 2002).

attain a degree. Identifying the college adjustment issues of first-generation students can aid the development of college environments that are inclusive and supportive for them.

The theoretical significance of the study lies in its extension of past research involving college impact models such as Tinto's from traditional students to non-traditional students, e.g., those who are first-generation and from various racial/ethnic groups. Much higher education research has involved predominantly White, full-time undergraduates ages 18-22 attending four-year institutions (often large, public universities), living on campus, not working, and with relatively few family obligations (Pascarella & Terenzini, 1998). Newer inquiries have expanded on the Tinto model or modified it to gain better perspective on diverse populations (e.g., Braxton, 2000; Hurtado & Carter, 1997; Nagasawa & Wong, 1999). Further, much of the literature on first-generation students continues to compare first-generation students as a group to non-first-generation students who often are "traditional." This study instead considered differences in first-generation student adjustment by racial/ethnic group.

Studies also frequently use data from national surveys conducted across multiple institutions, which is conducive to generalizing but perhaps less helpful in understanding student differences that may be related to the different environments at different institutions (e.g., Ishitani, 2006).⁵ More recent evidence suggests that using the same instrument at single institutions in a range of different settings could spur better

⁵ Conducting studies that address the effects of student characteristics and the college environment is difficult in part because of the use of national data sets—"unlike data collected at a single institution, the national data set includes students who enrolled in institutions that are different in numerous ways ... [Researchers are] interested in the effect of academic and social integration ... on longitudinal attrition behavior. The survey may ask questions about items related to academic and social integration during the first year, but it does not question these students with the same items again for the rest of their enrollment ... since one's level of academic and social integration may vary over time" (Ishitani, 2006, pp. 864-865).

understanding of diverse first-generation students (Hertel, 2002); this study was conducted at one institution.

Much of the research also has sought predictor variables of attrition and other college outcomes; thus, the researchers are interested in the “integration” or so-called “adjustment” measure as a predictor, not in adjustment itself. Therefore, few studies have focused primarily on the college adjustment of first-generation students; and few studies have considered college adjustment as a multifaceted process, as this study does via the Student Adaptation to College Questionnaire (see Page 34).

When this study was proposed, the researcher believed it was the first to study the effects on adjustment of both generational status and race/ethnic group membership—in effect, to examine differences within groups of students based on their generational status and backgrounds.

In addition, this study extends past research that has focused primarily on the first-year transition to college by including students from all classes of undergraduate education. While the first year of college is generally accepted as the most pivotal to a student’s persistence and degree attainment, the challenges for non-traditional students do not disappear by sophomore year; the instrument used in this study can be administered at any time during a student’s college career and has been used successfully as a counseling tool with students from all college year levels (Baker & Siryk, 1999).

CHAPTER 2

Literature Review

The following sections provide overviews of the college choice, transition from high school, and in-college experience issues most relevant to this study, e.g., those that help provide context for the study of the college adjustment of first-generation students at a four-year institution. These sections are then followed by a more detailed review of studies of the college adjustment of first-generation college students, with attention to those on minority college students, and by a summary of the issues and research questions that drove this study.

As described earlier, college adjustment is viewed as the student's ability to feel engaged academically and socially in the college environment, to develop a sense of personal and emotional well-being based in those engagements and feelings, and to therefore feel committed to the institution and to getting a degree (Baker & Siryk, 1984, 1989, 1999). Thus, college adjustment is the culmination of experiences—and, significantly, the student's perceptions of and feelings about those experiences—that actually begin as the student is choosing a college, continue through the transition from home and high school to the college environment, and carry on during college (Weidman, 1989).

College Choice Issues

Financial issues. First-generation college students are more likely than their peers to choose college based on costs, on whether they can get jobs to pay for college, and on whether they can live at home while attending college (Nunez, Cuccaro-Alamin, & Carroll, 1998; The Foundation for Independent Higher Education & UCLA, 2007). They

also are more worried about financial aid and averse to student loans (Somers, Woodhouse & Cofer, 2004). These students also may have substantial work and family responsibilities (Richardson & Skinner, 1992) and feel pressure to hold full-time jobs during college (York-Anderson & Bowman, 1991). They are more likely than others to cite “to make more money” as a major reason to go to college (The Foundation for Independent Higher Education & UCLA, 2007). Minority first-generation students in particular may see college as the path to avoiding their parents’ lives of hardship (Lopez, 2001); and they report a desire to help their families financially, in marked contrast to other students (Bui, 2002; Terenzini et al., 1994).

Support issues. First-generation students receive (and perceive) less support from their parents than other students applying to college (Choy, 2001; Fallon, 1997; Hossler, Schmit & Vesper, 1999; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; York-Anderson & Bowman, 1991). However, “support” is typically defined in this research as the ability to provide valuable information, or “college knowledge,” as well as financial assistance. But while first-generation students lack college insights from their parents, they may receive other forms of support; and they are now more likely than those with college-educated parents to say that the reason they are in college is that their parents urged them to attend (The Foundation for Independent Higher Education & UCLA, 2007). Minority first-generation students in particular rely on extended family members and “significant others” such as family friends for college information (Attinasi, 1989, 1992; Perez & McDonough, 2008). Similarly, Gofen’s grounded theory study (2007) concluded that the strong influence of family fuels first-generation students’ aspirations to attend college and earn a degree.

Transition Issues

Tinto (1993) posited that the first six weeks of college can be the most crucial to ultimate success in college and that students are more likely to succeed when they can separate from the home context and engage in academic and social pursuits on campus. For first-generation students, the transition from high school to college has been described as one of “bewildering complexity” (Terenzini et al., 1994, p. 61) that is often complicated by cultural dislocation (Pascarella, Wolniak, Pierson, & Terenzini, 2003; Rendon & Garza, 1996). While first-generation students find peers from backgrounds like theirs at community colleges (which typically serve larger numbers of low-income and minority students), they “are often taken aback by the social and academic climate” at four-year colleges and universities (Cushman, 2007, p. 44). First-generation students have less social capital and thereby less insight into how to seek help on campus, and they worry about financial aid and grades (Bui, 2002; Moschetti & Hudley, 2008; Quintana, Vogel & Ybarra, 1991; Solberg & Villarreal, 1997; York-Anderson & Bowman, 1991). They frequently describe their first exposure to campus “as a shock that took them years to overcome” (Richardson & Skinner, 1992, p. 33).

But contrary to the Tinto-based assumption that individuals must break with the past to better acclimate to the present, Terenzini, Rendon, et al. (1994) note that “cultural disjunction does not necessarily imply that all students need or want to separate totally from their culture to attain success” (p. 64). In an influential case study of Mexican-American first-generation students, Attinasi (1989, 1992) identified behaviors that aid transition to the strange college environment: “Getting ready” behaviors are supported by extended family members, high school mentors or peers (1989, p. 269) via college

preparatory classes or campus visits; these “significant other” influences mediate the effects of parental education and income level. “Getting in” (the college transition) is managed through “collective affiliations” (interactions and connections with peers and others) and “cognitive mapping” that help first-generation students psychologically reduce the size of the university. Similarly, in interviews, first-generation college graduates told Richardson and Skinner (1992) that they “scaled down” campus by finding places with friends where they felt comfortable studying or seeking support. Subsequent research has shown the importance of significant others and informal support networks to first-generation and especially minority students (Hurtado & Carter, 1997; Nagasawa & Wong, 1999; Nora & Cabrera, 1996; Padilla, Trevino et al., 1997).

College Experiences

Many studies have included aspects of the adjustment of first-generation students within the context of larger, longitudinal examinations of college student characteristics and experiences and outcomes in college. This research has consistently found that first-generation students are less likely than other students to have experiences in college associated with “success and persistence” in both their curricular and outside-classroom lives (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996, p. 17); for example, they work more hours and study fewer hours than other students. Further, volunteer work, student employment and intercollegiate athletics, known to facilitate social adjustment for traditional students, do not have similar effects for first-generation students (Pascarella, Pierson, Wolniak, & Terenzini, 2004). Instead, there may be other factors at work: those who are female, minority, living on campus and hoping to attend graduate school tend to post greater academic gains (Pike & Kuh, 2005).

However, in general, differences in integration and intellectual development between first- and non-first-generation students do not appear to be great and are not easily interpreted (Pike & Kuh, 2005; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). For example, though living on campus and participating in a residential learning program (“learning community”) was expected to have a more positive influence on first-generation students’ academic and social integration, the effect is low to moderate (Inkelas, Daver, Vogt, & Leonard, 2007). Instead, the authors found that self-confidence is more important to first-generation students’ academic integration. They also reported that, contrary to other findings, “the more ‘objective’ measures of high school grades and standardized test scores [bear] no relationship to [their] academic transition” (p. 424). In addition, while researchers expected parental involvement to be a strong predictor of degree aspirations for first-generation students (in a negative direction), the main predictor is their perception of the importance of good grades (McCarron & Inkelas, 2006). These contradictory findings join others that point to the potential value of non-cognitive variables in first-generation student research, as summarized below.

Family as a correlate of success. Non-cognitive factors are difficult to study, and such studies are relatively few, but they tend to contradict research findings that paint a negative portrait of the family’s influence on first-generation students as being less encouraging and supporting of college attendance (e.g., Billson & Terry, 1982; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; York-Anderson & Bowman, 1991). For example, research suggests that family relationships aid a “sense of belonging” at college rather than hinder it (Hurtado, Carter, & Spuler, 1996), and that they enhance feelings of “validation” (Rendon, 1992, 1994). Research among Hispanics has especially underlined

the importance of family: Garza's (1998) qualitative research with first-generation Mexican-American females enrolled in a predominantly White women's university revealed that family support had substantial impact on their academic experiences, more so than the ethnic and gender makeup of their school. In a qualitative study of low-income, mostly Hispanic first-generation college graduates, Rodriguez (2002) found that they perceive holding a special status in their families because of their college attendance: "Even though these parents can't provide direct knowledge and personal experiences, they can establish a family value for education (pp. 20-21)." Historically, the U.S. immigration experience is rooted in the meritocratic view that individuals who persevere, who learn what it takes to succeed, can and do achieve.⁶

Other correlates of success. Non-cognitive variables such as strong support and encouragement, self-confidence and self-efficacy, perceptions, college climate, dealing with racism, and successful leadership experiences have been more strongly correlated with minority and first-generation student success in college than with the traditional student measures of standardized tests and grades (e.g., Sedlacek, 1996; Tracy & Sedlacek, 1987).

