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UNDERSTANDING SOCIOECONOMIC DIFFERENCES IN THE RELATIONSHIP
BETWEEN BLACK COLLEGE STUDENTS' INVOLVEMENT AND EDUCATIONAL
OUTCOMES

BY

MARJORIE L. DORIME-WILLIAMS

DISSERTATION

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Doctoral Committee:

Assistant Professor Denice Hood, Chair
Associate Professor Terrell L. Strayhorn, Director of Research, The Ohio State University
Associate Professor Christopher Span
Professor William Trent

ABSTRACT

Participation rates in postsecondary education vary greatly by race, ethnicity, gender, and socioeconomic status (SES). In addition to issues of access, there are also problems with retention and persistence associated with specific demographic characteristics (e.g. race). Low retention and persistence rates of Black students continue to be an issue for higher education professionals. Some strategies for improving student persistence are based on research surrounding student involvement; involvement has been found to contribute to academic, social, and cognitive development for Black college students. Noticeably lacking in this discussion is an examination of educational outcomes influenced by involvement for Black students who are not classified as low-income.

This study examined SES differences in the relationship between Black college students' involvement and their educational expectations. While the educational attainment of low-income Black students has been well documented throughout the educational pipeline, there is still very little known about the academic experiences and outcomes of middle and upper-class Black students, as they are largely absent from postsecondary education literature. Using data from the National Center on Education Statistics (NCES) Education Longitudinal Study (ELS: 2002), statistical analysis were conducted on responses from college sophomores to explore the relationships between SES, involvement, and educational expectations of Black students at four-year public institutions.

Results show that students from different SES backgrounds have statistically significant differences in their involvement, volunteer activities, and educational expectations. High-middle SES students also reported the highest rates of "never" being involved in academic activities compared to their peers. Analysis from this study also found that students from all SES

backgrounds were more likely to have high educational expectations if they were more involved, both academically and non-academically. Finally using logistic regression, results indicate that high SES students who are involved have the highest probability for positive educational expectations.

The findings of this study have substantial implications for student affairs practitioners, educators, and policymakers in postsecondary education who focus on Black collegians. The importance of involvement in college is a key factor to improving students' educational outcomes and raising graduate school expectations. Findings from this research also highlight the importance of targeting services to Black students of all SES backgrounds.

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CHAPTER 1

INTRODUCTION

From very early on in our education system, social stratification and differentiated access to education have contributed to social inequality; unequal distribution of status, power, opportunity, and other resources allow some social groups (i.e. Whites, upper class¹ individuals, males) to advance further than others. Education was designed to provide individuals with the necessary skills and abilities to increase their opportunity for a better life. Education has also focused on several other goals; basic academic knowledge and skills; critical thinking and problem solving; appreciation of the arts and literature; social skills and work ethic; citizenship and community responsibility; physical health; and emotional health (Rothstein, Jacobsen, and Wilder, 2008). While this is true for some, disadvantaged social groups consistently fail to realize equitable social and economic gains due to limited access to education (Ballantine & Hammack, 2012; Baum & Payea, 2004).

College attendance and graduation serves a critical function in preparing America's future workers. Unfortunately, participation and success rates in postsecondary education vary greatly by race, ethnicity, gender, and socioeconomic status (SES) (Advisory Committee on Student Financial Assistance, 2010; Baum & Payea, 2004; U.S. Census Bureau, 2011). White and Asian students attend postsecondary institutions at higher rates than Blacks and Latinos (Baum & Payea, 2004; Bowen, Chingos, McPherson, 2005; Perna, 2000). For example, 48.5% of White high school graduates attended college in 2010 while only 46.3% of Black students went on to postsecondary education (National Center for Education Statistics (NCES), 2011). In

¹ Class refers to SES as measured by family income, parents' education, and parent's occupation.

addition the Black-White and Latino-White gaps in achievement continue to persist. In 2001, 45% of White 18 to 24-year old high school graduates, 40% of Black graduates, and 35% of Latino/Hispanic² graduates were enrolled in college (Baum & Payea, 2004). Trends are similar for college enrollment in postsecondary education by test scores, parental education, and SES; those in favored social groups (e.g. Whites, upper class individuals, males) fare much better in participation in higher education.

While access is an important part of the postsecondary education process for all demographic groups, there are just as many problems with retention and persistence associated with demographic characteristics. Among high school students who graduated in 1992, 68% of those who were low-income and 78% of those who were middle income were able to obtain a bachelor's degree (Advisory Committee on Student Financial Assistance, 2010). These numbers confirm the better performance of those in higher socioeconomic positions throughout the educational pipeline. Examining six-year college graduation rates reveals that 70% of Asian American/Pacific Islanders, 67% of Whites, 47% of Hispanics, and 46% of Blacks have successfully earned a bachelor's degree in that given time period (Baum & Payea, 2004). Race is also a factor in educational outcomes for students.

These inequalities have severe consequences for future social outcomes. For example, in 2010 White men with bachelor's degrees earned an average of \$71,286 but similarly educated Black men only earned \$55,655 (U.S. Census Bureau, 2011). This problem begins with students in kindergarten and extends well into their postsecondary educational careers (Advisory Committee on Student Financial Assistance, 2010). In many cases students who are low income do not have the same access to quality teaching and courses as those from higher income

² Latino and Hispanic will be used interchangeably throughout this paper.

families. In fact, 34% of low-income students³ have only taken a math course up to Algebra I, the same is true for only 10% of high income students (Advisory Committee on Student Financial Assistance, 2010). Inequalities such as these contribute to a system of education where only 22% of low-income students receive a bachelor's degree while high-income students have a 70% college completion rate (Advisory Committee on Student Financial Assistance, 2010). In the current economic market, a college degree can mean greater lifetime earnings and better life opportunities (Baum & Payea, 2004).

Based on the available data, the problems in enrollment, attainment, and persistence in higher education are quite clear. Inequality of outcomes is a persistent issue throughout the educational system. The ability for low-income and minority students to gain access to equal educational opportunity that leads to greater social mobility is limited (Kim, 2004; Kim, DesJardins, & McCall, 2009). Students who have traditionally fared well, those who are White middle and upper class, continue to do so while those populations that have been historically underrepresented in higher education—Blacks, Latinos, and students from the lower-class—continue to face countless barriers to academic success.

Blacks currently make up approximately 14% of the United States population (U.S. Census Bureau, 2012b). Black students represent approximately 12% of college students in the United States; this includes higher enrollment rates at two-year public, private, and for profit institutions (NCES, 2010). In 2008, the percentage of Black students at public 2-year and private not-for-profit 2-year institutions was 14 and 20 percent, respectively (NCES, 2010). This was higher than the number of Black students enrolled at public 4-year and private not-for-profit 4-year institutions. The percentage of Black students at for-profit institutions (27 percent) was also

³ Low-income students are defined as those whose family income is below 125% of the federal poverty line. In 2011, for a family of four the average income was \$23,021.

higher than the percentages at other types of institutions (NCES). Historically underrepresented racial and ethnic minorities, first-generation, low-income, and non-traditional⁴ students make up an overwhelming majority of students at community colleges and for-profit institutions (Chapman, 1981; Taggart & Crisp, 2011). Enrollment of Black students has seen some improvement over the last several years, but low retention and persistence rates of these students continues to be an issue for higher education professionals. In addition, the average time for Whites to obtain a degree is less than it is for Blacks, regardless of SES. In 1993, White students received their bachelor's in an average of 6.24 years while it took Black students 7.19 years to obtain a bachelor's degree (Patillo-McCoy, 1999). This difference in time to degree indicates a significant problem in higher education that if left unaddressed can have dire consequences for Black students and society at-large. The failure of institutions to graduate Black students at comparable rates to their peers limits not only the personal earning potential of those individuals but also decreases their ability to contribute to society in general. Students who fail to earn a bachelor's degree have lower lifetime earnings, are less satisfied with life, have worse health outcomes, and are less likely to be engaged with their communities (Baum & Payea, 2004).

Colleges and universities and even the federal government have employed many strategies to address retention and graduation of Black students; summer bridge and college pre-enrollment programs, academic support programs, and other programs that provide remedial support all attempt to improve student retention and academic success (Bettinger & Long, 2009). Substantial research has focused on barriers in higher education that hinder the success of Black students. Academic, financial, and social factors all impact students during their time in college

⁴ Non-traditional students include those who may not have gone to college straight from high school, are older than other students in their year, and may be transferring from community college.

(Ballantine & Hammack, 2011; Bowen, Chingos, & McPherson, 2009; Bowen, Kurzweil, & Tobin, 2005; Perna & Titus, 2005). For example, Tinto's (1993) theories on persistence and retention explain how the experiences of undergraduates can serve to promote or inhibit persistence and as a result graduation rates. Tinto's work also focuses on a student's ability to successfully integrate socially and academically into their college setting. Successful integration leads to "degree completion, personal satisfaction, future postgraduate study, increased career opportunities, and higher incomes" (Smith et al., 2007, p. 566). It is apparent that successful integration can lead to higher retention rates and have a considerable impact on future life outcomes. In several studies on the experiences of Black students at predominantly White institutions (PWIs) the significance of Tinto's retention theory on the importance of social integration and retention has been confirmed (Davis et al., 2004; Pascarella & Terenzini, 2005; Smith et al., 2007; Strayhorn, 2008). Other work on Black students in higher education has focused on other factors such as how stereotypes influence student performance (Steele, 1997).

Research has drawn on Claude Steele's theory on stereotype threat to examine Black collegians experiences. Steele's (1997) theory focuses on how group social stereotypes can influence the intellectual functioning and identity development of individual group members (1997). Students may fear that acting in a certain manner or underachieving academically can confirm negative stereotypes. This fear can have a significant influence on Black student performance. Being seen as "unworthy leads to fear of doing something to confirm that stereotype," which often leads to failure (Davis et al., 2004, p. 439). Furthermore, stereotype threat has been associated with decreased class participation, increased anxiety, and poor academic performance (Steele, 1997). These factors can serve as contributors to decreased Black student enrollment in postsecondary education (Davis et al., 2004; Steele, 1997). Research

shows that Black students do not enter college disadvantaged by a lack of self-esteem, but they are adversely affected by racist stereotypes of intellectual inferiority, a finding that supports Claude Steele's theory of stereotype threat (Steele, 1997; Deil-Amen and Truly, 2007; Fischer, 2007).

Extant literature on issues of campus climate and safe spaces for underrepresented students is extensive. For many Black students attending PWIs, successfully navigating academic, social, and cultural spaces on campus can be a daunting experience. Institutional alienation is cited as a significant characteristic of the experience of Black students attending predominantly White universities (Allen, 1992; Hoffman & Lowitzki, 2005; Strayhorn, 2011). Research has been conducted suggesting that PWIs do not provide positive atmospheres for minority student learning (Davis et al., 2004). There are a number of problems that can arise both in and outside of the classroom that lead to negative experiences for Black students. As a result Black students are less likely to persist when compared to their White peers.

One common occurrence is that Euro-centric educational offerings can lead Black students to feel underappreciated and/or devalue their own cultural group (Tatum, 1997). Another problem that causes negative experiences for Black students is negative stereotypes in the classroom, particularly when they come from both professors and classmates. Whether they are consciously expressed or not, these stereotypes can cause Black students to become demoralized, mistrustful, and generally uncomfortable (Steele, 1997; Davis et al., 2004).

Racially hostile or cold campus climates have serious implications for the ability of Blacks to adjust to college and succeed (Davis et al., 2004; Fischer, 2007). Fischer evaluated these issues in a study that surveyed students at the end of their first year. Participants were asked to report how often they had experienced various race related problems, such as "hearing

derogatory remarks made by fellow students, professors, or college staff; receiving an unfair grade because of their race; being discouraged from taking a class or pursuing a course of study because of their race; and experiencing other problems on campus due to their race,” (Fischer, 2007, p. 139). The results showed not only that there were large differences between racial groups in the perceptions of a negative racial climate on campus, but Black students also had the highest average perceptions of a negative campus racial environment.

Other research in education focuses on improving student persistence. Astin’s (1984;1985) work on involvement in postsecondary education examines how various forms of student involvement (i.e. faculty and peer interactions, Greek life, sport team membership, participation in campus organizations) can positively influence student persistence. In addition to improving student persistence, involvement is associated with higher academic performance. Student development is an important part of the work that educators do in college settings and encouraging student involvement is believed to be essential to this mission. While student involvement can vary in intensity and takes on many diverse forms, research supports the general conclusion that student involvement has significant positive effects on student outcomes⁵ (Astin, 1985; Flowers, 2004; Hernandez, Hogan, Hathaway, & Lovell, 1999; Moore, Lovell, McGann, & Wyrick, 1998; Pascarella & Terenzini, 2005).

There is a significant body of work on the experience of Black students in higher education and factors that promote or inhibit their persistence. Involvement is an important factor supporting student persistence and academic performance (e.g. Astin, 1984; Pascarella & Terenzini, 2005). Research has found that student involvement contributes to academic, social, and cognitive development (Astin, 1984, 1985; Flowers, 2004; Pascarella & Terenzini, 2005).

⁵ Throughout this dissertation I use the term “outcome(s)” to refer to students experiences in college, as well as their educational expectations during college.

Black student involvement has been linked to positive outcomes such as higher rates of academic and social development (Flowers, 2004).

Much of the work on Black student involvement focuses on gender and class differences. Several authors highlight the challenges and outcomes of Black men in college (e.g. Harper, 2006; Fries-Britt, 1997). Unfortunately, Black women in higher education literature are often used only as a comparison group. In many cases, Black undergraduate women “are often juxtaposed and pitted against Black undergraduate men, who are framed as ‘endangered species’” implicitly suggesting that Black women do not need or require the same attention or focus (Stewart, 2012). Very little of the research on Black student involvement specifically examines the experiences of Black women.

There has also been work that highlights differences in involvement among low-income Black students (e.g. Wapole, 2008). One study examined long-term effects of college involvement on graduate school attendance. Low-income students were less likely to attend graduate school and years after their undergraduate experience low-income students reported lower incomes than their high SES peers.

However, noticeably absent in this discussion is an examination of outcomes for Black students who are not classified as low-income. Very little literature has focused on middle and upper income Black students in higher education. Frequently the focus by scholars in various fields (education, sociology, anthropology, etc.) has been on the plight of poor or low-income minorities, especially Blacks. Race and class have become interchangeable for many in discussions on the conditions of Blacks in this country; this often results in the term “low-income” becoming synonymous for “Black”. The problem with this notion is that although Blacks are overrepresented among low-income families, there are still many who are not low-

income. According to census information from 2011, 45.1% of Black families are among the middle-income quintile and higher (U.S. Census, 2012b). Too often educators, administrators, policy makers, researchers, and organizations focus on addressing the needs of Black students by associating financial status with social, cultural, and academic need (Ackerman, 1991; Advisory Committee on Student Financial Assistance, 2010; Rouse, 2004; Wapole, 2008). Many institutional, state, and national programs designed to improve educational outcomes for Black students often include “low-income” status as a requirement for participation. Black students from middle and upper class backgrounds are often only referred to as a point of comparison to their low-income peers. Traditionally, there has been a lack of focus on Blacks who are not low income; only recently have researchers begun to address the disparities that exist between middle and upper class Black students and their White peers.

John Ogbu’s (2008) work on Black student underachievement is one example of such work. Ogbu’s work suggests that Black students belittle and discourage other Black peers who they view as conforming to the attitudes, values, and behaviors that raise achievement. In a study of Black students who should be high academic achievers (middle and upper class Blacks) but weren’t, Fordham and Ogbu (2008) explained that high-achieving Black students are penalized by their peers for “acting White” because academic achievement is defined and viewed as being a focus for White students. The expectation was that these students who were of higher SES and lived in more affluent areas would perform just as well academically as their White peers because they had access to economic resources and had the barrier of poverty removed for them. Ogbu’s theory is based on the premise that Black students “perceive barriers to occupational opportunity and limited returns to education,” (Deil-Amen and Turley, 2007, p. 2339). Previous examinations of Black students’ underachievement in schools often focused on low-income

families, and inadequate access to financial, social, cultural, and political resources and opportunities. Although many have criticized this work, Ogbu's oppositional culture theory attempts to explain why Black students, regardless of social class or income level, underachieve in educational settings and why there continues to be an achievement gap between Black and White students; a disparity that continues to grow as students enter higher education.

Finally, while the educational attainment of low-income Black students has been well documented throughout the educational pipeline, there is still very little known about the academic experiences of middle and upper-class Black students, as they are largely absent from postsecondary education literature (Gosa & Alexander, 2007). College completion rates of Black and White students with college-educated parents, 21 percent and 47 percent respectively, show a great disparity for a population that is expected to have higher rates of success and achievement (Espenshade & Radford, 2009). By 2004, a quarter of all Black families were considered to be middle class based on income, occupation, or education (Attewell, Domina, Lavin, & Levey, 2004). More and more Black families are entering the ranks of the middle and upper class (Kerr, 1991). As the previous section highlights, many factors can affect the academic success of Black students in the realm of higher education and financial status is only one aspect of a complex picture.

Purpose of the Study

The purpose of this dissertation study is to measure SES differences in the relationship between Black college students' involvement and their educational outcomes. Specifically, the study aims to identify what differences exist between Black students of low-, middle-, and upper SES in their level of involvement. This dissertation study also seeks to examine how different

forms of involvement influence educational outcomes between Black students of various SES backgrounds. With the demographic shift of many Black families into the middle class comes the need to address issues, such as the impact of prejudice and discrimination on life outcomes, which are relevant to Black communities based on more than SES. Three questions guide this study: a) How do Black students differ in their involvement based on SES, b) Are there differences in students' educational expectations based on SES and involvement, c) What types of involvement have the greatest influence on student expectations?

This study will be based on a secondary data analysis of data available from the U.S. Department of Education's National Center on Education Statistics (NCES) Education Longitudinal Study (ELS:2002). This data analysis will involve using several variables to measure SES differences in the relationship between Black college students' involvement and their educational outcomes. The sample will include Black students enrolled full-time in postsecondary degree-granting institutions.

Significance of the Study

Significance for practice. Findings from this study are significant for several stakeholders. The first group for which this dissertation study has significance for is Black students. One of the purposes of this study is to examine what differences exist between Black college students based on their SES background. Black students come from various socioeconomic, cultural, ethnic, geographic, religious, and many other backgrounds that shape their experiences prior to and during their time in college. This study can provide empirical support for distinguishing Black students from one another based on more than just low and high-income status. An improved system would have a more nuanced categorization including "middle income". The results from

this study can also provide Black students with a different perspective on how they can view and understand their experiences in college and how their SES and involvement might influence that experience. In addition, the results of this study can provide a lens with which all Black students can be better understood in higher education.

This study also holds importance for student affairs practitioners and administrators, particularly those who manage extracurricular and other involvement programs. Student affairs personnel invest substantial time, energy, and resources into student involvement programs and support. The findings from this study have the potential to provide information on a student population that has not previously been targeted by college educators and services, middle- and upper-income Black students. This study can provide practitioners with information on what forms of involvement are most beneficial to various groups of Black students for specific outcomes we desire for collegians. This understanding could also contribute to a more nuanced delivery of services to support Black students in postsecondary education. In addition, information from this study can be used to better tailor efforts to get students involved, improve persistence, and better distribute resources.

Another constituency for which this study is significant includes institutional, state, and federal policymakers in higher education. Many decisions about funding, programming, and efforts to improve educational outcomes for college students are made on a macro-level. Initiatives to improve college achievement, particularly for Black students, are often tied to financial status. For example, programs such as the Ronald E. McNair Postbaccalaureate Achievement program or the Student Support Services program provide students with access to services, resources, networks, and knowledge that assist in promoting undergraduate and graduate school success. This study can inform policy makers of the importance of these and

other programs to Black students from differing SES backgrounds. The results from this study can also highlight the needs of students that have to this point been ignored by policymakers at all levels. Information from this study could be used by policymakers to create greater opportunities for Black students who are not low-income to become involved with support services on campus.

Significance for research. The current dissertation study also has significance for future research. One area in this study that could be expanded by future researchers is the improved understanding of group differences among Black students in higher education with a focus on SES and middle and upper class students. Some research has looked at differences in Black student performance or experience based on institution type (i.e. PWIs, HBCUs, four-year, two-year) (Allen, 1992). Future research can build upon this by examining SES differences of Black students within and between institution types in order to develop the literature on outcomes of Black students in college. This study directly relates to possible avenues for future research by providing information on how differences in SES of Black students can influence their educational outcomes.

Other future studies could focus on the relationship between involvement and Black students educational outcomes. Moving forward, research can examine other variables (i.e. year in college, percent of underrepresented minorities on campus, number of faculty of color) that relate to involvement for Black students and how these can change their educational outcomes. Very little contemporary scholarship on student involvement focuses specifically on Black students' experiences; the current dissertation study introduces a new lens for examining Black students college involvement and its impact on their educational outcomes. Future research can build upon this study by increasing the focus on other ways that college can influence Black

students involvement.

Finally, the current study has implications for future studies on race and class. Directions for future research could include studies that solely examine the experiences of middle and upper class Black students in postsecondary education. This line of research could focus on various aspects of college life that affect Black middle and upper class students. Such research could include types of institutions attended, choice of major, academic achievement, student involvement, and experiences with discrimination to name a few. This dissertation study provides a foundation for further understanding the experiences of Black middle and upper class students in higher education.

Significance for theory. This study is significant for the development of future theory in several areas. Much of the theory on student achievement has focused on low-income status as representative of all Black students in postsecondary education. Theory seeking to explain the poor performance of Black students in higher education is often tied to the belief that low-income status is a key indicator of achievement for Black students. The results from this study have the potential to expand theory on Black student achievement by exploring educational outcomes of Black students who are not low-income. In order to adequately address academic performance and promote the graduation of Black students in higher education, it is necessary that theory evolve in a way that addresses the issues encountered by all students, not simply those who are low-income.

Currently, much of the literature and theory developed on the experiences of Black students in higher education treats them as a uniform group. From decisions made about where to attend college to overall academic achievement, Black students are often discussed as a group that is homogenous, especially with regard to class status. Theory that makes a distinction between

Black students of various SES backgrounds is another possible outcome based on the findings of this study. Theory that provides an increased understanding of the nuanced differences between Black students based on class status can be useful in the development of programs designed to support Black students in college. With theory that more fully explains Black student achievement and how these outcomes differ by subgroups scholars and researchers can better explain, predict, and suggest remedies for postsecondary educational outcomes.

Finally, current theory on student involvement focuses very little on the influence of involvement on Black students. Typically Black students are used as a comparison group to White students in college. In addition, there is very little in student involvement theory that addresses the differences within the Black college student population. This study on the socioeconomic differences in Black students' involvement can provide empirical evidence on the ways that promoting involvement can lead to positive student outcomes. By failing to address identity intersections such as race and class, particularly for Black middle and upper class students, in higher education and the effect of these interactions on college experiences and outcomes theory on student involvement cannot adequately explain educational outcomes.

Delimitations

This study has several delimitations. One delimitation in this study relates directly to the nature of the ELS:2002 dataset. This study is limited by the factors that are defined, operationalized, and measured by this single study. That is to say, this dissertation study is limited by the variables that are measured by the Education Longitudinal Study (ELS:2002). Therefore, it is possible that the variables available in this dataset may not be sufficient to explain and account for SES differences in the relationship between Black college students SES

and the affect of involvement on educational outcomes in the desired manner. To the extent that this is true, statistical models may be underspecified and limit the interpretations of the findings from the study.

Another delimitation of using this dataset involves the collection of data. Information available in the dataset, while the most recent national data available for students in postsecondary education, includes responses for students who are (at the most) in their second year of college. This limits the ability of this study to interpret or analyze long-term relationships between students' SES and involvement during and after enrollment in postsecondary education. Therefore, important measures such as rates of persistence, graduation rates, or successful employment cannot be included in models of involvement on student outcome since data after 4- or 5- years of college attendance are not available.

Despite these delimitations, this dissertation study is a worthwhile contribution to the field. It expands upon several important issues in higher education, contributes to the literature on Black students in college, and provides a new perspective on how the intersection of race and class can possibly affect educational outcomes. This dissertation study also moves beyond the traditional White middle-class paradigm that continues to serve as the norm for measuring student change and progress in higher education. Finally, this study serves as a starting point for future research that can focus on middle and upper class Black students throughout the educational pipeline.

Organization of the Dissertation

This dissertation is organized into five chapters. Chapter One introduces the issues facing Black students in postsecondary education, the research questions guiding this study, and the significance of this research to researchers, practitioners, and other stakeholders. Chapter Two

reviews the literature on student involvement and development and Black students in higher education. The third chapter discusses the methodology of this study, including a description of the dataset and variables that will be included in the analysis. Chapter four describes the results of the study and the findings from data analysis that was conducted. The final chapter discusses the results of the study in greater detail and the implications for future practice, research, and theory.

CHAPTER 2

LITERATURE REVIEW

This chapter presents a review of the literature on student involvement theory, demographic differences in student outcomes, and Black students' experiences and educational outcomes and expectations in higher education to summarize what is known about the experiences of students in postsecondary education, as well as the impact of college involvement on educational outcomes and expectations. This chapter will also include a brief discussion of Black students and social class and educational expectations. Previous research on student involvement and the impact of college on students also provides a theoretical and conceptual foundation for the proposed study. Theoretical understandings provide the constructs and language necessary for understanding how SES plausibly influences Black student involvement on campus and the educational outcomes and expectations that likely result from such involvement.