For example, first-generation students draw on feelings of confidence, validation, and other factors to sustain effort and persist in college (London, 1992; Piokowski, 1983; Terenzini et al., 1994). The desire to succeed has been found to be the most significant predictor of the academic success (Purswell, Yazedjian & Toews, 2008) and persistence decisions of first-generation college students (Hernandez, 2000). It is also possible that

⁶ A poll in 2003 of U.S. Hispanics by *The New York Times* and CBS News (Romero & Elder, 2003) revealed that Hispanics were far more optimistic about life and their children's prospects than were non-Hispanics, particularly Blacks. Most respondents (57%) were immigrants, 66% of whom said they came to the United States with expectations of better economic opportunities.

focusing on shorter-term intentions to succeed (e.g., do well on the next exam) rather than long-term degree aspirations is more useful in understanding first-generation students (Purswell, Yazedjian & Toews, 2008), whose world views and orientations may be very different from those of other students (Inman & Mayes, 1999; Lohfink & Paulsen, 2005).

Minority status complications. As suggested, the large proportion of first-generation students with minority backgrounds may complicate interpretation of college experience research results. For example, first-generation students have fewer interactions with faculty and are less likely to view faculty as being concerned about their success (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996); research has also indicated that minority students view faculty as less approachable than do White students (e.g., Lundberg & Schreiner, 2004; Smith & Noel, 1996). Further, academic-related involvements and faculty interactions appear to have more positive impact for minority students than for White students (MacKay & Kuh, 1994; Mayo, Murguia, & Padilla, 1995; Terenzini et al., 1994). Whether these and similar findings are affected by first-generation status or by race/ethnicity—or both—has not been established.

In addition, when first- and non-first-generation students were compared on the determinants of persistence in a national, longitudinal study (Lohfink & Paulsen, 2005), widely differing results suggested students are making choices “based on different habits—i.e., world views that may be unique to their own groups—thereby differentially framing what students see and value about college” (p. 419). For example, for first-generation students in the study, persistence was more likely when they grew up in a home where English was not the primary language spoken, and identified “living at

home” and “faculty reputation” as their reasons for attending the school. The implications are that, unlike other students, first-generation students may connect more to the “local ingredients and aspects of the family and school environments associated with their college-going behaviors” (p. 419); significant determinants in the study also pointed to racial/ethnic differences.

More recently, another national study focused on minority students and found that first-generation student status and race/ethnicity contribute uniquely to patterns of college involvement and subsequent academic achievement (Lundberg, Schreiner, Hovaguimian, & Miller, 2007): Therefore, “institutions cannot assume that addressing the needs of first-generation students will concomitantly address the needs of students of color” (p. 76).

College Adjustment Studies

Few studies focus specifically on the college adjustment of first-generation students, often with mixed and inconclusive results. The following summarizes this research and attendant issues.

Hertel (2002) compared first- and non-first-generation, first-year students at a large, public university in the Midwest on self-esteem, intellectual values, perceived support from on-campus and off-campus peers, parental income, and amount of paid employment per week, and also used these variables as predictors of college adjustment. Hertel reported that intellectual activities and pursuits predicted overall college adjustment significantly better for first-generation students than for others. For non-first-generation students, on-campus friend support predicted adjustment; these students tended to “view college as more of a social process and put greater value on extracurricular activities” (p. 14). The study’s response rate after three mailings was just

29%. The 130 participants were largely White (86%) and lived on campus (94%), and 25 were classified as first-generation. Therefore, it is not surprising that Hertel did not examine within-group differences.

In a case study of the role of social class in college adjustment that yielded similar findings to Hertel's quantitative analysis, Bergerson (2007) reported that her academically prepared and motivated first-generation female subject could not adjust to college because she felt that while she was focused on academics, her peers were immersed in their social lives. "While Anna had a strong academic background ... [she] continued to develop social capital that was not valued at [the college]" (p. 114).

In a single-institution study of first-year students, Ramos-Sánchez and Nichols (2007) conducted a path analysis to investigate self-efficacy as a mediator in the relationship between generational status and two outcome variables, academic adjustment and college grade-point average. The hypothesis that self-efficacy would mediate generational status and adjustment measures was not supported; and, while first-generation students registered significantly lower levels of self-efficacy than others and generally had lower GPAs, the study's reliance on truncated measures raises issues of reliability and validity. (It should be noted that one other study involving the self-efficacy of first-generation college students is also one of the few to examine minority differences [Phinney & Haas, 2003]; no differences were found between the Hispanic and Asian participants in coping strategies, and college adjustment was not examined. However, students who were having trouble coping often stated that they wished they had someone to help, guide or provide emotional support, which may have implications for adjustment.)

Minority-specific studies. Related to the work of Phinney and Haas (2003), Dennis, Phinney, and Chuateco (2005) conducted a longitudinal study of the college adjustment of 100 ethnic minority first-generation students at an ethnically diverse urban commuter university on the West Coast. Participants were Hispanic (84%) and Asian (16%). Predictor variables, assessed in the fall of the second year of college, included background variables (ethnicity, SES and gender); personal motivations (family expectation motivation and personal/career motivation); environmental support (“family support” and “resources needed,” and “peer support” and “resources needed,” based on the Phinney and Haas study mentioned previously). Outcome variables were assessed in the spring of the second year of college. They consisted of college GPA; college adjustment (measured as “the extent to which students felt a sense of belonging to the college environment,” e.g., “I feel pleased about my decision to attend college” [p. 230]); and college commitment, a four-item scale the authors developed to measure level of commitment to earning a degree. Contrary to expectations, the authors found that the respondents’ personal/career motivations in the fall rather than family expectations significantly predicted college adjustment, GPA and commitment to the institution; lack of peer support was a negative predictor of college adjustment the following spring. Family influence on adjustment was expected especially because the research setting serves predominantly minority students from lower and lower-middle class backgrounds, many of them immigrants. However, adjustment was measured with a four-item scale to assess only institutional attachment. In addition, minority differences could not be examined because of the small number of Asian participants; and, while literature based on the generally accepted definition of “first generation” was reviewed, the “first-

generation” study participants were minority students “whose parents did not complete college,” meaning that they may have had college knowledge (p. 227).

Yazedjian and Toews (2006) studied the college adjustment of 190 first-year Hispanic students at a public university in Texas that is not a Hispanic Serving Institution.⁷ They found that self-esteem, acculturation, and ethnic identity were the strongest predictors of overall adjustment. Contrary to other research findings, parental attachment but not education level was related to the students’ self-esteem, thereby contributing indirectly to adjustment. However, 44% of the Hispanic participants had parents with bachelor’s degrees, though some could have been educated outside the United States, and only 29% were first-generation. That the level of parental education was skewed toward higher levels may have indicated a lack of variability in the sample. Still, an interesting implication for adjustment is that family relationships may nurture a student’s “comfort in his own skin” via ethnic identity and acculturation, wherein an individual has learned to straddle two cultures or more.

Richardson and Skinner (1992) were the first to specifically consider the college adjustment of minority first-generation students as part of 107 in-depth interviews of graduates of 10 public universities from across the country (52% of the participants, who were Black, Hispanic and Native American, also had attended community college). An “opportunity orientation” was identified that facilitated the college adjustment of these students; in this orientation, beliefs are developed about valued adult roles and about education’s role in accessing these roles. These students “understood the connection

⁷ To be recognized as a Hispanic Serving Institution (HSI) by the federal government, the institution must be an accredited, non-profit entity with a high enrollment of needy students and low-average educational expenditures per full-time student, and whose undergraduate, full-time student body is at least 25% Hispanic (U.S. Department of Education, 2009).

between a college degree and their potential for a ‘good’ job” and “more money, security, and power” (p. 30); they also devalued “just going to college” as “drifting” (p. 31). Significantly, they attributed their ability to “beat the odds” to “determination” (p.30) and advised minority first-generation students to concentrate on a goal at college no matter the obstacles: “They advised future students . . . not to worry about whether they liked the experience itself or whether they encountered discrimination” (p. 31). In addition to the “scaling down” strategies described in the transition section, faculty behavior made a difference in these students’ adjustment: “It becomes apparent to minorities when a college wants them to succeed, although the support may be attributed to institutional self-interest” (p. 40).

Because many first-generation students are the children of immigrants and their numbers are increasing, researchers are also examining specific cultural and identity issues that can affect college-going. At least one study has involved aspects of college adjustment: Tseng (2004) studied the effect of “family interdependence” on the academic adjustment of 998 college students, almost half of them Asian, from both immigrant and U.S.-born families at a private, selective university in the East. Two methods were used to measure academic adjustment: Two scales assessed “academic motivation” (e.g., “It is important to do well in school to earn a good living”), and grade-point averages assessed “academic achievement.” Tseng found that family obligation attitudes contributed to greater academic motivation among students from immigrant families but that the greater time spent on family demands also detracted from their academic achievement. This held true for all ethnic groups—Asian, Hispanic, Black, European-American and Afro/Caribbean students. It is also worth noting that Alessandria and Nelson (2005)

compared 175 students from immigrant and U.S.-born families in six ethnic categories in an exploratory study of identity development and self-esteem. Contrary to expectations, they found that the children of immigrants, regardless of ethnicity, recorded higher levels of self-esteem than those with U.S.-born parents. They also did not register lower levels of identity development. While these results cannot be interpreted, and the researchers did not study first-generation status, they suggest that the multicultural influences on today's first-generation students add complexity to an already complex landscape.