As research on student involvement has expanded, differences have been found between and among various groups based on demographic traits. Race, gender, and ability status⁶ are only a few of the traits that have been studied previously. While literature on differences in student involvement by background traits has grown, there is still much work to be done in order to better understand how student involvement, both academic and non-academic, affects various students, such as those who come from varying SES backgrounds (e.g., low- vs. high-income). Research on differences in student involvement offers further support for the proposed dissertation study. Although factors such as race, Greek-life membership, employment status,

⁶ Ability status refers to individuals who may be diagnosed with mental or physical impairments, this term is also known as disability status.

and gender have all been examined through a student involvement lens, little research has been done that applies student involvement theory to Black students based on social class status.

Student Involvement Theory

Student involvement is defined as student participation in many different areas, groups, and activities on college campuses. Greek life, clubs and activities, and faculty member and peer interactions both in- and outside of the classroom are examples of student involvement in postsecondary education (Gellin, 2003). Much of the research on student involvement stems from Astin's (1984; 1985) research on the importance of student involvement in higher education. His work is rooted in identifying what involvement factors in college significantly affect student persistence; these high involvement factors include full-time attendance, participation in extracurricular activities, studying hard, living on campus, and interacting frequently with other students and with faculty (Astin, 1985). Many in higher education support involvement in student organizations as a way of promoting academic achievement and persistence (Guiffrida, 2004).

Defining Student Involvement

According to work by Astin (1985), student involvement "refers to the amount of physical and psychological energy that the student devotes to the academic experience," (p. 36). Involvement is essential to promoting college students' learning and development. A highly involved student will commit substantial time and energy to studying, spending time on campus, and being actively engaged in student organizations. Consistent with a broad definition, involvement can take on many forms. For instance, Astin (1984) cites participation in a fraternity or sorority, undergraduate research programs, and athletics as definite forms of involvement,

although he admits that involvement experiences may vary in *quality* and *frequency* or the intensity of a student's involvement in said activity. These forms of involvement also differ in their academic and non-academic focus. Astin's theory on student involvement is based on several basic concepts:

1. Involvement refers to the investment of physical and psychological energy in various objects.
2. Regardless of its object, involvement occurs along a continuum.
3. Involvement has both quantitative and qualitative features.
4. The amount of student learning and development associated with any educational program is directly proportional to the quality and quantity of student involvement in that program.
5. The effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement. (Astin, 1984).

Student involvement theory focuses on the time and effort that students spend devoted to specific activities that will produce the educational gain that we desire for students. Because students have a limited amount of time to spend on any particular activity, time spent on issues related to family, friends, work, and other off-campus activities might take away from their involvement; the student must work to manage these time commitments for optimal learning and development to occur (Astin, 1985). Student involvement theory provides a context for understanding diverse literature on environmental influences on student development. It is a useful tool for researchers, administrators, and faculty to produce effective learning environments. This theory also offers a link between the variables associated with positive student experiences (i.e. learning from talented faculty, up-to-date physical facilities, access to

financial resources) and actual student outcomes. Involvement theory argues that students must not only have access to well-trained faculty and world-class facilities, but they must also be actively engaged with the resources and personnel available to them on campus.⁷ This requires students to invest energy and effort into both the academic and social campus environment. This approach also shifts the focus from what educators do for students to what students actually do themselves. Astin's work, and subsequent studies on involvement, has encouraged a theory in higher education that pays attention to not just what students are exposed to, but also what they actively become involved with and how it affects outcomes. Further research in this area has provided useful definitions for involvement and empirical support for the influence of involvement on student outcomes. These studies are reviewed in the next section.

Influence of Student Involvement on Outcomes

Research on student learning and development has often focused on several academic and non-academic areas of college life; including athletics, Greek organizations, general activities and organizations, on-campus living, out-of-class involvement with faculty members, peer interaction, and employment (Hernandez et al., 1999; Pascarella & Terenzini, 2005). In one study, Astin (1985) found that for some student outcomes, involvement has a stronger association with positive student change than institutional or personal characteristics. Another quantitative study examined the influence of student involvement on students' self-ratings of their academic ability. This was based on a survey of an incoming freshman cohort concerning activities such as studying or volunteering. House (2000) found several statistically significant results including finding that increased involvement in volunteer work was "significantly related

⁷ For the purposes of this paper, engagement and involvement will be used interchangeably. Both will refer to the amount of energy students devote to academic and social activities on and off campus.

to the participants' self-perceptions of their drive to achieve," (p. 262). Student involvement can have an effect on numerous student outcomes (i.e. critical thinking, cognitive development, leadership skills) and the literature on this subject is extensive. The following provides a brief review of the research on various student outcomes that are impacted by involvement.

Student involvement has been shown to have a positive influence on cognitive development and vocational aspirations and leadership skills (Flowers, 2004). The literature on student academic involvement shows that there is a positive relationship between involvement and cognitive development and academic outcomes. Cognitive development refers to more general skills that students acquire through learning and interactions in and out of classrooms (e.g. critical thinking, analytical reasoning, principled reasoning, reflective judgment) and has been a part of much of the literature in student development (Brendel, Kolbert, & Foster, 2002; Jones, 1992; Pascarella & Terenzini, 2005). Academic outcomes relate to the "acquisition of subject matter knowledge and academic skills," (Pascarella & Terenzini, 2005, p. 65). Activities such as spending time and substantial energy on homework have been associated with positive academic achievement (Pascarella et al., 2004). Student involvement, which includes both student interaction with their environment and effort spent on academic and social activities, has also been shown to promote growth in academic development (Flowers, 2004). Positive academic outcomes also relate to student retention, grades, or grade point average (GPA) (Baird, 1985; Hoffman & Lowitzki, 2005).

Studies have been conducted that show student involvement positively contributes to cognitive development (Flowers, 2004; Terenzini, Springer, Yaeger, Pascarella, Nora, 1996). Some of these outcomes stem from the informal contact that occurs between students and faculty members both in and out of class (Flowers, 2004). In addition, cognitive development is a factor

that can influence academic outcomes, (Terenzini et al., 1996). Both cognitive development and academic outcomes are influenced by student-faculty interactions, students' interactions with their institution, and "the quality of student effort expended on academic and social activities on campus" (Flowers, 2004, p 633). Literature supports the finding that involvement experiences positively affect cognitive development and academic outcomes (Flowers, 2004; Hernandez et al., 1999; Kuh, 1995; Pascarella & Terenzini, 2005). For example, in a study of 149 college seniors that consisted of structured interviews, Kuh (1995) found that leadership responsibilities were positively associated with gains cognitive complexity. Kuh (1995) also found that faculty contact had a positive impact on students' cognitive development. These academic forms of involvement were significant in promoting a positive collegiate experience for these students. Studies on student involvement and its impact on cognitive development have taken place in various institutional settings, using both qualitative and quantitative research methods, and diverse student samples; however they all support the assertion that involvement has a positive effect on college students' experiences.

Student involvement in college can also increase student development and skills in areas that are viewed as valuable for job positions after college (Flowers, 2004; Moore et al., 1998; Pascarella & Terenzini, 2005). These include students' vocational aspirations and leadership skills (Moore et al., 1998; Terenzini et al., 1996). Research has found that student involvement improves self-confidence and interpersonal and leadership skills (Pascarella & Terenzini, 2005). Pascarella and Terenzini also found that there was a strong positive relationship between leadership activities and social self-concept. The development of these skills can be valuable to students who are entering the labor market as professionals.

While student involvement has been associated with several positive outcomes, some of the research on involvement has been inconclusive and at times even contradictory (Pascarella & Terenzini, 2005). Some studies have linked student involvement in some areas, such as Greek life, clubs and organizations, faculty interaction, peer interaction, and living on campus to gains in critical thinking, however the findings have been inconsistent (Gellin, 2003; Pascarella & Terenzini, 2005). Pascarella and Terenzini present findings that suggest institutions that promote close relationships and frequent interactions between faculty and students have an impact on critical thinking. In addition to these findings, Pascarella and Terenzini also caution “involvement in intellectual and cultural activities may be more important to general cognitive development than other types of involvement,” (2005, p. 174). These findings highlight the different impact of academic and non-academic involvement. This includes student involvement in social clubs, athletics, and any other non-academic campus participation. One study used the New Jersey Test of Reasoning Skills, a standardized test to measure critical thinking, to examine the effect of athletic participation on critical thinking skills. The test was administered to a small sample of athletes and non-athletes. Athletes scored significantly lower on the test (Pascarella & Terenzini, 2005). This study is only one example of the ways in which student involvement can lead to negative results on the college experience and overall student outcomes.

Since the 1970s, higher education scholars like Astin (1985) have argued the importance of student involvement in college as an effective mechanism for producing the educational outcomes desired of students. Previous research has shown that student involvement in clubs and organizations is positively associated with outcomes such as higher grades, personal and social skills, and cognitive development. Despite fairly consistent evidence about the importance of

involvement, some scholars have uncovered demographic differences in student involvement outcomes. This literature is reviewed in the next section.

Demographic Differences in Student Involvement

Previous research on college student involvement has several shortcomings, such as showing how differences in campus climate have the potential to shape students' perceptions about an institution as well as their willingness to become involved. For example, studies have indicated that a student's chances of dropping out are greater if they attend a two-year institution than at a four-year college (Astin, 1985). While somewhat limited, research has expanded to include students who attend women's colleges, historically Black colleges and universities (HBCUs), and Hispanic serving institutions (HSIs), but this line of research can be expanded. Another shortcoming is the lack of representation of racial/ethnic minority students and other historically marginalized populations in such studies. Even those studies that include a sufficient number of racial/ethnic minority students may fail to account for the ways in which other demographic traits—namely, gender and socioeconomic status (SES)—affect college student involvement and subsequent outcomes. This section of the review of literature is organized around these major categories.

Differences in College Student Involvement by Gender

Several studies have examined the differences between men and women in college involvement and educational outcomes. Factors external to the college setting can have detrimental effects on student participation and retention. These include family obligations, particularly for student parents, and working while enrolled. For women who bear most or all of the responsibility in their family setting, this can have significant negative effects on their

college outcomes (Anderson, 1988; Ewert, 2010). Ewert's study of the differences in male-female discontinuous and part-time pathways through four-year colleges using data from NELS:88 and a sample of 4,640 students found that family responsibilities and generally women's greater involvement outside of school takes time away from the ability for students to become involved in campus clubs and organizations, limit time with faculty members, and reduce time spent studying (Ewert, 2010). Prior academic preparation and generally better performance of women in college also contribute to differences between men and women in their college involvement (Anderson, 1988; Ewert, 2010).

Differences in College Student Involvement by SES

Research on college students of differing SES has presented significant findings on the role of students' background on involvement in college. Differences between low and high SES students include differences in participation in extracurricular activities, time spent working, and GPA (Wapole, 2003). Other research has indicated that increased involvement for low SES students can help students overcome academic and socioeconomic disadvantages (Strayhorn, 2010). In one longitudinal study investigating the experiences of low and high SES students there were several findings relevant to involvement in postsecondary education. Measuring involvement by contact with faculty; time spent working, studying, volunteering, or in student groups and intercollegiate athletics, and college GPA, the study found several differences and similarities between low and high SES students (Wapole, 2003). For example, high and low SES students had similar rates of contact with faculty members both in and outside of the classroom. However, low SES students spent less time in student clubs and groups than their high SES peers (Wapole, 2003). These students also reported less time spent studying which suggest some difficulty investing time into the academic capital that is required to be successful in college

(Wapole, 2003; 2008). Knowing the importance of involvement on student development and retention, this difference in involvement by SES is only one area of concern in the literature. Other differences between various demographic groups in college illustrate the need for further research.

Differences in College Student Involvement by Race

Studies on student involvement have shifted to focus on not just White students' experiences, but those of other racial and ethnic groups as well. For example, student involvement has been found to have a positive impact on Black students' in- and out-of- class experiences. In his survey of 1,800 students Allen (1992) found that involvement, engaging with faculty members, and positive experiences with peers who were different had an influence on academic outcomes. However, Black students who were at predominantly White institutions (PWIs) had lower grades than their White peers. This study included controls for SES and high school GPA. Previous research provides evidence that Black college students who are involved in frequent and meaningful ways in campus clubs, organizations, and other campus activities tend to earn higher grades, feel more satisfied with their college experience, and report greater perceived learning gains than their same-race peers who are less involved, if at all (Allen, 1992; Strayhorn, 2010).

While minority student participation in traditional student organizations at predominantly White institutions (PWIs) has increased over the years, Black students are still less involved in some involvement experiences than their White counterparts. For example, Black students are rarely represented among residence hall government, residence hall assistants, orientation leaders/ambassadors, or student government (Sutton & Kimbrough, 2001). In one study, Kimbrough and Sutton examined trends for Black student involvement at PWIs. It has been

found that Black students “report that their marginal participation within traditional campus organizations is attributed to a campus climate described as cool or unwelcoming,” (2001, p. 30). Racial identity may be a key factor influencing the level of involvement for Black students, particularly at PWIs. Research has been conducted suggesting that PWIs do not offer an open atmosphere conducive for minority student learning (Davis et al., 2004). Exposure to prejudice and discrimination both in and out of the classroom is a major factor in minority student withdrawal from a campus (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999). An awareness of race and negative racial encounters can deter Black students from becoming more involved on college campuses (Fischer, 2007). For these reasons and more, Black and White students generally “differ in their participation levels in student involvement,” and the types of organizations they participate in (Flowers, 2004, p. 634).

One common occurrence is that Euro-centric educational offerings can lead Black students to feel underappreciated or devalue their own cultural group (Tatum, 1997). Another problem that causes negative experiences for Black students is negative stereotypes in the classroom, particularly when they come from both professors and classmates. Whether they are consciously expressed or not, these stereotypes can cause Black students to become demoralized, mistrustful, and generally uncomfortable (Davis et al., 2004; Steele, 1997). Research shows that Black students do not enter college disadvantaged by a lack of self-esteem, but they are adversely affected by racist stereotypes of intellectual inferiority, a finding that supports Claude Steele’s theory of stereotype threat (Deil-Amen & Trully, 2007; Fischer, 2007; Steele, 1997).

A significant contributor to the issue of negative campus climate for Black students relates to interactions with their White peers. Some Black students are not accustomed to being in a setting with such a large number of White students and this has a direct affect on their

comfort level on campus (Davis et al., 2004; Fischer, 2007). Students, both Black and White, come to college with already formed ideas about race. Family, peers, and the media all serve to indoctrinate individuals from a very early age about race and difference. Black children in particular learn quickly about the negative stereotypes that Whites hold toward their racial group. Given the differences in experience and discussion of race, these notions can lead to conflict once students are brought together on a campus. Furthermore, research suggest that White college students, “are socialized to avoid stereotyping blacks and thinking about racial differences whereas black college students are socialized to emphasize racial group membership and to notice differences between themselves and whites,” (Davis et al., 2004, p. 422). Such a distinct difference in an approach to race and difference may serve to only increase conflict between Black and White students. This conflict can also have a greater negative affect on Black students than on their White counterparts.

Racially hostile or cold campus climates have serious implications for the ability of Blacks to adjust to college and succeed. Fischer (2007) evaluated these issues in a study that surveyed students at the end of their first year. Participants were asked to report how often they had experienced various race related problems, such as “hearing derogatory remarks made by fellow students, professors, or college staff; receiving an unfair grade because of their race; being discouraged from taking a class or pursuing a course of study because of their race; and experiencing other problems on campus due to their race,” (p. 139). The results showed not only that there were large differences between racial groups in the perceptions of a negative racial climate on campus, but Black students also had the highest average perceptions of a negative campus racial environment (Fischer, 2007). Although many colleges and universities make attempts to create programs that reach out to Black students they are frequently seen as

“cliquish” or “divisive” rather than helpful or effective (Davis et al., 2004). As with many of the other difficulties encountered by Black students, class status does little in this case to diminish the impact on middle and upper class Blacks.

Minority student involvement in postsecondary education has remained minimal due to students feeling that most organizations are exclusive and insensitive to their needs (Davis et al., 2004; Sutton & Kimbrough, 2001). On the other hand, multicultural organizations affirm racial/ethnic students’ presence and promote a sense of “mattering” which encourages involvement (Sutton & Kimbrough, 2001, p. 31). Previous scholars have acknowledged racial differences in college students’ involvement by directing attention to minority students’ involvement in ethnic organizations such as Black Greek-letter organizations (BGLOs), Black student associations, and campus gospel choirs (Harper & Quaye, 2009; Strayhorn, 2011; Sutton & Kimbrough, 2001). For instance, Harper and Kimbrough (2006) stressed the importance of Black male collegians’ involvement in BGLOs. Similarly, Strayhorn (2011) interviewed 21 students participating in gospel choirs and found that involvement in the gospel choir affirmed students’ racial identity, facilitated their sense of belonging at a PWI, and nurtured their resilience to persist despite setbacks.

Research has also found that racial/ethnic minority students have a preference for organizations that perform service activities over philanthropy (Sutton & Kimbrough, 2001; Sutton & Terrell, 1997). Guiffrida (2004) rightly noted “because of their cultural differences from the majority, students of color especially benefit when the groups are related to their cultural/ethnic group,” (p. 88). In one study of 405 students on Black student involvement and leadership, Sutton and Terrell found that Black students “prefer to exhibit leadership skills through service activities within the local community rather than through elected positions,”

(Sutton & Terrell, 1997, p. 36). However, it is important to note that some research counters these conclusions by suggesting that Black student participation in Black non-academic organizations may actually divert students' attention from academics or isolate Black students from the larger student population (Guiffrida, 2004; Nora, Cabrera, Hagedorn, & Pascarella, 1996). Additional empirical testing of this point is warranted.

In addition to the use of student involvement as a theoretical framework for this study, it is also necessary to understand the experiences and educational outcomes of Black students in higher education as a whole. Knowing how race can affect students' experiences, perceptions, and priorities in college can provide a more thorough understanding of how Black students choose to become involved on campus. Furthermore, research on higher education has shown that Black students are not a monolithic group. This also highlights the need for continued research that provides a more nuanced understanding of factors (i.e. class status, income, college involvement) that can influence educational outcomes for Black students. A review of literature on differences in Black students' participation in postsecondary education is also necessary to provide context for the proposed study.

Black Students in Higher Education

In order to further understand Black students' involvement in postsecondary education, a review of literature on the general experience of Black students in higher education is needed. Although there are commonalities between all college students, there are also significant differences in the college experience for Black students that need examination for the purposes of this study. Black students encounter many challenges throughout the educational pipeline and these difficulties can influence both involvement and college outcomes.

There are many challenges that may compromise the learning and developmental outcomes of Black students in college. For instance, some Black students attend institutions that they perceive as unwelcoming, unsupportive, and qualitatively different from the cultures in which they grew up (Davis et al., 2004). Attending a PWI can be a stressful situation for Black students, yet many more Black students attend PWIs today than ever before. In 1968, 80% of Black degrees were earned at Black colleges and universities (Allen, 1985). In 2001, 87.1% of Black undergraduates attended PWIs. These institutions accounted for 78.5 of undergraduate degrees conferred upon Black students that year (Rodgers & Summers, 2008). At PWIs, 70% of Black undergraduates fail to obtain a bachelors degree in comparison to only 20% of Black students at historically Black institutions (Davis et al., 2004). Unfortunately, despite greater minority student attendance at PWIs, Black students performance at PWIs continues to lag behind their White and Asian counterparts. In Allen's analysis of the structural, interpersonal, and psychological factors relating to student outcomes results pointed to the fact that Black students had lower persistence rates, lower academic achievement, as measured by GPA, less likelihood of earning an advanced degree, and lower post-graduation earnings. In general, some PWIs have not been effective in addressing Black student persistence or retention (Allen, 1985; Davis et al., 2004; Rodgers & Summers, 2008).

Cultural and ethnic identity are integral parts of the retention process for Black students in higher education (Rodgers & Summer, 2008). Successful adaptation or integration into the college community is an important part of the process in helping Black students succeed at PWIs (Allen, 1985). However, because Black students encounter racial issues that their White peers may never have to consider, integration is much more difficult. Feelings of unfairness, sabotage, condescension, isolation, invisibility, and super-visibility are only a few of the challenges that

Black students become acutely aware of while attending a PWI. Making these experiences even more concerning is that they all can contribute to lowered campus involvement and ultimately a decrease in retention and persistence (Davis et al., 2004). The promotion of social relationships and support systems for Black students is necessary in order to improve student performance. Allen's analysis of factors positively influencing Black students at PWIs found that "social involvement was highest for students who claimed better relations with faculty, higher participation in Black student organization activities, and held highly positive views toward support services," (Allen, 1985, p. 140). This in addition to favorable faculty relations can positively contribute to educational outcomes for Blacks at PWIs. Although Allen's work was performed during the 1980s, the findings are still relevant for Black students at PWIs (Strayhorn, 2011).

Differences in Involvement Among Black Students

In addition to differences between Black students and other racial and ethnic groups, there are also differences among Black students in higher education as well. Although research has shown that Black students' involvement is statistically significant to influencing positive student outcomes, and that it has an impact on college students (Flowers, 2004; Strayhorn, 2010) little has been done to differentiate Black students from one another. In an effort to expand research on Black students and involvement and to address limitations in previous studies, Flowers used a national sample of almost 200 four-year institutions, approximately 8,000 Black students, and controlled for a comprehensive range of variables (i.e. background characteristics, institutional characteristics, college experiences). The results found that the effects of involvement are more pronounced for some college experiences than others for Black students

(Flowers, 2004). For example, student involvement experiences have a direct impact on student developmental gains in understanding arts and humanities, personal and social development, understanding science and technology, thinking and writing skills, and vocational preparation. These effects were greater for involvement experiences such as “using the library as a quiet place to read or study materials”, “asking the instructor for information related to a course”, and reading “articles or books about personal adjustment and personality development” than they were for experiences like looking “at the bulletin board for notices about campus events”, “using facilities in the gym for individual activities”, or looking “in the student newspaper for notices about campus events and student organizations” (Flowers, 2004). This study also found that Black students educational outcomes are more likely than White students to be affected by the type, quantity, and quality, of their involvement experiences in college (Flowers). For instance, academic-related involvement is more likely to have a positive impact on vocational development than non-academic involvement. Finally, Flowers noticed out-of-class recreational experiences have fewer positive effects on educational outcomes than academic-related experiences.

Another study that examined how involvement supports or hinders Black student academic success found significant differences between low GPA and high GPA participants. One finding explained that differences in the goals of student groups for Black students were evident in research on high achieving and low achieving Black students. Black students with high GPAs reported participating in groups that focused on supporting members, while Black students with low GPAs often participated in groups that focused on uniting Black students outside the group and making changes on campus (Guiffrida, 2004). While findings such as these may offer some insight into Black students involvement, particularly at PWIs, the small, single-

institution sample of students has limited generalizability and other factors (e.g. gender, previous academic achievement, SES) that can influence student success were not addressed. The following section discusses research that provides more information on differences between Black students in involvement.

Differences by Gender

Another issue in studying involvement of Black students is that many studies often focus on a specific gender group, typically Black men in college (Harper, 2006; Fries-Britt, 1997, Strayhorn, 2010) and fail to fully explore the experiences of Black women. For example, in a study on the influence of social and cultural capital on Black and Latino students' academic achievement it was found that Black men benefited greatly from their involvement in activities such as student government and volunteer activities (Strayhorn, 2010). These findings confirmed prior research on the role of involvement in the development of Black men in college (Harper, 2006; Fries-Britt, 1997). A 2003 study by Harper examined the experiences of 32 Black male student leaders who had become involved, earned high GPAs, and held leadership positions on campus. Further exploration of information provided in this study discusses the ways in which Black men were unengaged on campus, the imbalance in leadership and involvement of Black women (who were often more involved), and strategies for increasing out-of-class involvement and leadership for Black men (Harper, 2006). While these findings are important for improving the academic outcomes of Black men in postsecondary education, the lack of research specifically focused on Black women and involvement is a gap in the literature on involvement and student development.

Differences by SES

Although differences among Black college students based on SES is a relatively unexplored area in student involvement, there are a few studies that touch differences based on various factors. For example, a longitudinal study using data from the National Study of the Cooperative Institutional Research Program (CIRP) sponsored by the Higher Education Research Institute (HERI) at UCLA and the American Council on Education examined how social class affects college outcomes and graduate school attendance focuses on Black students in four-year colleges and universities (Wapole, 2008). Although not the direct focus of the study and limited by a small sample size, results from the analysis seemed to indicate that low SES students had low levels of involvement. Wapole (2008) further describes these finding as unusual because the majority of students attended private institutions where student involvement is typically encouraged.

Blacks and Social Class

Weber and Bourdieu both discuss elements of what constitutes social classes and how individuals position themselves in relation to others based on class and group membership (Bourdieu, 1967, 1985; Weber, 1947, 1958). Bourdieu's frameworks allow us to understand why people from certain backgrounds might act in the manner that they do, how these acts are viewed as natural common sense and culturally valuable (McKnight & Chandler, 2010). Class status, and group membership, means that students who are in less affluent social classes do not have access to the same high quality resources as upper and middle class students. Part of this also relates to the social mobility of individuals. Class status offers access to networks, resources, and other elements that improve life opportunities. Class exist as cohesive social entities with

common life experiences (Kingston, 1996). Class advantages are commonly transmitted across generations, meaning that parents of upper and upper middle class families are able to help ensure upward mobility of their children (Kingston, 1996; Lareau, 2003). And finally, class location has fundamental effects on life experiences because class system is reproduced through class inheritance. Again, social class status comes with advantages and disadvantages depending on ones position in the hierarchy. For those in higher and more prestigious social positions, class status is often accompanied by social dominance – although intersecting identities like gender or race may be mediating factors.

This understanding of class also offers information for understanding how education contributes to and perpetuates social inequality. Because many adults from lower social classes do not have positive experiences with or personal knowledge of the educational system, they are unable to provide the same supports to their children as those from the upper class. Furthermore, educational institutions privilege and socially reproduce a patriarchal White normative society. Much of this is due to the increased social class status of Whites in comparison to minorities in the United States (Lareau, 2003; Massey, 2007; McKnight & Chandler, 2012). Social class along with race and access to capital has significant bearing on students' access to resources and how they are treated and perceived in the educational system.