Conclusion

First-generation college students have been studied primarily in terms of how they compare to other students whose parents are college graduates. Although minority students are more likely than other students to be first-generation (e.g., Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996), most research has centered on first-generation college students as a group rather than focusing on those with minority backgrounds, and when minority status has been considered, it has been as a single category (Dennis, Phinney & Chuateco, 2005; Lundberg, Schreiner, Hovaguimian, & Miller, 2007). As noted, a large body of research is based in national, often longitudinal studies at campuses with predominantly White students; many studies describe the characteristics of first-generation status and attempt to delineate the predictors of college outcomes, especially degree attainment, but contradictory and incomplete evidence indicates that the variables most associated with traditional student success do not have the same effects for first-generation students, and therefore that more insight is needed into the factors that may contribute and interact to facilitate first-generation college student success (Dennis, Phinney & Chuateco, 2005; Lundberg, Schreiner, Hovaguimian,

& Miller, 2007; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). Specifically, few studies have successfully examined college adjustment and differences among first-generation students in adjusting to college.

Research does consistently reveal that first-generation students often enter college with work and other pressures related to college costs, family obligations, and lack of college knowledge. These factors affect the experiences they have in college, and some may act as deterrents to the kinds of activities, interactions and involvements that have been deemed important for the success of traditional students. However, as mentioned, the theoretical frameworks frequently used to study college students do not appear to be a very good “fit” for first-generation students. By all the standards used to measure “traditional” student success, they should not do well; yet many of them do. More recent findings contradict earlier research on the correlates of first-generation student academic success and persistence. For example, parental education level and other family variables that exerted negative influences on first-generation student success have also been found to be positively related to that success; further, contrary to expectations, researchers have found that first-generation students are often motivated by a desire to lead better lives and encouraged in that goal by parents and/or extended family members, mentors and peers. In addition, the high school grade point average, frequently reported as a correlate to both first-generation and non-first-generation student success in college, has in some research not been related to the success of first-generation students.

Thus, it is not surprising that evidence suggests first-generation students may place different values on academic and social pursuits than do non-first-generation students, and that those values may also vary within groups of students. Motivations and

perceptions may play a far more important role in college adjustment for first-generation students than do their background characteristics, certainly more so than for traditional students; however, there has been little research in this area. As mentioned, few studies have focused on the college adjustment of first-generation college students, and almost none have also examined possible interaction with race/ethnicity. These findings underscore the need for a better understanding of first-generation student perceptions of and feelings about their academic, social, and personal lives in college, and, in particular, of considering those perceptions and feelings by racial/ethnic group. The first known quantitative study to consider that nexus was conducted in 2005, post this study's proposal; as noted, it did not define "first generation" in line with the preponderance of the literature, and minority differences could not be examined. Subsequent studies used only parts of valid and reliable measures, or they drew low numbers of minority participants, or they encountered other complications.

In sum, much of the research specific to the college adjustment of first-generation students, and especially of the effects of racial/ethnic status, have been inconclusive. In general, this study was conceived to extend the literature by addressing incomplete or inconsistent findings and a lack of evidence and to examine differences in college adjustment as a function of first-generation status and racial/ethnic group.

Research Questions

To address the identified gaps in the literature about what is not known or understood about the college adjustment of first-generation students from different ethnic/racial backgrounds, the following research questions were addressed in the present study:

- (1) To what extent are first-generation students academically, socially and personally adjusted to college and to what extent are they committed to their institution?
- (2) What are the joint and separate effects of generational status and race/ethnicity on undergraduates' adjustment to college?

CHAPTER 3

Methodology

Research Questions, Design and Sample

Research Question 1 was addressed through descriptive statistics about the adjustment of first-generation students. Research Question 2, involving the interaction and separate effects of generational status and ethnicity, was addressed through a 2 X 3 factorial design. The independent variables were generational status (first generation and non-first generation) and race/ethnicity (White/non-Hispanic, Black, Hispanic). The dependent variable was college adjustment, with overall adjustment, academic adjustment, social adjustment, personal/emotional adjustment, and goal commitment/university attachment as its components; these variables were measured by self-report on responses to the Student Adaptation to College Questionnaire (SACQ) (Baker & Siryk, 1989, 1999).

Factorial analysis of variance was used to determine the extent to which the independent variables of generational status and race/ethnicity jointly or separately influenced the dependent variable of college adjustment. It is the appropriate statistical method for a factorial design (Stevens, 1999). The statistical analysis was performed on the scores on the “full scale,” or overall college adjustment measure, and then on the scores for items comprising each of four scales that assessed the components of overall adjustment—academic, social, personal/emotional and attachment.

Research Setting

The study was conducted during the fall of 2006 with undergraduate students at a private research university in the southeastern United States. About 10,200 degree-

seeking undergraduates were enrolled at the official fall semester benchmark in the university's eight schools and colleges and one continuing education division. The majority of students were enrolled in the College of Arts & Sciences (4,219), with the Schools of Business (2,063) and Communication (1,251) enrolling the next largest numbers of students. Females constituted 55% of the student body and males 45%. White, non-Hispanic students comprised 56% of the undergraduates, Hispanics 27%, Black, non-Hispanics 10%, Asians/Pacific Islanders 6% and American Indians less than 1% (717 students did not report ethnicity).⁸ Forty-four percent (44%) of these undergraduates came to the university from states outside the state in which the university is located. Thirty-five percent (35%) came from local and neighboring counties and 15% came from elsewhere in the state. Six percent (6%) came from other countries. As the university's selectivity has increased, its numbers of lower socioeconomic, minority and first-generation students have rapidly decreased. For example, 629 students identified themselves as first-generation in fall 2004; in fall 2006, only 315 did.

The private university in the study was named No. 1 in "Race/Class Interaction" of 371 schools in the 2010 edition of the well-regarded *Princeton Review* guide, "The Best 371 Colleges," whose results were based on a survey of 122,000 students (about 325 students per campus surveyed). According to its Office of Planning and Institutional Research, the university's retention figures (the percentage of freshmen who return for their sophomore year) have greatly increased over the last decade. In a 2007-2008 regression analysis conducted by that office, the main predictors of retention were institutional scholarships and grades (M. Sapp, personal communication, May 19, 2009); students in financial and/ or academic trouble are more likely to leave the university.

⁸ Ethnic categories are those used by the university.

Tuition is more than \$35,000 per year; total cost of attendance estimates are \$42,000 to \$55,000. No significant differences were found in retention by ethnic groups; and, interestingly, although Blacks as a group at the university are more than a percentage point below other students in grade-point average, they retain at the same rate as their peers.

Sampling Frame and Procedures

The sampling frame was based on information forms completed by each admitted degree-seeking undergraduate student before entering the university. Part of the information collected on these forms included the parental education level for both mother and father. However, students were not required to provide this information. For a student to be placed in the sampling frame, the university's student information form had to indicate that 1) neither parent had more than a high school education or that 2) at least one parent had attended college. Therefore, it was possible that some first-generation students and also some non-first-generation students at the university were not in the sampling frame because they did not provide any information. In addition, transfer students and international students were excluded from the sampling frame; their experiences as students at other colleges and universities and in non-U.S. educational systems, respectively, could have affected the findings. The sampling frame included 315 degree-seeking, self-identified first-generation undergraduate students and 4,403 degree-seeking, self-identified non-first-generation undergraduate students. Of the first-generation students, 136 were Non-Hispanic White, 68 Black, and 111 Hispanic. Of the non-first-generation students, 3,185 were White, 317 Black, and 901 Hispanic. The population of students came from all four undergraduate class levels.

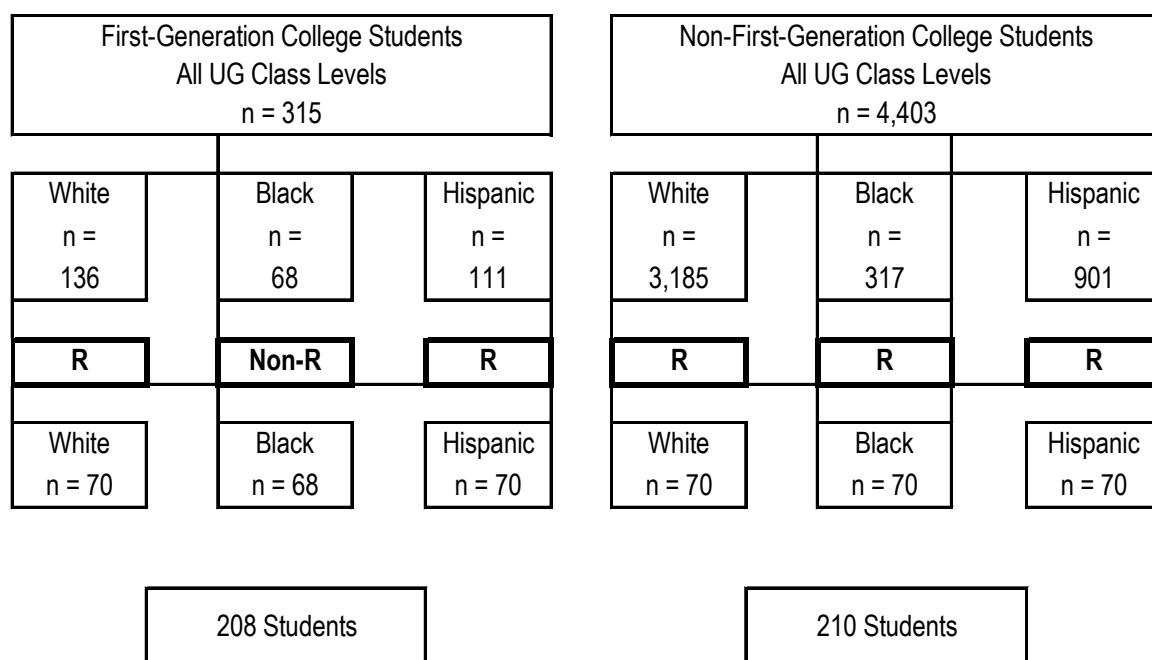
The required sample size ($N=240$) was determined through a power analysis based on the finite population of approximately 4,718 students. Using the metric in Cohen's d (Cohen, 1988), the effect size of .36 (in the medium effect size range .3 to .5) was considered appropriate for a study in the behavioral sciences.⁹ A level of power of .80 (an 80% chance of detecting differences when they exist) was selected as a "sensible compromise" for research in the behavioral sciences (Keppel & Wickens, 2004, p. 176). With a fixed number of subjects, "maximal statistical power is attained when they are divided equally into ... groups" (Lipsey, 1990, p. 139). Therefore, with a two-tailed test of significance with $\alpha = .05$, at least 40 subjects per cell, or a total of 240 students, were required for the study. This was equivalent to 120 subjects per group for the first-generation and non-first-generation groups, and 80 subjects per group for each of the three different ethnic categories.

The issue of non-participation was a major concern. Students historically do not yield high response rates in university survey research (e.g., Dey, 1997). Posting a survey online appeared to be reasonable because evidence existed that most college students regularly use email and the Internet (Carini, Hayek, Kuh, Kennedy, & Ouimet, 2003); in addition, parental education level has not been a significant predictor of Internet use among college students (Odell, Korgen, Schumacher, & Delucchi, 2000). However, shortly before and after the period in which survey administration in this study was delayed in the wake of hurricanes Katrina and Wilma, research findings also indicated that response-rate difficulties with web-based survey administration among college students are similar to those with mailed questionnaires (e.g., Cranford et al., 2008). It

⁹ Cohen (1988) defined effect sizes as "small, $d = .2$," "medium, $d = .5$," and "large, $d = .8$," with the disclaimer that a "certain risk" was inherent in "offering conventional operational definitions for those terms for use in power analysis in as diverse a field of inquiry as behavioral science" (p. 25).

therefore was advisable to oversample, with the goal of selecting at least 80 subjects per cell (480 total rather than 240). However, the unexpectedly small first-generation student population in fall 2006 made reaching this goal (80 per cell) impossible. In this study, the number of available non-first-generation college students (4,403) was overwhelmingly greater than the number of first-generation students (315). In addition, the small number of Black first-generation students dictated a revised sampling approach that included *all* 68 Black first-generation students and random selection of 70 students in each of the remaining cells. The final sample consisted of 418 students. The sampling frame is depicted in Figure 3.1.

Figure 3.1. The sampling frame drawn from the populations of self-identified first-generation and non-first-generation college students in fall 2006.



Instrument and Measures

The Student Adaptation to College Questionnaire (SACQ) (Baker & Siryk, 1989, 1999), a 67-item, self-report questionnaire, was used in this study not only because it is the most popular, valid, and reliable measure of college adjustment, but also because it reflects the concept of college adjustment as multifaceted. (See Appendix A for the complete instrument.)

The SACQ's subscales are academic adjustment, social adjustment, personal/emotional adjustment, and goal commitment/institutional attachment (Baker & Siryk, 1999). Cronbach's coefficient alpha (Cronbach, 1951) values reflecting internal consistency reliability for the latest version of the SACQ were gathered over several years at three institutions and are included with the following subscale descriptions.

The academic adjustment subscale has 24 items with alpha values ranging from .81 to .90. The subscale measures (1) motivation, including attitudes toward academic goals and work required; (2) application, or how well motivation is being translated into actual academic effort; (3) performance, the efficacy or success of academic effort as reflected in aspects of academic performance; and (4) academic environment, described as satisfaction with the academic environment of the college and what it offers.

The social adjustment subscale has 20 items with alpha values ranging from .83 to .91. It measures (1) the extent and success of social activities; (2) the extent of involvement and relationships with other persons on campus; (3) nostalgia, dealing with social relocation and being away from home; and (4) social environment, measuring satisfaction with the social aspects of the college environment.

The personal/emotional adjustment subscale has 15 items with alpha values ranging from .77 to .86. This subscale measures (1) the psychological, indicating the sense of psychological well-being; and (2) the physical, or sense of physical well-being.

The goal commitment/institutional attachment subscale has 15 items with alpha values ranging from .85 to .91. It measures feelings about or degree of satisfaction with college in general and feelings about attending the particular institution.

The full scale value range is .92 to .95 (Baker & Siryk, 1999, p. 34).

Each item of the SACQ is a statement to which the student responds on a nine-point scale ranging from “applies very closely to me” to “doesn’t apply to me at all.” The student must indicate the point on the scale that best represents the degree to which the statement is true for him or her at the time of testing. Table 3.1 provides a summary representation of the four subscale components of the dependent variable, college adjustment.

Table 3.1
Definitions of Subscale Variables and Sample Items

| Variable Item | Number of Items | Definition | Sample |
|---|-----------------|--|---|
| Academic Adjustment | 24 | Motivation (6), Application (4), Performance (9), Academic Environment (5) | I have been keeping up to date on my academic work. |
| Social Adjustment | 20 | General (7), Other People (7), Nostalgia (3), Social Environment (3) | I feel that I fit in well as part of the college environment. |
| Personal/Emotional Adjustment | 15 | Psychological (9), Physical (6) | I have been feeling tense or nervous lately. |
| Goal Commitment/ Institutional Attachment | 15 | General (3), This College (4), Other Subscale Items (8) | I am pleased now about my decision to go to college. |
| Items Contributing to Full-Scale Score Only | 2 | | I feel I have good control over my life situation at college. |

Data from 34 administrations of the latest version of the SACQ at 21 different colleges and universities show intercorrelations among the subscales and between the subscales and the full scale that are large enough to indicate that the subscales are measuring a common construct, but “small enough to support the conceptualization of that construct as having different facets as represented by the subscales” (Baker & Siryk, 1999, p. 34). As with the alpha coefficients, considerable evidence exists of the “SACQ’s reliability across institutions and academic years” (Baker & Siryk, 1999, p. 35).

Intercorrelations among SACQ subscales for a sample of 204 second-semester freshmen

are depicted in Table 3.2. The intercorrelations are comparable across administrations with 34 different samples at colleges and universities.¹⁰

Table 3.2
Intercorrelations Among SACQ Sub- and Full-Scale Scores for Second-Semester Freshmen at Clark University and Holy Cross College

| Measure | 1 | 2 | 3 | 4 | 5 |
|---------------------|-----|-----|-----|-----|---|
| 1. Full Scale | 1 | | | | |
| 2. Academic Scale | .86 | 1 | | | |
| 3. Social Scale | .86 | .55 | 1 | | |
| 4. Personal Scale | .82 | .64 | .58 | 1 | |
| 5. Attachment Scale | .85 | .59 | .87 | .54 | 1 |

The two primary applications of the SACQ have been in counseling and applied higher education research; while the great majority of studies involving the SACQ have been conducted with college freshmen, it can be administered at any time during a student's college career (Baker & Siryk, 1999). However, researchers have been advised that evaluating the college environment through student perceptions is not the SACQ's purpose; it "focuses on the quality of the student's adjustment to—rather than an evaluation of—that environment" (Baker & Siryk, 1999, p. 4). In addition, researchers are advised strongly to not rely solely on the full-scale adjustment score: Students may score fairly well overall but have deficits in certain facets of the college experience; the instrument helps illuminate those areas, and, indeed, validity considerations dictate use of the subscales.

¹⁰ "The attachment subscale contains one item from the academic adjustment subscale and eight from the social adjustment subscale, which results in somewhat inflated correlations between the attachment subscale and the other two subscales" (Baker & Siryk, 1999, p. 34).

A number of studies subsequently have employed items from the SACQ in examining student transition and integration into college, including that of minority students (e.g., Hurtado, Carter, & Spuler, 1996; Lopez, 1991; Solberg, Valdez, & Villareal, 1994). At least four studies have used elements of the SACQ to study first-generation students (Dennis, Phinney, & Chuateco, 2005; Hertel, 2002; Ramos-Sánchez & Nichols, 2007; Yazedjian & Toews, 2006). Of these studies, the only one to specifically consider the college adjustment of ethnically diverse first-generation students (Dennis, Phinney, & Chuateco, 2005) used four items from the SACQ's 15-item institutional attachment subscale alone to measure college adjustment.

Data Collection Procedures

Approval to conduct this study was obtained from the Institutional Review Board at the university (see Appendix B). When initial invitations to students to come to various campus sites for personal questionnaire administration met with low response, the researcher chose online survey administration as a feasible alternative. Recent research has indicated that most college students regularly use email and the Internet (e.g., Carini, Hayek, Kuh, Kennedy, & Ouimet, 2003) and that parental education level does not appear to predict Internet use by college students (Odell, Korgen, Schumacher, & Delucchi, 2000). To illuminate and address any issues in administering the SACQ online, a small pilot test of the procedures in administration of the SACQ was conducted with five graduate students.