Class, in combination with cultural expectations, creates very different experiences in education for students of different class status. These experiences (whether positive or negative) lead to an accumulation or deficit of educational knowledge and skills. Students have different outcomes in the educational pipeline partially due to their class status but other factors should also be considered. Students from more affluent backgrounds receive greater support and access to resources than their peers. Teacher expectations and treatment of students based on perceived

class status is one example of how outcomes in education are influenced by class (Espinoza, 2011; Laureau, 2003). This leads to a disparity in educational outcomes and access, participation in, and graduation from higher education.

While Blacks disproportionately occupy positions in low-income or low SES backgrounds, a Black middle and upper class exist and continues to grow. Limited research has also shown that the benefits of higher SES do not eliminate the influence of race for Black students in education. In a 2003 study conducted by Turley, it was found that an increase in neighborhood median income is associated with a significant increase in test scores for White children but not for Black children (Diel-Amen and Turley, 2007). In addition, Gosa and Alexander (2007) found that Black students from higher-income households and/or with more highly educated parents do somewhat better in school than Black students who lack these advantages, but not nearly as well as Whites in similar family circumstances.

In 2004, Ann Arbor Michigan had an average SAT score of 1165 at its three main high schools. In addition, 85% of their seniors went on to four-year colleges. However, in a district with most children coming from households with at least one college educated parent, a median income of \$71,293, and the district spending \$9,234 on each student, Black students scored 100 points less on their SATs, had a “C” average, and were four times more likely to fail a class (Step toe, 2004). This lack of achievement on the part of middle and upper class Black students is one that should be seriously considered. Research makes clear that despite having perceived advantages, Black students at all income levels still struggle in in the educational pipeline compared to their White peers. Despite social class and status attainment being linked to educational expectations and outcomes, there is still much that is unknown about how SES for

Black students impacts their college experience. This relationship will be discussed in the following section.

Educational Expectations

Educational expectations are referred to by several different terms in research; “aspirations”, “hopes”, and “plans are only a few of the words used to describe the same or similar concepts. Additionally, there is no uniform measure of any of these concepts (Carter, 2001). The term “educational expectations” has various definitions and has been operationalized in many different ways by researchers. Even the term “expectation” is not always used to refer to similar measures. For example, a review of three different studies using National Longitudinal Survey (NLS) data refer to the same item on the survey as “aspirations”, “plans”, and “expectations” (Carter, 2001). This finding highlights the inconsistency and trouble that exist among scholars around this topic. Berman and Haug (1975) define aspirations as goals that individuals would like to achieve and expectations as goals that individuals intend or expect to attain. For the purposes of this study, I will use “educational expectation” to refer to educational goals that students expect to achieve. Within Education Longitudinal Study (ELS:2002), educational expectation specifically refers to the highest degree that students expect to attain.⁸

Prior research has focused on the relationship between educational expectations and social class. This line of research also explores the relationship between social status or attainment and educational expectations. Scholarship on status attainment offers several explanations for the relationship between educational expectations and SES. This research

⁸ Expectation and aspirations are terms that will be used interchangeably throughout the remainder of this paper unless otherwise noted.

supported the assumption that educational expectations and later SES for students was only a reflection of their parents' SES (Carter, 2001).

Another model of status attainment and educational expectation is a social psychological model that suggest SES and ability influence how students are supported by others which in turn socializes them to certain educational expectations (Carter, 2001; Kerckhoff, 1976). Educational aspirations are formed through social interactions. Both of these models offer explanations as to how educational expectations can be influenced by SES. However, Kerckhoff (1976) argues that these models and the status attainment process is not simply one of socialization, but of social allocation. Social allocation sees social outcomes as the result of societal forces that assign individuals a social location according to external criteria and less as a result of the influence of other individuals in a person's life. His critique suggests that individuals are constrained by social structures, or by what society says they are allowed to do. This offers an explanation as to why individuals may "want" a specific outcome, like going to college, but assessment of their life opportunities may lead them to "expect" something different. Kerckhoff's critique also offers an explanation for the differences in educational expectation and attainment for White women and minorities compared to White men.

Of the studies examining Black students' educational expectations, many place these students in opposition to Whites (Berman & Haug, 1975; Mahoney & Merritt, 1993; Morgan, 1996; Terrell, Terrell, & Miller, 1993). Literature on educational expectations also focuses on high school and middle school students (Jerry, 2002). There is very little empirical research that compares Black college students to one another based on educational expectations and even fewer that consider SES of Black students as a significant factor in educational outcomes. These

theories on educational expectations also fail to explain how and why Black students from various SES backgrounds differ in their educational expectations and outcomes.

Gaps in Previous Works

This literature review is meant to serve as an introduction to the research conducted on student involvement in postsecondary education. However, there are several limitations that should be mentioned. First, while research on Black and other students of color has increased since Astin's introduction of the theory on student involvement, there still remains a gap in the literature on the experiences of Black students directly relating to their involvement on campus. Subsequently, studies that focus primarily on applying and understanding theories on student involvement as they relate to Black collegians are still needed. Instead of research that continues to compare Black students to Whites students, often using a deficit model, future research should seek to explore the ways in which Black student involvement promotes success within this population.

Increased understanding of the role of involvement as an individual independent variable is also lacking in much of the literature. Often, involvement is studied in relation to other variables such as employment, GPA, and background traits rather than controlling for these possibly confounding variables. The connection between involvement and student outcomes needs greater exploration. There is still much that is not understood about what aspects of involvement make the most difference. Further research on the influence of academic versus non-academic forms of involvement also has the potential to contribute significantly to current literature.

Future research exploring the impact of student involvement on student development that incorporates larger sample sizes and data from nontraditional students (e.g., adult students, minority student populations) is also needed (Flowers, 2004; Henendez et al, 1999). Many current studies involve small sample sizes, qualitative data, or information obtained from a single institution. This work makes it difficult to generalize findings to the larger Black college student population.

Finally, research that explores the differences among Black students is sorely needed. Many of the studies on Black students' outcomes and involvement fail to examine other factors that could potentially be mitigated by increased student involvement, such as SES. By addressing subpopulations among Black students, student involvement research can help develop policies and practices that improve Black college students involvement and college outcomes.

Summary

Student involvement is identified by student participation in many different areas, groups, and activities on college campuses. Student involvement “refers to the amount of physical and psychological energy that the student devotes to the academic experience,” (Astin, 1985, p. 36) and is believed to be essential to promoting college students' learning and development. Theories on student involvement focus primarily on identifying the factors within college students' experiences that contributes to positive academic and social development. Research on student involvement supports the belief that involvement can positively influence a number of college outcomes. Involvement has been shown to have a positive influence on cognitive development and vocational aspirations and leadership skills, self-perceptions of their drive to achieve, and academic outcomes (Flowers, 2004; Pascarella et al., 2004; Pascarella & Terenzini, 2005). While

these factors are only a few of the areas studied in relation to student involvement, substantial evidence exists that supports the findings of positive gains from college involvement.

It is just as important to note however that there are many differences in student involvement based on student background characteristics. Differences in levels of involvement, types of involvement engaged in, and outcomes of involvement in college have been found between men and women, students of low and high SES, and race. Due to differences in academic preparation, family background and support, access to various forms of capital, and perceptions of campus climate, students have varied opportunities and experiences with college involvement (Allen, 1992; Ewert, 2010; Sutton & Kimbrough, 2001; Wapole, 2003). Obligations outside of college life, such as employment or family responsibilities, can also limit the amount of time students have to participate and engage with clubs and organizations on campus (Ewert, 2010).

Further study of Black students' involvement in college, particularly at PWIs, has been characterized by findings that support the significance of involvement on college outcomes. Black college students who are involved in campus clubs and organizations, earned higher grades, felt more satisfied with their experience, and report greater perceived learning gains (Allen, 1992; Strayhorn, 2010). Research on Black student involvement has also found that Black students continue to be underrepresented and fail to participate in certain forms of involvement. For example, Black students tend to not participate in residence hall government, residence hall assistants, orientation leaders/ambassadors, or student government (Sutton & Kimbrough, 2001). This line of research indicates a need to further understand how Black students' experiences influence college involvement.

Despite the growing body of research on differences in student involvement among racial groups and their educational outcomes, no previous studies were found that measure SES differences among Black collegians in student involvement and subsequent educational outcomes in postsecondary education. This is the gap addressed by the present study. The purpose of this study is to measure socioeconomic differences in the relationship between Black college students' involvement and educational outcomes. Based on the review of literature in this area, the following questions will guide this study: a) are there differences in Black students' educational outcomes based on socioeconomic status, b) what types of involvement have the greatest influence on student outcomes, c) how do Black students differ in their involvement based on socioeconomic status. The following chapter will further address these research questions and the methodology of the study.

CHAPTER 3

METHODS

This chapter will provide a description of a) the purpose of this study, b) the research questions guiding this study, and c) further details on the sampling methods, instrumentation, data collection, and data analysis used in this study. The purpose of this dissertation study is to understand SES differences in the relationship between Black college students' involvement and their educational outcomes. Three research questions guide the present study: a) How do Black students differ in their involvement based on SES, b) Are there differences in students' educational expectations based on SES and involvement, and c) What types of involvement have the greatest influence on student expectations?

This secondary data analysis proceeded in three phases. First, descriptive statistics were produced about the sample in the dataset in order to obtain means and standard deviations of the variables in the analysis. The variables in the analysis include (but are not limited to) race, SES quartile, various variables for involvement activities, and education expectations. Second, correlations were run in order to better determine the relationship between the variables in the analysis and to test for multicollinearity. Third, regression analysis and supporting statistical tests were run in order to determine the association between the predictors and educational expectations while controlling for other possibly confounding factors.

Sample Selection

For the purpose of this dissertation study I used data from a nationally representative sample of students who responded to the U.S. Department of Education's National Center on

Education Statistics (NCES) Education Longitudinal Study (ELS:2002), initially begun in the spring of 2002. ELS:2002 is designed to monitor the transition of young students from tenth grade through postsecondary education and into the workforce. ELS:2002 is a longitudinal, multilevel study, meaning that information is collected from students, their parents, librarians, teachers, and schools. This is a longitudinal dataset that follows a nationally representative cohort of students beginning with their sophomore year of high school (the base year survey), with follow-ups in 2004 (12th grade), 2006 (sophomore year of college), and in 2012. Data from the 2012 follow-up are not yet available from NCES.

The population in the base year (2002) of this study is comprised from 752 schools that included questionnaires for principals, librarians or media center directors, and administrators. Over 15,000 students and their parents responded to the base year survey of the study. ELS:2002 used a two-stage, stratified sampling selection process. First, schools were selected randomly from a national list ; this resulted in 1,221 public, Catholic, and other private schools being selected for participation. Of the eligible schools, 752 participated in the study. Participating schools provided sophomore student enrollment lists. Approximately 26 students per school were selected from these lists. The student population includes a nationally representative sample of White, Black, Hispanic, and Asian high school students at both public and private schools. Non-public schools were oversampled to support comparison to public schools. Asian students were also sampled at a higher rate than White, Black, and Hispanic students so that the sample would be large enough for comparison to these groups (Ingels, Pratt, Rogers, Siegel, & Stutts, 2005). In order for ELS:2002 to maintain a representative sample of high school seniors in the first follow-up two years later and to account for students who were early completers and drop-outs, seniors

in 2004 who had not completed their sophomore year in the U.S. in 2002 were given a chance to participate in the survey (Ingels et al., 2005).

The sample in this analysis was restricted to only Black students who participated in the survey, since the purpose of this study is to measure SES differences between such students.

Table 3.1
Weighted sample and actual sample of ELS:2002 and Black participants

	Weighted Sample	Actual Sample
Base year (2002)	N = 3.4 million Black N = 491,321	N = 33,495 Black N = 2,020
First Follow-up (2004)	N = 3.2 million Black N = 441,090	N = 15,348 Black N = 2,108
Second Follow-up (2006)	N = 3.13 million Black N = 441,018	N = 15,098 Black N = 2,129

Instrumentation

The areas covered on the ELS:2002 student survey instruments⁹ can be classified in three broad categories:

- a) Background information (collected in the base year only except for respondents first entering the sample in a later round);
- b) Process information, which includes information about possible influences on the student in the home, school, and community environment, as he or she moves through the educational pipeline and into the workforce;
- c) And outcome information that focuses on the outcomes of the transition process, educational attainment and labor market status, of the transition process.

⁹ The ELS:2002 consists of five major survey components: a student survey, parent survey, administrator survey, teacher survey, and librarian or media specialist form. Given the focus of the present study, information pertaining to the student survey *only* will be discussed in this chapter.