Because the instrument used in the study was administered online, the IRB approval required that email communications be sent to students inviting them to participate in the survey and telling them that: (1) the purpose of the questionnaire was to

better understand the college adjustment of different types of students; (2) the questionnaire was part of research for a doctoral student's dissertation; (3) findings might be shared with university administrators concerned with serving students and improving the college environment; (4) their participation was voluntary; and (5) strict confidentiality was guaranteed (no responses would be linked to student identities or become part of official university records or in any way affect a student's status or standing). The approval also included a waiver of a signed informed consent form. Students interested in taking part in the survey could click on a link to the survey instrument on a secure website created by the university's Office of Information Technology specifically for online survey research. Once students did so, they arrived at a "landing page" that again explained the survey's purpose, voluntary nature and confidentiality. Students could not proceed to the actual questionnaire without first encountering the informed consent information; they then were asked to choose to continue (by checking a "yes" box) or not to continue (a "no" box).

Concern about the issue of non-response prompted the researcher to offer an incentive of a \$150 Amazon.com gift certificate to two survey completers, and the odds of winning were estimated and included in both the email invitation and the informed consent form. (The Office of Information Technology drew the winning students randomly from the database of survey completers at the end of that fall semester.)

Once an electronic version of the SACQ was created, the university's Office of Information Technology assisted the conduct of a "blind study." The office created a listserv of the email addresses of students in the sample and sent the researcher's email invitation to them on October 24, 2006, with a link to the survey and a deadline for entry

into the Amazon certificate drawing. At least 11 “bounce backs” occurred during that effort, seven because the particular email provider treated all university email as spam, and four because they were bad email addresses supplied by students to the university. The researcher provided replacement emails to the Office of Information Technology. Reminder emails were sent November 6 and November 16.

Because of a very low initial response rate, the researcher next worked with the Office of Information Technology to create a second launch of the survey to occur immediately after the Thanksgiving school break. The second launch occurred on November 30, 2006. A reminder email was sent on December 4. A final reminder email with deadline was sent on December 11. Respondents to the first survey launch numbered 115, a response rate of 27.5%. Another 27 responses after the second launch brought the response rate to 34%, an increase of 6.5%.

Data Analysis

Raw data were transmitted from the Office of Information Technology to the researcher, who prepared the data for entry into the Statistical Package for the Social Sciences (SPSS) Version 16.0 for Windows. After data entry, analysis consisted of two phases: preliminary and primary.

Preliminary analysis. The preliminary analysis addressed Research Question 1. Raw scores for the SACQ’s full scale and four subscales were converted to T-scores based on the normative samples stratified by sex and semester (Baker & Siryk, 1999).¹¹ The T-scores were entered into SPSS to obtain a summary of descriptive statistics, including student characteristics (e.g., numbers of males and females) and measures of

¹¹ “First-semester norms are appropriate only for first-semester or first- or second-quarter freshmen. Second-semester norms should be used with students who have had previous college experience,” e.g., all other students (p. 11).

central tendency and variability. In addition, an item analysis of the instrument was conducted based on data from the study's sample; raw scores for the SACQ's full scale and four subscale items were entered into SPSS to obtain the following: (1) an examination of correlations among the subscales of the dependent variable; and (2) the recomputation of their Cronbach's alpha values to assess the instrument's internal consistency for the population under study.

Primary analysis. The primary analysis addressed Research Question 2 and consisted of a factorial analysis of variance to determine whether the main effects for generational status and ethnicity were significant and whether there was an interaction between generational status and ethnicity for each of the components of the dependent variable, overall adjustment to college, academic adjustment, social adjustment, personal/emotional adjustment, and goal commitment/university attachment.

Chapter 4

Results

The findings are presented in this section. The purposes of the study were to describe the college adjustment of first-generation students and to determine whether there was any interaction between generational status and race/ethnicity or, in the absence of an interaction, whether there were main effects for the independent variables. The preliminary analysis addressed the instrument's internal consistency and the first research question; the primary analysis addressed the second research question. Finally, a secondary analysis that does not address a specific research question is reported due to interesting data.

Subject Characteristics

A total of 142 (out of the total sample of 418 students) students successfully completed an online questionnaire, a response rate of 34%. As can be seen, there are an equal number of first-generation and non-first-generation respondents. However, there were racial/ethnic differences: more White students (58 of 140, or 41.4%) responded than Hispanic students (44 of 140, or 31%), and more Hispanic students responded than Black students (40 of 138, or 29%). Of the White respondents, 27 (46.5%) were first-generation, and 31 (52.5%) non-first-generation. Of the Black respondents, 19 (47.5%) were first-generation and 21 (52.5%) were non-first-generation. Among Hispanic respondents, 25 (56.8%) were first-generation and 19 (43.0%) were non-first-generation. Table 4.1 presents a description of the respondents regarding the two categories of generational status and three categories of race/ ethnicity, the independent variables in this study.

Table 4.1
Respondents by Generational Status and Race/Ethnicity

| <u>Status</u> | <u>Race/Ethnicity</u> | | | <u>Total</u> |
|----------------------|-----------------------|-------|----------|--------------|
| | White | Black | Hispanic | |
| First Generation | 27 | 19 | 25 | 71 |
| Non-First Generation | 31 | 21 | 19 | 71 |
| Total | 58 | 40 | 44 | 142 |

In addition, more females participated than males in the study. While the student body composition was 55% female, 45% male, females represented 65% of the respondents in this study. Female participation by generational status and race/ethnicity was comparable. However, male participation was higher among Whites. Most (79%) of the respondents were underclassmen, and the largest group was composed of freshmen (34%). There were no marked differences in participation across class levels by generational status or race/ethnicity. Table 4.2 presents a description of the respondents by generational status, race/ethnicity, and gender. Table 4.3 depicts respondents by generational status, race/ethnicity and class level.

Table 4.2
Respondents by Generational Status, Race/Ethnicity and Gender

| <u>Status & Race/Ethnicity</u> | <u>Gender</u> | | <u>Total</u> |
|------------------------------------|---------------|--------|--------------|
| | Male | Female | |
| <i>White</i> | | | |
| First Generation | 12 | 15 | 27 |
| Non-First Generation | 13 | 18 | 31 |
| <i>Black</i> | | | |
| First Generation | 3 | 16 | 19 |
| Non-First Generation | 5 | 16 | 21 |
| <i>Hispanic</i> | | | |
| First Generation | 8 | 17 | 25 |
| Non-First Generation | 9 | 10 | 19 |
| Total | 50 | 92 | 142 |

Table 4.3
Respondents by Generational Status, Race/Ethnicity and Class Level

| <u>Status & Race/Ethnicity</u> | <u>Class Level</u> | | | | <u>Total</u> |
|------------------------------------|--------------------|------|----|----|--------------|
| | Fr | Soph | Jr | Sr | |
| <i>White</i> | | | | | |
| First Generation | 11 | 3 | 6 | 7 | 27 |
| Non-First Generation | 13 | 8 | 5 | 5 | 31 |
| <i>Black</i> | | | | | |
| First Generation | 6 | 2 | 5 | 6 | 19 |
| Non-First Generation | 6 | 5 | 4 | 6 | 21 |
| <i>Hispanic</i> | | | | | |
| First Generation | 7 | 9 | 6 | 3 | 25 |
| Non-First Generation | 5 | 4 | 6 | 4 | 19 |
| Total | 48 | 31 | 32 | 31 | 142 |

Preliminary Analysis: Internal Consistency Assessment Based on Respondent Data

An examination of correlations for the full scale and each subscale of the dependent variable and Cronbach's alpha values obtained from item analysis revealed

internal consistency reliability.¹² Pearson correlation coefficients ranged from .59 to .89 for all of the scales (Table 4.4) and were comparable to the intercorrelations derived in applications with 34 samples across 21 institutions (Baker & Siryk, 1999). In addition, the Cronbach's alpha for the full-scale, 67-item Student Adaptation to College Questionnaire (SACQ) as administered to this study's respondents was .95; it ranged from .87 to .90 for the four subscales (Table 4.5). This indicates good reliability for the full scale of the SACQ as well as high inter-item correlation—evidence the items of each subscale are measuring the constructs they are supposed to be measuring.

There is also evidence of external validity. Baker and Siryk successfully related their instrument's items to a range of independent criteria, including college grade-point average, student appeals for psychological services, and social activities checklists.

Table 4.4
*Intercorrelations Among SACQ Sub- and Full-Scale Scores
Based on Respondent Data*

| Measure | 1 | 2 | 3 | 4 | 5 |
|---------------------|-----|-----|-----|-----|---|
| 1. Full Scale | 1 | | | | |
| 2. Academic Scale | .89 | 1 | | | |
| 3. Social Scale | .88 | .65 | 1 | | |
| 4. Personal Scale | .84 | .65 | .59 | 1 | |
| 5. Attachment Scale | .86 | .64 | .89 | .60 | 1 |

Note. All coefficients are significant at $p < .01$.

¹² “The variables measured by the SACQ are not expected to be necessarily stable and enduring properties of individuals, but states that can vary with changes in the student's environment, life events, and, possibly, personality characteristics. Thus, estimates of internal consistency reliability are more appropriate than test-retest reliability” (Baker & Siryk, 1999, p. 34).

Table 4.5
*Cronbach's Alphas for Scores on SACQ Scales
 Based on Respondent Data*

| Measure | Cronbach's Alpha Coefficient |
|------------------|------------------------------|
| Full Scale | .95 |
| Academic Scale | .88 |
| Social Scale | .90 |
| Personal Scale | .87 |
| Attachment Scale | .90 |

Note. All coefficients are significant at $p < .01$.

Preliminary Analysis: Research Question 1

Research Question 1: To what extent are first-generation students academically, socially and personally adjusted to college and to what extent are they committed to their institution?

Overall, first-generation students in this study scored in the middle (average) range on the college adjustment measure. T-scores on the SACQ have a mean of 50 and a standard deviation of 10. The mean T-scores of the 71 first-generation respondents on the SACQ fell within two-thirds of the normal distribution, meaning that the test recorded their college adjustment as “average.” This held for every subscale of the SACQ as well as the overall college adjustment score. All means for all groups on all scales are within plus or minus five points of the instrument mean of 50. Hispanic student scores had both the highest mean (54.5 for academic adjustment) and the lowest mean (46.2 for social adjustment). In general, there is a slightly greater variability, as reflected in the standard deviations, in the scores of Black and Hispanic students than in the scores of White students.