The base year questionnaires focus mainly on background and process items. The first follow-up questionnaires was to obtain process and outcome information. The focus of the final follow-up of the study was to collect final outcome. While other surveys and questionnaires were administered to parents, teachers, and school personnel, only information from the student questionnaires was used in this dissertation study.

Table 3.2
Areas covered in each year of ELS:2002

	Background information	Process Information	Outcomes Information
2002	X		
2004	X	X	
2006		X	X
2012			X

The base-year student questionnaire had seven sections: (1) locating/background information, (2) school experiences and activities, (3) plans for the future, (4) non-English language use, (5) money and work, (6) family, and (7) beliefs and opinions about self. The following provides some examples of the content covered in each of these sections. The first section included questions about race and sex. The section on school experiences and activities included questions asking students to agree or disagree with statements such as “students get along well with teachers” and “the punishment for breaking school rules is the same no matter who you are.” These questions were scaled using a 4-point Likert scale ranging from “strongly agree” to “strongly disagree”. The section on plans for the future included questions such as how far in school will students get (i.e. graduate from high school, graduate from college, obtain a master’s degree or equivalent). The language section asked students questions about their native language and if it was not English how often they spoke their native language. The following section on money and work asked questions about students’ work-based experiences and how long they may have worked. The family section asked questions about parent or guardian

occupation, education, and involvement in student education and learning. The final section on beliefs about self included questions asking students to agree or disagree with statements such as “when I do mathematics, I sometimes get totally absorbed” and “when studying, I put forth my best effort.” These questions were also scaled on a 4-point Likert scale using “almost never” to almost always”.

Follow-up surveys for students required some modification. The follow-up student survey had eight content areas: (1) contact information for longitudinal design purposes, (2) school experiences and activities, (3) how students spend their time, (4) plans and expectations for the future, (5) postsecondary planning steps and choice criteria, (6) plans for work after high school, (7) working for pay, (8) community, family, and friends (Ingels et al., 2005). The postsecondary follow-up survey also included items on a) the type of institution attended, b) students’ choice of major, c) frequency of involvement in various activities on campus, d) and whether students have dropped out or transferred from their first institution of attendance. Items asking about participation were scaled on a 3-point Likert scale using “never”, “sometimes”, and “often”.

Validity and Reliability

The use of this dataset and the proposed analysis requires an examination of both the validity and reliability of the instrument. Validity refers to the capacity of an item or instrument to measure what it was designed to measure; in quantitative research this is seen in terms of the correlation between scores in the instrument and measures of performance based on some external criteria. Face validity is the extent to which a test or set of items (e.g. questions on a survey) measures what it is supposed to measure (Adler & Clark, 2003; Ingels, Pratt, Wilson,

Burns, Currivan, Rogers, & Hubbard-Bednasz, 2007). In addition to the face validity of an instrument or an item, content validity refers to a set of items that fully explore the content of a particular concept (Adler & Clark, 2003). Finally, the construct validity of an instrument looks at how much a “measure of one concept is associated with a measure of another concept that some theory says it should be associated with,” (Adler & Clark, 2003, p. 154). In order for findings to have merit, the measures used must have validity. Validity of data is extremely important, as results from research cannot be generalizable without it.

Several steps were taken to ensure the validity of the measures in this dataset. First, there was an extensive development and review process for each questionnaire that included field-testing and revision with experts on survey design and psychometrics. The field-testing of questionnaires also contributed to examining the correlations between theoretically related measures. These steps contributed to ensuring the construct validity within the surveys. In addition, ELS:2002 was developed to provide consistency with the earlier psychometrically-sound education longitudinal studies sponsored by the NCES. Where possible, ELS:2002 drew items from the National Longitudinal Study of the High School Class of 1972, the High School and Beyond (HSB) longitudinal study, and the National Education Longitudinal Study of 1988 (NELS:88). This continuity also provides support for the validity of the items and instruments used in this study.

Reliability also is important when conducting research. Reliability refers to the extent that results are consistent over time and that they can be reproduced using similar methods (Adler & Clark, 2005). This means that a particular measurement will remain the same if it is administered repeatedly, that the measurement is stable over time and subjects, and that there will be similarity of measurements within a certain period of time (Adler & Clark, 2005).

Reliability can be defined as “the consistency in results of a test or measurement including the tendency of the test or measurement to produce the same results when applied twice to some entity or attribute believed not to have changed in the interval between measurements,” (Ingels et al., 2007, p. O-17). Reliability is another important issue when working with national datasets.

Field test instruments used for ELS:2002 were evaluated in a number of ways to test for reliability. Evaluation of item nonresponse, examination of test-retest reliabilities, and calculation of scale reliabilities were used for the questionnaires (Ingels et al., 2007).

Psychometric analyses also included “various measures of item difficulty and discrimination, investigation of reliability and factor structure, and analysis of differential item functioning” (Ingels et al., 2007, p.18). Additional test including factor analyses and alpha reliabilities were calculated in the present study.

Data Collection Procedures

The following section describes the data collection procedures carried out by the NCES for ELS:2002. Before data collection began, permission was obtained from the states, districts, and for Catholic schools the dioceses selected to participate in the study. Schools were initially contacted through mail and then by phone. Dates were established for a survey day and for two make-up days. Base-year data were collected in the spring of 2002. The base-year survey collected data from students, parents, teachers, librarians, and school administrators. Data collection for students primarily took place during in-school survey sessions conducted by a field survey administrator (Ingels et al., 2007). In order to protect student and school confidentiality information about specific schools, districts, and states where information was collected is not available.

Transcript study

The first follow-up data were collected in spring term 2004, from students (including transfers, and new seniors) as well as dropouts; transcripts were collected in the next school year. All transcripts were requested from students' base year schools. Data collection materials were mailed to schools beginning in December 2004. Each school was asked to provide "basic enrollment, testing, and course-taking information for each student, as well as information about the school's grading and graduation policies and requirements," (Ingels et al., 2007, p. 66).

Transcripts were collected from sample members at the end of 2004 and early in 2005 from the students' base-year school. If students had transferred, then transcripts were collected from both the base-year school and the last known school of attendance. Transcripts were collected for regular graduates, dropouts, students still in high school, early graduates, and students who were homeschooled after their sophomore year. Schools were paid \$5 for each transcript. (Ingels et al., 2007).

Follow-up Study

Data collection for the 2006 follow-up was adjusted to include survey modes and procedures that were independent of the in-school protocol of the first follow-up survey. Almost all of the students in the 2006 sample transitioned from high school to postsecondary education, the workforce, or the military between the first and second follow-up data collection periods (Ingels et al., 2007). Modes of data collection included web self-administration, in-person, and telephone computer-assisted interviewer administration.

Variables

The following is a list of variables that was included in the study and as they are found in ELS:2002.

Table 3.3

Variable names and descriptions as found in ELS:2002

Variable name	Variable description
<i>Background Characteristics</i>	
BYPARED – Parents’ Education	Parents’ highest level of education (1 = Did not finish high school; 2 = Graduated from high school or GED; 3 = Attended 2-year school no degree; 4 = Graduated from 2-year school; 5 = Attended college, no 4-year degree; 6 = Graduated from college; 7 = Completed Master’s degree or equivalent; 8 = Completed PhD, MD, other advanced degree, 9= Don’t know)
BYRACE - Race	Students’ race/ethnicity (3 = Black or African American Non-Hispanic)
BYSEX - Sex	Students’ sex (1 = male; 2 = female)
BYSES1QU – SES quartile	Quartile coding of SES1 variable (1=lowest to 4=highest); SES is based on five equally weighted, standardized components: father’s education, mother’s education, family income, father’s occupation, and mother’s occupation
F1RGPP2 – High School GPA	GPA for all courses 9 th -12 th grade (0 = 0.00-1.00; 1=1.01-1.50; 2=1.51-2.00; 3=2.01-2.50; 4=2.51-3.00; 5=3.01-3.50; 6=3.51-4.00)
<i>Institutional Characteristics</i>	
F2ILEVEL – Level of institution	Institutional level as indicated by the Integrated Postsecondary Education Data System (IPEDS) (1 = 4-year college or university; 2 = 2-year college; 3 = less than 2 years)
F2ICNTRL – Control of institution	Institutional control as indicated by the Integrated Postsecondary Education Data System (IPEDS) (1 = public; 2 = private; not-for-profit; 3 = private, for-profit)

Table 3.3 (cont.)

Variable Name	Variable description
F2ISECTR – Sector of institution	Institutional control as indicated by the Integrated Postsecondary Education Data System (IPEDS) (1 = public, 4-year or above; 2 = private, not-for-profit 4-year or above; 3 = private, for-profit 4-year or above; 4 = public, 2-year; 5 = private, not-for-profit 2-year; 6 = private, for-profit 2-year; 7 = public, less than 2-year; 8 = private, not-for-profit less than 2-year; 9 = private, for-profit less than 2-year)
<i>Education</i>	
F2PSEJ06 – Enrollment	January 2006 postsecondary enrollment status: level by intensity, enrolled full-time at 4-year school
F2STEXP – Educational expectation	Highest level of education respondent expects to complete (1=Less than high school graduation only; 2=GED or other equivalency only; 3=High school graduation only; 4=Attend or complete 2-year college/school; 5=Attend college, 4-year degree incomplete; 6=Graduate from college; 7=obtain Master’s degree or equivalent; 8= Obtain PhD, MD, or other advanced degree; 9=Don’t know)
<i>Involvement</i>	
<u>Academic</u>	
F2B18A	(1=never, 2=sometimes, 3=often) Talk with faculty about academic matters outside of class
F2B18B	Meet with advisor about academic plans
F2B18C	Work on coursework at library
F2B18D	Use web to access school library for coursework
F2B18G	Participate in other extracurricular activities
<u>Non-academic</u>	
F2B18E	Participate in intramural or non-varsity sports
F2B18F	Participate in varsity or intercollegiate sports
<u>Volunteer service</u>	
F2D09	(0 = no, 1 = yes) Whether performed volunteer/community service work in past 2 year
F2D10A	Volunteered with youth organization
F2D10B	Volunteered with school/community organizations
F2D10C	Volunteered with political organization
F2D10D	Volunteered with church-related group
F2D10E	Volunteered with neighborhood/social action associations
F2D10F	Volunteered with hospital or nursing home
F2D10G	Volunteered with education organizations
F2D10H	Volunteered with conservation/environmental group
F2D11	Frequency of volunteer service (1 = less than once a month, 2 = at least once a month but not weekly, 3 = at least once a week)

Data Analysis Procedures

Data analysis will proceed in four stages including four primary techniques: a) descriptive statistics, b) correlations for all variables, c) a model summary, d) *t*-test and Chi-squares and e) sequential logistic regression. Further tests were conducted to determine multicollinearity, to identify any possible outliers in the dataset, and to better determine the relationship between the variables in the regression analysis.

The dependent variable in this dissertation study is educational outcome. Because there are no variables presently available that directly measure students' academic achievement, like college GPA, student educational expectation was used to measure a positive educational outcome. This variable indicates the level of education students expect to complete (categorical variable). Higher educational aspirations were used to signal a more positive educational outcome. Educational expectation will also be recoded as a dichotomous variable for logistic regression analysis. Responses were recoded into two groups, expectation to "earn a bachelor's degree or less" and expectation to "earn a master's degree or higher". Any "don't know" responses were coded as missing for the purposes of this analysis.

The main independent variables in this study include involvement and SES. SES was measured by SES quartile in 2002 when respondents were high school sophomores. This variable is provided by ELS:2002 and simply places students into approximately equal quartiles based on five equally weighted, standardized components: father's education, mother's education, family income, father's occupation, and mother's occupation. In the full dataset (which includes all survey participants), 35.2% of the Black students were in the lowest quartile, 29.8% in the low-middle quartile, 21.8% in the high-middle quartile, and 13.1% in the highest quartile. In the sample, Black students are distributed more evenly in the four quartiles with 20.3% in the lowest

quartile, 26.6% in the low-middle quartile, 29% in the high-middle quartile, and 24% in the highest quartile. As a categorical variable, students are divided into four groups: low-income, middle-income, high middle-income, and high income. In this study students in these groups will also be referred to by SES quartile: low SES, low-middle SES, high-middle SES, and high SES. Dummy coding was applied to SES quartile for the purpose of comparison between groups

Involvement includes variables that inquire about students' participation in various academic and non-academic opportunities such as talking with faculty members, meeting with advisors, and participating in varsity and non-varsity sports. All of the involvement variables are categorical; each variable measures student involvement on a 3-point likert scale of "1=never", "2=sometimes", and "3=often". Volunteer activity will also be used to examine types of student involvement. Students who took the survey were asked whether they engaged in volunteer activities and what kind. Volunteer activity is a dichotomous variable with responses being "yes" and "no". Composite variables for academic and non-academic involvement were also created to measure involvement. These new variables are both additive and were created through the use of factor analysis on the individual variables measuring involvement.