Approximately 16% of scores on the SACQ fall above the T-score of 60, and 16% below 40. Thus, with 50 as average, T-scores of 40 and 30 would be regarded as low and very low, respectively, and 60 and 70 would be seen as high and very high, respectively. While most of the data looked very similar across groups, there were students in all groups who scored extremely low and extremely high on every scale of the SACQ. A scale on which a student scores especially low compared to other scales or to the normative sample stands out for potential special interpretation and attention. In counseling applications of the SACQ, such students would be targeted for assistance. The five scales in this study (academic adjustment, social adjustment, personal/emotional adjustment, goal commitment/attachment to the institution, and overall adjustment) all yielded several low scores in the 20s and high scores in the 70s (scores below 29 are in the 1st percentile, those above 70 in the 98th percentile).

The means and standard deviation for overall (full-scale) adjustment as a function of the two factors are presented in Table 4.6. Tables 4.7 to 4.10 present the means and standard deviations for each of the dependent variable's four component subscales.

Table 4.6
*Means and Standard Deviations for Overall
 College Adjustment: First-Generation Students*

| Ethnicity | First Generation | |
|-----------|------------------|-----------|
| | <u>M</u> | <u>SD</u> |
| White | 49.6 | 10.2 |
| Black | 51.6 | 12.8 |
| Hispanic | 50.2 | 12.2 |

Table 4.7
*Means and Standard Deviations for Academic
 Adjustment: First-Generation Students*

| Ethnicity | First Generation | |
|-----------|------------------|-----------|
| | <u>M</u> | <u>SD</u> |
| White | 49.0 | 8.2 |
| Black | 50.8 | 11.6 |
| Hispanic | 54.5 | 10.1 |

Table 4.8
*Means and Standard Deviations for Social
 Adjustment: First-Generation Students*

| Ethnicity | First Generation | |
|-----------|------------------|-----------|
| | <u>M</u> | <u>SD</u> |
| White | 50.5 | 9.7 |
| Black | 52.4 | 12.6 |
| Hispanic | 46.2 | 11.2 |

Table 4.9
*Means and Standard Deviations for Personal/
 Emotional Adjustment: First-Generation Students*

| Ethnicity | First Generation | |
|-----------|------------------|-----------|
| | <u>M</u> | <u>SD</u> |
| White | 49.4 | 11.2 |
| Black | 50.2 | 11.8 |
| Hispanic | 48.4 | 12.1 |

Table 4.10
*Means and Standard Deviations for Attachment/
 Goal Commitment: First-Generation Students*

| Ethnicity | First Generation | |
|-----------|------------------|-----------|
| | <u>M</u> | <u>SD</u> |
| White | 50.5 | 9.3 |
| Black | 54.0 | 11.4 |
| Hispanic | 48.2 | 9.4 |

Item responses of special interest. Forty (56%) of the first-generation student respondents indicated they live on campus, a factor associated in the literature with better academic and social integration. Twenty-six (65%) first-generation participants indicated substantial satisfaction with living in a residential hall; 15 (37.5%) of those students chose “applies very closely to me” on the item “I enjoy living in a college dormitory.” (The opposite end of the nine-point scale is “doesn’t apply to me at all.”) In addition, of the 38 first-generation students who replied to the item “I am getting along very well with my roommate(s) at college,” a majority (60.5%) indicated substantial agreement with the statement.

While 15 items on the SACQ assess personal/emotional well-being overall, one item in particular addresses a specific, well-known stressor in the literature: “I worry a lot about my college expenses.” On that item’s nine-point scale, 23 first-generation respondents (32.4%) chose “applies very closely to me.”

On institution-specific items, an overwhelming majority of first-generation students indicated that getting a college degree is very important to them; 61 respondents (86%) chose “applies very closely to me,” and many of the remaining respondents chose the next points on the nine-point scale. An overwhelming majority also said they “expect to stay at this college for a bachelor’s degree,” with 82% choosing the top three points on the nine-point scale. There was greater variability in the first-generation student response to “I am pleased now about my decision to attend this college in particular,” with 54 students (76%) indicating general satisfaction with the decision.

Primary Analysis: Research Question 2 and Factorial Analysis of Variance

Research Question 2: What are the joint and separate effects of generational status and race/ethnicity on undergraduates’ adjustment to college?

A 2 X 3 ANOVA was conducted to determine the interactive and separate effects of race/ethnicity and generational status (first-generation and non-first-generation) on student adjustment to college. The ANOVA indicated no significant interaction between race/ethnicity and student generational status on overall adjustment to college, $F(2, 136) = .624, p = .54, \text{partial } \eta^2 = .01$. The power observed in the analysis was extremely low, .15 at the alpha level of .05, indicating an 85% chance of failing to detect an existing effect. The overall effect size was very small, $\text{partial } \eta^2 = .01$. As discussed at length in Chapter 5, it is possible that the small sample size influenced this outcome.

The ANOVA also indicated no significant interaction between race/ethnicity and generational status for any of the four subscales measuring student adjustment to college (academic adjustment, social adjustment, personal/emotional adjustment, goal commitment/attachment to institution). In addition, an examination of the main effect for generational status was also non-significant, $F(2, 136) = .032, p = .86, \text{partial } \eta^2 = .00$, as was an examination of the main effect for ethnicity, $F(2, 136) = .264, p = .77, \text{partial } \eta^2 = .00$. Table 4.11 presents the results of the analysis.

Table 4.11
Two-Way Analysis of Variance for Overall College Adjustment, Academic Adjustment, Social Adjustment, Personal/emotional Adjustment, and Attachment to Institution

| Variable and source | MS | F | η^2 |
|-------------------------------|--------|------|----------|
| Overall college adjustment | | | |
| Generation ^a | 3.96 | .032 | .000 |
| Ethnicity ^b | 32.71 | .264 | .004 |
| Generation x Ethnicity | 77.38 | .624 | .009 |
| Academic adjustment | | | |
| Generation ^a | 3.28 | .032 | .000 |
| Ethnicity ^b | 243.26 | 2.36 | .034 |
| Generation x Ethnicity | 16.04 | .156 | .002 |
| Social adjustment | | | |
| Generation ^a | 16.38 | .143 | .001 |
| Ethnicity ^b | 110.29 | .966 | .014 |
| Generation x Ethnicity | 163.38 | 1.43 | .021 |
| Personal/emotional adjustment | | | |
| Generation ^a | 71.63 | .568 | .004 |
| Ethnicity ^b | 64.25 | .510 | .007 |
| Generation x Ethnicity | 174.51 | 1.38 | .020 |
| Attachment to institution | | | |
| Generation ^a | 7.42 | .079 | .001 |
| Ethnicity ^b | 28.59 | .304 | .004 |
| Generation x Ethnicity | 192.54 | 2.04 | .029 |

Note. η^2 = effect size.

^a *df* = 1, 136. ^b *df* = 2, 136.

Secondary Analysis

The research questions did not involve a comparison of first-generation and non-first-generation students; however, the descriptive data do suggest interesting differences between the two groups and thus will be discussed. A computation of the Cohen's *d* effect size for each of the college adjustment subscales revealed several differences that can be seen in Tables 4.12-4.16 below. Black first-generation college students had a higher mean on the social adjustment subscale than did Black non-first generation students; the effect size was in the medium range (.45). Black first-generation students also recorded a higher mean on the goal commitment/attachment to institution subscale (.47 effect size). Hispanic non-first-generation students recorded a substantially higher mean than did Hispanic first-generation students on the personal/emotional adjustment subscale (.53 effect size).

Table 4.12
Means, Standard Deviations and Effect Sizes for Overall College Adjustment

| Ethnicity | First Generation | | Non First Generation | | Cohen's <i>d</i> |
|-----------|------------------|-----------|----------------------|-----------|------------------|
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | |
| White | 49.6 | 10.2 | 50.5 | 10.4 | .09 |
| Black | 51.6 | 12.8 | 48.9 | 9.1 | .25 |
| Hispanic | 50.2 | 12.2 | 53.0 | 12.2 | .23 |

Table 4.13
Means, Standard Deviations and Effect Sizes for Academic Adjustment

| Ethnicity | First Generation | | Non First Generation | | Cohen's <i>d</i> |
|-----------|------------------|-----------|----------------------|-----------|------------------|
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | |
| White | 49.0 | 8.2 | 49.9 | 10.1 | .10 |
| Black | 50.8 | 11.6 | 50.3 | 9.1 | .05 |
| Hispanic | 54.5 | 10.1 | 53.1 | 11.9 | .13 |

Table 4.14
Means, Standard Deviations and Effect Sizes for Social Adjustment

| Ethnicity | First Generation | | Non First Generation | | Cohen's <i>d</i> |
|-----------|------------------|-----------|----------------------|-----------|------------------|
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | |
| White | 50.5 | 9.7 | 50.6 | 10.2 | .01 |
| Black | 52.4 | 12.6 | 47.4 | 9.9 | .45 |
| Hispanic | 46.2 | 11.2 | 49.0 | 10.9 | .25 |

Table 4.15
Means, Standard Deviations and Effect Sizes for Personal/Emotional Adjustment

| Ethnicity | First Generation | | Non First Generation | | Cohen's <i>d</i> |
|-----------|------------------|-----------|----------------------|-----------|------------------|
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | |
| White | 49.4 | 11.2 | 49.0 | 9.4 | .04 |
| Black | 50.2 | 11.8 | 49.0 | 12.3 | .10 |
| Hispanic | 48.4 | 12.1 | 54.4 | 10.8 | .53 |

Table 4.16
Means, Standard Deviations and Effect Sizes for Goal Commitment/Attachment to Institution

| Ethnicity | <u>First Generation</u> | | <u>Non First Generation</u> | | Cohen's <i>d</i> |
|-----------|-------------------------|-----------|-----------------------------|-----------|------------------|
| | <u>M</u> | <u>SD</u> | <u>M</u> | <u>SD</u> | |
| White | 50.5 | 9.3 | 50.0 | 9.9 | .05 |
| Black | 54.0 | 11.4 | 49.2 | 9.2 | .47 |
| Hispanic | 48.2 | 9.4 | 52.0 | 9.0 | .42 |

Chapter 5

Discussion

That there were no significant interactive or main effects of race/ethnicity and student generation status on student adjustment to college in this study may be the reflection of several circumstances. First, a low return rate and, consequently, low number of subjects in each cell may have obscured existing differences. In essence, the effort may have been under-powered by a final respondent number that fell well below the number chosen for statistical power, with too few students participating to develop a representative picture or meaningful analysis.