Other variables that provide information on institutional and background characteristics were used as controls in this study. In addition, because the focus of this study is on Black student outcomes, the data was restricted to include only Black students. Institutional information was used to restrict the data to include only those students who were enrolled as full-time college students as of January 2006. Other institutional information provided in this dataset includes the level of the institution (4-year, 2-year, or less) and the control of the institution (public, private non-profit, and private for-profit). Differences in institution types could have an affect on results from this study; therefore only students who attend 4-year public institutions

were included for analysis. Institutional selectivity, type (e.g. PWI, HBCU, community college) and size are other factors that could affect results of this analysis, particularly because institutional selectivity could be a reflection of social class. However this information is restricted and not available for use in this study.

Due to the disparities in college enrollment between men and women, especially between Black men and women, gender was also included as a control variable in this analysis. Controlling for gender also helps to account for differences that may exist between men and women in academic and nonacademic involvement. Other background characteristics included in this investigation are parents' education and high school GPA. Students whose parents have completed advanced degrees may be more inclined to pursue graduate or professional degrees themselves. To account for the influence of parents' education, it was used as a control variable in the study. The other control variable is high school GPA. Students' academic performance prior to postsecondary education may also impact their educational expectations. It is for this reason high school GPA is included as a control. Both of these variables were also dummy coded for comparison purposes.

Descriptive statistics were calculated to determine the mean and standard deviation for all variables included in the study. Crosstabs, Chi-square tests, and independent samples *t*-test were used to conduct bivariate analysis on the key predictor variables, control variables, and the dependent variable. Using forced entry, hierarchical logistic regression analysis was run on educational expectations; sex, parents' education, and high school GPA were control variables. SES quartile was entered into the next block of the regression analysis in order to determine the relationship between income and educational expectation. Next involvement, as measured by academic and non-academic factors and volunteering, was entered into the regression equation.

The analysis from this model was used to determine educational outcomes or student expectations based on SES and involvement. Each step of the process included descriptive statistics, correlations, and all relevant regression analysis.

Conclusion

This dissertation study used data from ELS:2002 to answer the proposed research questions. Recall that the purpose of this study is to measure socioeconomic differences in the relationship between Black college students' involvement and their educational outcomes. The specific research questions are: a) How do Black students differ in their involvement based on SES, b) Are there differences in students' educational expectations based on SES and involvement, c) What types of involvement have the greatest influence on student expectations? Using logistic regression analysis and this dataset allows for the answering of each of these questions. The next chapter presents the study's findings.

CHAPTER 4

RESULTS

The purpose of this study was to measure SES differences in the relationship between Black college students' involvement and their educational expectations. Three research questions guided the analysis in this study: a) How do Black students differ in their involvement based on SES, b) Are there differences in students' educational expectations based on SES and involvement, c) What types of involvement have the greatest influence on student expectations? Analysis for the first research question was conducted using crosstabs and chi-square tests. Logistic regressions were calculated in order to address the second and third research questions in this study. The following sections include sample characteristics and descriptive statistics, results from the *t*-tests and further analysis of groups differences, correlation diagnostics, and results from the regression analysis as well as post-hoc analyses.

Sample characteristics

The sample was restricted to include only Black/African American students at public 4-year institutions who were enrolled full-time as of January 2006. This entire weighted sample included a total of 47,021 responses. The *valid* weighted sample in this study was 16,662; this was the final number of respondents who answered all of the survey questions relating to the variables in this study. Due the differences in students' responses to various items in the survey, including legitimate skips and nonresponses, the final valid weighted sample size differs from the entire Black student sample (See Appendix A).

The total sample in the study (N=47,021) was 56.4% female and 43.6% male. All of the students in the survey are in their second year of postsecondary education. Of the students in the total sample (N=47,021), 52.5% of their parents have less than a college degree. Only 20.4% of the parents in the study had a master's degree or higher (See Table 1). Students' cumulative high school GPA (grades from all courses from 9th through 12th grade) was scaled as a categorical variable from 0 to 6 by the NCES in the ELS:2002 data. The mean GPA was between a 2.51 and a 3.00 (SD=1.30, n=43,680). Approximately, 13.1% of the students in the sample had a 3.51 or higher GPA (See Table 2). Although SES was distributed among quartiles, the total sample (N=47,021) within the four groups was not completely even. The lowest quartile had 9,558 participants (20.3%), the second quartile had 12,521 participants (26.6%), the third quartile had the most participants at 13,645 (29%), and the highest quartile had 11,296 participants (24%).

Involvement in this study was measured through several activities and volunteer participation. The seven forms of involvement, which were measured on a scale of 0 "never" to 2 "often", were used to form composite variables for academic and nonacademic involvement using factor analysis. Talking with faculty, meeting with advisor, doing coursework at the library, using the web to access the library, and other extracurricular activities were combined in an additive model to create the variable "academic involvement". Varsity and non-varsity participation were used in an additive model to create the variable "nonacademic involvement". The mean academic involvement score was 6.80 (SD=1.86, range from 0 to 10) while the mean nonacademic involvement score was only .84 (SD=1.15, range from 0 to 4). The majority of students (n=46,826) participated in some volunteer/community service activity (62.7%) at least once a month (n=29,372, 73%). The most students participated in a church-related group

(n=29,372, 49.9%), a neighborhood or social action association (n=29,193, 47.5%), or in a school or community organization (n=29,216, 41.4%) (See Table 3).

Finally, student educational expectation was recoded to determine the difference between students who expected to gain a bachelor’s degree or less and those who expected to obtain a master’s degree or higher. The majority of the students in the sample (N=46,404) expected to gain a master’s degree or higher (70%).

Table 4.1
Parents highest education

	Frequency	Percent	Valid Percent	Cumulative Percent
Did not finish high school	123	.3	.3	.3
Graduated from high school or GED	7014	14.9	14.9	15.2
Attended 2-year school no degree	6409	13.6	13.6	28.8
Graduated from 2-year school	5157	11.0	11.0	39.8
Attended college, no 4-year degree	5959	12.7	12.7	52.5
Graduated from college	12795	27.2	27.2	79.7
Completed Master’s degree or equivalent	6102	13.0	13.0	92.6
Completed PhD, MD, other advanced degree	3461	7.4	7.4	100.0
Total	47021	100.0	100.0	

Table 4.2

Cumulative GPA for all courses taken in the 9th - 12th grades - categorical

	Frequency	Percent	Valid Percent	Cumulative Percent
0 - 0.00 - 1.00	541	1.2	1.2	1.2
1 - 1.01 - 1.50	656	1.4	1.5	2.7
2 - 1.51 - 2.00	3937	8.4	9.0	11.8
Valid 3 - 2.01 - 2.50	10119	21.5	23.2	34.9
4 - 2.51 - 3.00	12097	25.7	27.7	62.6
5 - 3.01 - 3.50	10604	22.6	24.3	86.9
6 - 3.51 - 4.00	5726	12.2	13.1	100.0
Total	43680	92.9	100.0	

Table 4.3

Volunteer/Community service participation

	Frequency		Percent	
	Yes	No	Yes	No
Youth organization	6283	22672	21.7	78.3
School/Community organizations	12084	17132	41.4	58.6
Political organization	6773	22519	23.1	76.9
Church-related group	14643	14729	49.9	50.1
Neighborhood/Social action association	13864	15330	47.5	52.5
Hospital/Nursing home	6871	22204	23.6	76.4
Education organization	8625	20672	29.4	70.6
Conservation/Environmental	1315	27782	4.5	95.5

Involvement and SES

The first research question was addressed using crosstabs and Chi-square to determine whether statistically significant differences existed between students in different SES quartiles and different forms of involvement. Analysis shows that there is a statistically significant difference between all forms of involvement, including volunteering and frequency of involvement, and SES quartile. In addition, results show that differences between students in SES quartiles and their involvement is statistically significant at $p < .001$. (See Table 4). Further analysis using SES quartile and involvement composite variables provided information on differences between group means. The mean score for academic involvement for all students was

7.22 ($SD=1.75$, range from 0 to 10). For nonacademic involvement the mean score for all students was .90 ($SD=1.13$, range from 0 to 4). Students from the highest SES quartile had the highest mean academic involvement mean ($M=7.42$, $SD=1.33$), while students in the third quartile, or high-middle SES group, had the lowest academic involvement mean score at 6.84 ($SD=1.43$). For nonacademic involvement, low-middle SES students had the highest mean score at 1.21 ($SD=1.34$). Again, high-middle SES students had the lowest mean score at .68 ($SD=1.00$).

Crosstab analysis also produced results that showed how students differed in involvement based on SES quartile. For example, when looking at students who never talked to faculty outside of class, high SES students had the highest rate of never talking to faculty at 9.2% and high-middle SES students were at 8.5% ($n=2,900$). Results were similar for students who never meet with their advisor about academic plans; high-middle SES students were at 13.6%, while low SES students who never meet with their advisors were less than 1% ($n=2,930$). This pattern is consistent throughout involvement variables for high-middle SES students. They often had the highest or second highest percentages of never being involved (See Appendix B.) These results both confirm that there is a statistically significant difference in involvement by Black students in different SES quartiles, and that high-middle SES students display lower rates of involvement than their peers. Further analysis is needed to determine if and to what degree SES and involvement influence students' educational expectations.

Table 4.4
Chi-square tests between SES quartiles and forms of involvement

	Pearson Chi-square value	df	Sig. (2-sided)
Talk with faculty	1424.45	6	.000
Meet with advisor	5109.56	6	.000
Work on coursework at library	790.60	6	.000
Use web to access library	2571.82	6	.000
Participate in intramural sports	2976.75	6	.000
Participate in varsity sports	2311.73	6	.000
Other extracurricular activities	2700.20	6	.000
Performed volunteer service in past 2 years	461.34	3	.000
Volunteered with youth organization	626.07	3	.000
Volunteered with school/community organizations	158.77	3	.000
Volunteered with political organization	2876.13	3	.000
Volunteered with church-related group	1262.63	3	.000
Volunteered with neighborhood/social action associations	397.28	3	.000
Volunteered with hospital or nursing home	927.38	3	.000
Volunteered with education organizations	1310.69	3	.000
Volunteered with conservation/environmental group	665.32	3	.000
Frequency of volunteer service	3139.27	6	.000

Educational Expectations

The remaining research questions relate to how SES and involvement relate to students' educational expectations. Using independent samples *t*-test, chi-square, and crosstabs the

relationships between these variables were further analyzed. First, independent samples *t*-test revealed a statistically significant difference assuming equal variance between the mean academic involvement score of students expecting a bachelor's degree or less ($M=6.08$, $SD=2.00$) and the mean score of students who expected to earn a master's or higher ($M=7.13$, $SD=1.69$), ($t=-58.41$, $p < .001$). Subsequent analysis also shows that assuming equal variance, there is a statistically significant difference between the mean nonacademic involvement score of those expecting to earn a bachelor's degree or less ($M=.80$, $SD=1.27$) and the mean score of the students who expected to earn a master's degree or higher ($M=.85$, $SD=1.08$), ($t=-4.72$, $p < .001$). These results show that there are statistically significant differences between both forms of involvement and education expectations.

Analysis using crosstabs and SES quartiles were also statistically significant; for SES quartile there is a statistically significant difference between quartile groups and their educational expectations ($X^2_3=906.58$, $p < .001$). Within quartile groups, high SES students had the highest percent that expected to earn a master's or greater ($n=11,296$, 77.1%), followed closely by low SES students at 72.8% ($n=9,558$). (See Table 5). Crosstabs were also performed on individual involvement variables (See Appendix C). There was no statistically significant difference between frequency of using the web to access school library for coursework and educational expectations ($X^2_2=.65$, $p > .05$). All other involvement variables had statistically significant differences between frequency and education expectations based on chi-square tests results (See Table 6).

Table 4.5
Crosstab of SES quartile and Education expectation

			SES Quartile recoded				Total
			Lowest quartile	Low-middle quartile	High-middle quartile	Highest quartile	
Graduate educational expectation	Bachelor's or less	Count	2604	5026	4327	2582	14539
		% within SES Quartile recoded	27.2%	40.1%	31.7%	22.9%	30.9%
	Master's or higher	Count	6954	7495	9318	8714	32481
		% within SES Quartile recoded	72.8%	59.9%	68.3%	77.1%	69.1%
Total		Count	9558	12521	13645	11296	47020
		% within SES Quartile recoded	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.6
Chi-square tests between education expectation and SES quartile and forms of involvement

	Pearson Chi-square value	df	Sig. (2-sided)
SES quartile	906.59	3	.000
Talk with faculty	3809.58	2	.000
Meet with advisor	463.00	2	.000
Work on coursework at library	136.74	2	.000
Use web to access library	.65	2	.721
Participate in intramural sports	501.40	2	.000
Participate in varsity sports	1525.25	2	.000
Other extracurricular activities	4478.34	2	.000
Performed volunteer service in past 2 years	124.83	1	.000
Volunteered with youth organization	546.30	1	.000
Volunteered with school/community organizations	356.01	1	.000
Volunteered with political organization	857.28	1	.000

Table 4.6 (cont.)