Second, the SACQ is based on self-report. While research indicates sensitive information is more frequently and accurately reported in self-administrated methods (Fowler, 2002), among the disadvantages of this method is the researcher's inability to exercise quality control and the reliance on respondents' perceptions and willingness to tell the truth. Among the SACQ questionnaire's limitations is its "transparency of purpose"—making it vulnerable to faking or rigging of responses to make a student appear more or less well adapted (Baker & Siryk, 1999, p. 5). It also should be noted that Smith and Baker (1987), in using the SACQ to examine the academic major's relationship to college adjustment, unexpectedly found differences between the sample of students obtained through the university's academic advising center and the sample of students contacted by the researchers. They suggested that solicitation by an official institutional agency (the academic advising center), as compared with their own solicitation for research purposes, tended to attract students for whom things were going well and who had selected majors, and tended to elicit more socially desirable responses

from those who did not yet have a major. “In any event, the findings underscore the importance of taking into account circumstances under which the SACQ is administered” (Baker & Siryk, 1999, p. 60). In the current study, students were approached for research purposes but also told that results were important for improving the university environment and that they might be shared with the university. It is possible that this communication affected the response rate and also resulted in a unique group of the university’s undergraduate population as respondents. Thus, students who completed the questionnaire may have had different motivations than those who did not complete the questionnaire, e.g., they may have been more adjusted to college or have taken part because of the Amazon.com gift certificate incentive.

Third, selection of the SACQ instrument may have been problematic in itself. Though the Cronbach alpha results demonstrated its internal consistency with the sample in this study, the questionnaire could lack sensitivity to diverse students in cross-cultural settings. While the process of college adjustment is multifaceted for any student, and the SACQ’s scales were devised to reflect this, the adjustment of students from very different backgrounds may add additional complexity, raising the question of construct validity. The SACQ was created and tested largely with White, traditional college students. Normative information for the SACQ was based on data from male and female students tested in both semesters of their first years in the 1980s at Clark University, a small (about 2,000 students) liberal arts institution in Worcester, Mass. The student body at Clark is predominantly White and from the United States. Ramos-Sánchez and Nichols (2007) are among the researchers who have suggested that the SACQ be tested among diverse groups of students. Hertel (2002), who combined the SACQ with three other

instruments in his research, called for future research to be conducted in more diverse settings “to help generalize findings” and to take ethnic backgrounds of students into account more fully (p. 16).

It also should be noted that the SACQ was originally meant for first-year students, and then was adapted early in its development so that it could be used for any class level. However, the large majority of published studies employing the SACQ have involved freshmen, “so its empirically determined suitability for students from other year levels—while seen to be promising—is yet to be clearly demonstrated” (Baker & Siryk, 1999, p. 4). Class level in this study exerted no discernible impact on college adjustment.

It is possible that the location of this research exerted a singular effect. The private university that was the setting of this study has greatly increased its selectivity in recent years, which not only has had the effect of reducing the number of first-generation and minority students, but also of admitting first-generation and minority students of relatively stronger academic achievement. Yazedjian and Toews (2006) noted in their SACQ-based study of the college adjustment of predominantly U.S.-born Hispanic students, many of whom had parents with some level of college education, that the students who were both acculturated *and* had a strong sense of ethnic group membership were more adjusted to college. That the university in the current study is as diverse or more diverse than any institution at which first-generation and minority college students have been studied could have an influence not captured in this study; for example, as referenced earlier regarding the school’s *Princeton Review* diversity ranking, ample experiences may exist both inside and outside the classroom to reinforce both acculturation and ethnic identity development. In addition, the university in question has

a lengthy record of working to understand its diverse student population, conducting internal research, implementing efforts to increase retention, and doing research among prospective students to illuminate issues and ways to improve communication (e.g., Eduventures, 2008). As previously mentioned, students of diverse ethnic backgrounds retain at similar rates at the university, and when they do not persist, the reasons tend to be financial and academic rather than college environment issues. In sum, it is possible that college adjustment or the lack thereof occurred as expected and was mediated more by the characteristics of these particular students and this particular college environment rather than by the students' generational status or race/ethnicity.

Given these considerations, it is especially interesting to note the differences in this study on the SACQ's social adjustment and goal commitment/attachment to institution subscales on which Black first-generation students appear more socially adjusted and committed to goals and to the university than do Black non-first-generation students. The substantially higher effect sizes of these differences—though still in the moderate range—may be a reflection of inclusive activities, including football and other sports, and a multicultural student affairs program in place in the institution where this study was conducted that was specifically aimed at Black first-generation students. That non-first-generation Hispanic respondents seem more personally and emotionally adjusted than first-generation Hispanic respondents is more difficult to interpret. While this might be expected, given past findings regarding first-generation students, many Hispanics attending the university in question are “local” and living with family or with family members in proximity. It may be that because the university at which this study was conducted has greatly raised its selectivity and academic standards, first-generation

Hispanic students may feel less of a sense of well-being, both psychologically and physically, than those who have parents with college experience. It also could be that the first-generation students, by nature of their status, are more “at risk” financially at an expensive school; they may feel more pressure to perform at the level necessary to retain scholarships or other aid they are receiving.

Finally, challenges exist in web-based survey response, particularly among college students. In a web-based study of alcohol use behavior, the average response rate of nine colleges across all class levels was 28.1%—with a range of 45.5% to 10.2% (Mitra et al., 2004). The authors noted that respondents with easy access to email tended to respond within 24 hours of the receipt of the initial email, suggesting that when emails are not opened immediately, the likelihood of response diminishes altogether. As students spend more time and money online, emails targeting them have grown concurrently; the response to the growing number of emails may be to delete those that do not immediately attract and hold attention. In the current study, because of Institutional Review Board requirements, the email inviting students to participate in the survey was much longer than the typical business or promotional email, and the offer of the Amazon gift certificate was not as prominent as it might have been. Kaplowitz, Hadlock and Levine (2004) noted that even in populations with access to the Internet, response rates for email and web surveys still may not match those of other survey methods; one explanation is that “less time and attention have been devoted to developing and testing motivating tools to increase web survey response, compared to the time spent studying tools employed in mail surveys” (p. 94). Further, the authors found that both surface mail and web-based questionnaires attracted greater response rates when preceded by a surface mail

notification and that the cost advantage of a mail notification/web questionnaire delivery suggests the approach would be helpful in studying populations with full access to the Internet: “Considering web survey applications alone, the findings suggest that a mail pre-notice can increase response rates. In this study, a reminder notification was less effective” (p. 100). In the current study, only follow-up reminder emails were employed. The sample could not be drawn until after the university’s fall semester enrollment benchmark in October; developing the blind study through the Office of Information Technology took another week. Thus, with the website-based survey launch set for the end of October, it did not seem feasible to use the limited time available to try to contact students beforehand via surface mail. Only three weeks existed for data collection and reminders before limited access to students due to the Thanksgiving holiday and end-of-semester activities.

Implications for Research

Considering the complexity of the issues in this study, qualitative methods may enhance understanding of how first-generation students from different ethnic/ racial backgrounds adjust to college. Alessandria and Nelson (2005) have noted that ethnic identity is “a complicated construct that may better be addressed through qualitative methodology” (p. 11). Orbe (2008) described a model of multidimensional identity negotiation based on qualitative research that found that the generalizations often made about first-generation college students simply do not apply to individual students. He called for multiple studies of first-generation students in varied, specific settings, e.g., Black males in inner city institutions of higher education. Given the problems that often exist in finding and collecting data from large samples, a case-study approach also could

be very useful to the research questions of this study. For example, a viable in-depth examination of college adjustment could go forward with three students per racial/ethnic group—a total of nine college students.

It is clear that while many studies of higher education have used large national data sets because they are more likely to produce generalizable findings, such approaches can also mask the effects of individual college and university efforts. As Pike and Kuh (2005) suggested, first-generation students may take part in programs designed to improve their chances for college success; “single-institution studies are better situated to consider such confounding factors” (p. 291).

Thus, a combined approach could be most productive. Following Hertel’s (2002) prescriptive of conducting a series of studies using one reliable and valid measure of college adjustment in a range of different university settings, both private and public, research might then add detailed personal interviews of first-generation and non-first-generation students to illuminate within-group and between-group differences. Realizing the challenges posed by varying contexts, the SACQ creators themselves advised follow-up interviews to questionnaire administration to help researchers better understand the results. As Ramos-Sánchez and Nichols (2007) suggested, a longer, longitudinal approach that would track students over the course of their college careers also is advisable.

Conclusion

This study suggests an inherent difficulty in assessing feelings about complex and, at times, sensitive issues via a web-based quantitative instrument. In retrospect, it appears a more productive approach would have been to personally administer the SACQ

to small groups of students, and then to follow with personal interviews. Without knowing the actual reason for nonresponse in this case, no other inferences can be drawn. What does remain, however, is the view that college-going will continue to intimidate and possibly deter anyone who lacks good information, insight, and support. As Bergerson (2007) noted in her exploration of the impact of social class on a first-generation student's adjustment to college, "all of these ideas require higher education institutions to move away from traditional understandings of what it means to be a student on a college campus ... and work toward developing higher education institutions that can welcome a variety of students and provide the optimal learning environment for each" (p. 117).

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Appendix A

Student Adaptation to College Questionnaire (SACQ)

Robert W. Baker, Ph.D. and Bohdan Siryk, M.A.
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Questionnaire #:

Directions

The 67 statements on the front and back of this form describe college experiences. Read each one and decide how well it applies to you at the present time (within the past few days). For each statement, fill-in the circle at the point in the continuum that best represents how closely the statement applies to you. Fill-in only one circle for each statement. To change an answer, completely erase the incorrect response and fill-in the desired response.

Applies Very Closely to Me Doesn't Apply to Me at All

| | ← | | | | | → | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1. I feel that I fit in well as part of the college environment | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. I have been feeling tense or nervous lately | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. I have been keeping up to date on my academic work | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. I am meeting as many people, making as many friends as I would like at college | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. I know why I'm in college and what I want out of it | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6. I am finding academic work at college difficult | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 7. Lately I have been feeling blue and moody a lot | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 8. I am very involved with social activities in college | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 9. I am adjusting well to college | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 10. I have not been functioning well during examinations | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 11. I have felt tired much of the time lately | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 12. Being on my own, taking responsibility for myself, has not been easy | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 13. I am satisfied with the level at which I am performing academically | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 14. I have had informal, personal contacts with college professors | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 15. I am pleased now about my decision to go to college | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 16. I am pleased now about my decision to attend this college in particular | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 17. I am not working as hard as I should at my course work | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 18. I have several close social ties at college | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 19. My academic goals and purposes are well defined | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 20. I haven't been able to control my emotions very well lately | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 21. I'm not really smart enough for the academic work I am expected to be doing now | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 22. Lonesomeness for home is a source of difficulty for me now | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 23. Getting a college degree is very important to me | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 24. My appetite has been good lately | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 25. I haven't been very efficient in the use of study time lately | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 26. I enjoy living in a college dormitory. (Please omit if you don't live in a college dormitory; any university housing should be regarded as a dormitory.) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 27. I enjoy writing papers for courses | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 28. I have been having a lot of headaches lately | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 29. I really haven't had much motivation for studying lately | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 30. I am satisfied with the extracurricular activities available at college | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

PLEASE TURN THE FORM OVER NOW AND COMPLETE STATEMENTS 31 THROUGH 67

| | ← Applies Very Closely to Me | Doesn't Apply to Me at All → |
|--|------------------------------|------------------------------|
| 31. I've given a lot of thought lately to whether I should ask for help from the Psychological/ Counseling Services Center or from a psychotherapist outside of college. | <input type="radio"/> | <input type="radio"/> |
| 32. Lately I have been having doubts regarding the value of a college education | <input type="radio"/> | <input type="radio"/> |
| 33. I am getting along very well with my roommate(s) at college. (Omit if you do not have a roommate.) | <input type="radio"/> | <input type="radio"/> |
| 34. I wish I were at another college or university | <input type="radio"/> | <input type="radio"/> |
| 35. I've put on (or lost) too much weight recently | <input type="radio"/> | <input type="radio"/> |
| 36. I am satisfied with the number and variety of courses available at college | <input type="radio"/> | <input type="radio"/> |
| 37. I feel I have enough social skills to get along well in the college setting | <input type="radio"/> | <input type="radio"/> |
| 38. I have been getting angry too easily lately | <input type="radio"/> | <input type="radio"/> |
| 39. Recently I have had trouble concentrating when I try to study | <input type="radio"/> | <input type="radio"/> |
| 40. I haven't been sleeping very well | <input type="radio"/> | <input type="radio"/> |
| 41. I'm not doing well enough academically for the amount of work I'm putting in | <input type="radio"/> | <input type="radio"/> |
| 42. I'm having difficulty feeling at ease with other people at college | <input type="radio"/> | <input type="radio"/> |
| 43. I am satisfied with the quality or caliber of courses available at college | <input type="radio"/> | <input type="radio"/> |
| 44. I am attending classes regularly | <input type="radio"/> | <input type="radio"/> |
| 45. Sometimes my thinking gets muddled up too easily | <input type="radio"/> | <input type="radio"/> |
| 46. I am satisfied with the extent to which I am participating in social activities at college | <input type="radio"/> | <input type="radio"/> |
| 47. I expect to stay at this college for a bachelor's degree | <input type="radio"/> | <input type="radio"/> |
| 48. I haven't been mixing too well with the opposite sex lately | <input type="radio"/> | <input type="radio"/> |
| 49. I worry a lot about my college expenses | <input type="radio"/> | <input type="radio"/> |
| 50. I am enjoying my academic work at college | <input type="radio"/> | <input type="radio"/> |
| 51. I have been feeling lonely at college lately | <input type="radio"/> | <input type="radio"/> |
| 52. I am having a lot of trouble getting started on homework assignments | <input type="radio"/> | <input type="radio"/> |
| 53. I feel I have good control over my life situation at college | <input type="radio"/> | <input type="radio"/> |
| 54. I am satisfied with my program of courses for this semester/ quarter | <input type="radio"/> | <input type="radio"/> |
| 55. I have been feeling in good health lately | <input type="radio"/> | <input type="radio"/> |
| 56. I feel I am very different from other students at college in ways that I don't like | <input type="radio"/> | <input type="radio"/> |
| 57. On balance, I would rather be home than here | <input type="radio"/> | <input type="radio"/> |
| 58. Most of the things I am interested in are not related to any of my course work at college | <input type="radio"/> | <input type="radio"/> |
| 59. Lately I have been giving a lot of thought to transferring to another college | <input type="radio"/> | <input type="radio"/> |
| 60. Lately I have been giving a lot of thought to dropping out of college altogether and for good | <input type="radio"/> | <input type="radio"/> |
| 61. I find myself giving considerable thought to taking time off from college and finishing later | <input type="radio"/> | <input type="radio"/> |
| 62. I am very satisfied with the professors I have now in my courses | <input type="radio"/> | <input type="radio"/> |
| 63. I have some good friends or acquaintances at college with whom I can talk about any problems I may have | <input type="radio"/> | <input type="radio"/> |
| 64. I am experiencing a lot of difficulty coping with the stresses imposed upon me in college | <input type="radio"/> | <input type="radio"/> |
| 65. I am quite satisfied with my social life at college | <input type="radio"/> | <input type="radio"/> |
| 66. I'm quite satisfied with my academic situation at college | <input type="radio"/> | <input type="radio"/> |
| 67. I feel confident that I will be able to deal in a satisfactory manner with future challenges here at college | <input type="radio"/> | <input type="radio"/> |

**EXPEDITED – APPROVAL**

July 14, 2005

Anne Hocutt, M.D.
School of Education
Locator Code: 2040

HSRO Study Number: 20053313
Title: **The Effects of First-Generation Status and Race/Ethnicity on students Adjustment to College**

IRB ACTION DATE: 6/17/05 – Reviewed by Chair/Designee


STUDY APPROVAL EXPIRES: 6/16/06

On June 17, 2005 the *IRB Chair/Designee* reviewed the above referenced study under the expedited review process pursuant to category [7]. The *Chair/Designee* determined additional information was required before approval could be obtained and you have provided that information.

APPROVAL INCLUDES:

HSR-1: New Research Protocol (version date: 5/29/04)
Consent Form (Undergraduate student ICF)
Surveys, Questionnaires

Sincerely,



Judith Aguirre, C.I.P.
Associate Director

IRB/jma
cc: IRB file
Attachments

Human Subjects Office (M-809)
P.O. Box 016960 Tel: 305-243-3195
Miami, Florida 33101
Fax: 305-243-3328



EXPEDITED – APPROVAL

May 4, 2006

Anne Hocutt, PhD
 University of Miami
 Department of Educational and Psychological Studies
 Coral Gables Campus, Locator Code: 2040

HSRO STUDY NUMBER: 20053313

TITLE: The Effects of First-Generation Status and Race/Ethnicity on Students' Adjustment to College

IRB ACTION DATE: 4/25/06

STUDY APPROVAL EXPIRES: 6/16/06

On March 28, 2006 an IRB Designee reviewed an amendment for the above referenced study. The Designee determined additional information was required before approval could be obtained and you have provided that information. This approval is granted under the expedited review process pursuant to 45 CFR 46.110(b)(2) with a waiver of documentation of consent pursuant to 45 CFR 46.117(c).

APPROVAL INCLUDES:

- Amendment (version # 1, date – 3/10/06)
- Research Materials (English Versions Only)
 - Undergraduate Student Informed Consent Form
 - Recruitment Email

NOTE: Translations of IRB approved study documents, including informed consent documents, into languages other than English must be made by a certified translator. The list of UM vendorized translators can be found at hsro.med.miami.edu

A request to continue this study must be submitted to the HSRO at least **30 days** before IRB approval expires. If this study does not receive continuing IRB approval prior to expiration, all research activities must cease, and may officially be suspended or terminated.

Please remember that the Human Subject Research Office (HSRO) must be notified of any proposed changes in research activities. Changes must receive IRB review and approval prior to implementation.

The HSRO must also be notified of all internal adverse events within 10 days of occurrence, and all external adverse events within 10 days of notification.

Sincerely,

A handwritten signature in black ink, appearing to read "Julia Beutler for J.B.", written over a horizontal line.

Julia Beutler, C.I.P.
 Director of Regulatory Affairs & Educational Initiatives

/nf
 cc: IRB file

Human Subjects Research Office (M809)
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