	Pearson Chi-square value	df	Sig. (2-sided)
Volunteered with church-related group	552.23	1	.000
Volunteered with neighborhood/social action associations	399.73	1	.000
Volunteered with hospital or nursing home	673.75	1	.000
Volunteered with education organizations	467.59	1	.000
Volunteered with conservation/environmental group	575.85	1	.000
Frequency of volunteer service	453.92	2	.000

Before continuing with regression analysis, three collinearity diagnostics – Pearson correlations, variance inflations factors (VIF), and tolerance levels – were calculated in order to ensure that multicollinearity was not an issue between the independent variables in the study. Multicollinearity can occur when two or more independent or predictor variables are highly correlated. This may alter the coefficient estimates within the regression model.

Correlations with the dependent variable, educational expectations, were significant ($p < .001$) with the exception of “use web to access school library for coursework”. However, all of these relationships were weak (less than $r=.10$). SES quartile and parents’ education has a high correlation ($r=.70$, $p < .001$), and indicates a positive and strong relationship. However this is expected because parental education is also used by NCES to compute the SES composite variable. As this correlation is at $r=.70$ (the threshold for an acceptable correlation value), it is unlikely that there is an issue of multicollinearity between these two variables. The Pearson correlation between the composite academic involvement score and involvement with faculty also approaches $r=.70$ ($r=.66$), but again the variable measuring faculty and other forms of

involvement are also used to create the academic involvement composite variable. In addition, although these variables have strong relationships, they are still within acceptable limits. Similar relationships exist between variables measuring nonacademic involvement and the nonacademic involvement composite variable. High correlations for varsity and non-varsity involvement and the nonacademic involvement composite variable ($r=.85$ and $r=.79$ respectively) are expected, but indicate that multicollinearity may be an issue with these variables. All other correlations are within acceptable limits. Further examination of tolerance and VIF values show that multicollinearity is not an issue in this analysis. All tolerance values were not close to zero (0) and all VIF values were well below four (4). Using all three of these collinearity diagnostics helps provide consistency in the analysis of multicollinearity in the data. This also ensures that the regression analysis to be conducted will not be affected by multicollinearity.

Logistic regression was used to determine the likelihood of participants expecting to obtain a bachelor's degree or less or a master's degree or higher controlling for background characteristics and using SES and involvement as predictors. Based on the omnibus test of model coefficients, there is a statistically significant decrease in the -2LL when all of the other predictors or variables are added to the model, which indicates that the null hypothesis should be rejected and use the full model ($X^2_{28} = 162331.61, p < .001$). The following formula also provides information on how much the deviance of the null model has been reduced:

$$\begin{aligned} \text{Where } D_m &= \text{deviance of the full model, and } D_0 = \text{deviance of the null model} \\ R^2_L &= 1 - (D_m/D_0) = \\ R^2_L &= 1 - (1113177/1275508.6) = \\ R^2_L &= 1 - (.873) \\ R^2_L &= .13 \end{aligned}$$

For the full model, the inclusion of all of the predictors in the model reduces the deviance of the null model by 13% ($R^2_L = .13$). The *Cox & Snell* R^2 value indicates that 16.1% of the

variation in students' educational expectations is accounted for by this logistic model. The *Nagelkerke R²* value (21.5%) also indicates that there is a somewhat moderate relationship between the predictors and the prediction.

Using forced entry, background characteristics were entered into the model (sex, parents education, high school GPA), in the next step SES was entered into the model, and finally involvement and volunteer variables were entered into the model. In the first model, sex, parents' education, and high school GPA were all statistically significant predictors and the model itself was statistically significant ($p < .001$). The second model was also statistically significant as was SES as a predictor ($p < .001$). All of the predictors in the final model made a statistically significant contribution to the prediction at $p < .001$, with the exception of volunteering with an environmental or conservation group ($p = .051$). Regression results suggest that Black students' involvement and SES are statistically associated with their educational expectations, controlling for other factors (See Table 7)¹⁰.

Based on logistic regression results, academic involvement ($\text{Exp}(B) = 1.20$) increases the odds of higher educational expectations more than nonacademic involvement ($\text{Exp}(B) = 1.03$). Students in the high SES quartile have increased odds of higher educational expectations than their lower SES peers ($\text{Exp}(B) = 1.39$). When looking at specific forms of involvement, volunteering with a political organization has the greatest positive influence on students' educational expectation ($\text{Exp}(B) = 1.82$) and volunteering with a church-related group has the

¹⁰ It is important to note that findings presented here are based on the raw weighted sample; raw weights were provided by NCES. Given that statistical weights dramatically increase sample sizes, thereby increasing the chances of making a Type-I error, I also applied the relative weight based on recommendations by Strayhorn (2009). Statistically significant relations remained the same although the original sample sizes were retained.

greatest negative influence on students' educational expectation ($\text{Exp}(B)=.89$). The results from the final block are shown in the table below.

Table 4.7
All variables in the final logistic equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
SEX	.122	.005	612.528	1	.000	1.129	1.118	1.140
PARED_ NoHS	-.633	.017	1332.193	1	.000	.531	.513	.549
BYPARED_ HSGED	-.447	.011	1696.956	1	.000	.640	.626	.653
BYPARED_ 2YrNoDegree	-.266	.011	635.391	1	.000	.766	.751	.782
BYPARED_ 2YrDegree	-.559	.010	2963.608	1	.000	.572	.560	.583
BYPARED_ 4YrNoDegree	-.421	.010	1924.132	1	.000	.656	.644	.669
BYPARED_ 4YrDegree	-.349	.007	2610.156	1	.000	.706	.696	.715
HSGPA_100	-1.829	.064	827.218	1	.000	.160	.142	.182
HSGPA_150	-1.287	.021	3812.905	1	.000	.276	.265	.288
HSGPA_200	-.823	.012	4718.923	1	.000	.439	.429	.449
HSGPA_250	-1.045	.008	17080.878	1	.000	.352	.346	.357
HSGPA_300	-.769	.006	14072.151	1	.000	.464	.458	.469
HSGPA_350	-.640	.006	11249.261	1	.000	.527	.521	.534
SESQU_ LowMiddle	-.144	.009	255.870	1	.000	.865	.850	.881
SESQU_ UpperMiddle	.094	.009	100.680	1	.000	1.099	1.079	1.119
SESQU_ High	.326	.011	925.138	1	.000	1.385	1.356	1.414
ACAD_INVO L	.184	.001	25919.928	1	.000	1.202	1.199	1.204
NONACAD_ INVOL	.025	.002	133.988	1	.000	1.025	1.021	1.029
Volunteer with youth	-.153	.006	744.008	1	.000	.858	.849	.868
Volunteer with school/ community	.284	.005	3013.281	1	.000	1.329	1.315	1.342

Table 4.7 (cont.)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Volunteer with political	.599	.007	7079.882	1	.000	1.821	1.796	1.847
Volunteer with church	-.118	.005	643.170	1	.000	.888	.880	.897
Volunteer with neighborhood/social action	.107	.005	483.209	1	.000	1.113	1.103	1.124
Volunteer with hospital/nursing home	.267	.006	1727.243	1	.000	1.307	1.290	1.323
Volunteer with education organization	.225	.005	1734.725	1	.000	1.252	1.239	1.266
Volunteer with environment/conservation	-.017	.009	3.801	1	.051	.983	.967	1.000
Volunteer_Monthly	.066	.004	281.295	1	.000	1.068	1.060	1.076
Volunteer_Weekly	.037	.004	76.805	1	.000	1.038	1.029	1.046
Constant	-.487	.014	1137.947	1	.000	.614		

The significant logistic coefficients were used to create the following predictive equation:

$$p = e^{(b_1 x_1 + b_2 x_2 + b_3 x_3 + \dots - a)} / 1 + e^{(b_1 x_1 + b_2 x_2 + b_3 x_3 + \dots - a)}$$

Using this equation, the affect of SES and involvement and volunteering were obtained for students' educational expectations while controlling for all other predictors. (See Appendix D). Accounting for only SES and controlling for all other predictors, the probability that a student will expect to earn a master's degree or greater is the greatest for high SES quartile students (69%) and the lowest for low-middle SES quartile students (58%). When controlling for all other predictors except involvement and volunteering, the probability that a student will expect to earn a master's degree or greater is higher for those who are academically involved (66%) versus those who are non-academically involved (63%). Results also show that 75% of

the students who volunteer for a political organization have the highest probability among volunteer activities. Students who volunteer at church-related groups have the lowest probability of expecting to earn a master's degree or higher (59%).

Summary

The purpose of this study was to understand the affect of SES and involvement on students' educational expectations. Specifically, a) How do Black students differ in their involvement based on SES, b) Are there differences in students' educational expectations based on SES and involvement, c) What types of involvement have the greatest influence on student expectations? Using descriptive statistics, crosstabs, Chi-square tests, *t*-tests, correlation diagnostics, and logistic regression this chapter provided results from analysis that aimed to answer these questions.

Students from different SES quartiles showed statistically significant differences in all of their involvement and volunteer activities. High SES quartile students had the highest academic involvement mean scores. High-middle SES quartile students also reported the highest rates of never being involved in academic activities compared to their peers. The second question focused on the relationship between SES and involvement and students' educational expectations. There were statistically significant differences between students of differing SES groups and their educational expectations and forms of involvement and educational expectations. Results show that students with higher mean scores for involvement also have higher educational expectations. Finally, logistic regression was used to determine the influence of SES and involvement on the probability of students' having higher educational expectations.

Regression analysis results would indicate that high SES students who are involved have the highest probability for positive educational expectations.

CHAPTER 5

DISCUSSION

This chapter presents a review of the findings in this study, places these findings within the context of previous research, provides implications for future research and policy, and offers a discussion of the limitations. This chapter closes with a summary of the overall study and its general importance to both scholars and practitioners.

The first research question in this study asks how Black students differ in their involvement based on SES. To answer this question, this study used crosstabs, Chi-square tests, and mean scores to discern differences between students in different SES quartiles. Results show that students in different SES quartiles do in fact differ in their level of involvement in academic and non-academic activities. There were statistically significant differences in involvement, volunteering, and academic and non-academic between the four SES groups of students. Students from the high SES quartile also had the greatest mean academic involvement score. Students from the high-middle SES quartile had the lowest mean academic involvement score. For non-academic involvement, low-middle SES quartile students had the highest mean score and high-middle SES had the lowest mean score. This finding is consistent with further results from this analysis. High-middle SES students consistently had the highest rates of “never” being involved for any of the involvement variables and for volunteering. Analysis of how Black students in various SES groups differed in their involvement also found that in four of the five variables used to measure academic involvement low-middle SES students had the highest rates of “often” being involved. For non-academic involvement low SES quartile students had the highest rates of “never” being involved in non-varsity activities and high SES quartile students

had the highest rates of “often” being involved in non-varsity activities. However, results for varsity involvement show that high-middle SES quartile students have the highest rates of “never” being involved while high SES students continue to have the highest rates of being involved.

Academic and non-academic involvement results suggest that students in the high-middle SES quartile are generally less involved than students in each of the other four SES quartiles. Non-academic involvement also shows differences between students in different SES quartiles, however the mean scores are not as high. Finally, analysis also shows that the low SES quartile group has the highest rates of volunteering for five out of seven volunteer activities and they also volunteer more often than their more affluent peers.

Results from analysis answering the first research question of this study are interesting for several reasons. Based on past research, we would expect that low SES quartile students are less likely to be involved than their higher SES peers and not the reverse. We would also expect that students from the low SES quartile would be less likely to engage in volunteer work and to also do so less frequently than their peers. Why? These findings suggest that volunteering as a form of involvement may be encouraged by academic involvement. Results show that low SES students reported that they are in involvement activities “sometimes” or “often” much more than their peers. Participation in programs and activities that direct low SES students to specific resources, encourage academic help seeking behavior, and provide other supports may help explain why low SES students reported higher levels of involvement than their high-middle and low-middle SES peers.

Another interesting finding in this study is the low involvement of high-middle SES students. Unlike students from the high SES quartile who had high mean scores of academic

involvement, high-middle SES students trailed behind both their low and low-middle peers. One possible explanation may be that these students are not receiving enough support both on and off campus. Many institutions create programs to target low SES Black students; these programs range from separate freshman orientations to year-round academic and social support programs designed to improve retention. Programs such as these often fail to reach high-middle and high SES students due to perceptions about preparation, knowledge about college, and ability to cope with challenges of being a Black student in a often predominantly White collegiate setting. High SES students may have access to more expansive networks, come to college better prepared, and have increased knowledge about the campus setting and resources than high-middle or low-middle SES students. This could explain how students from high-middle and low-middle SES backgrounds fail to become as involved as their peers. Such consistent findings for high-middle SES students' rates of involvement may also indicate that this is a specific subpopulation of Black students who are not able to access campus support and resources for other unknown reasons. This is an area that should be further examined by future research.

The difference in students' mean scores in academic and non-academic involvement by SES quartile may also indicate a different focus for Black students in different SES quartiles. High SES students may be accustomed to being highly involved prior to college and this behavior may simply have transitioned with them. Low involvement scores for high-middle SES students may also indicate that these students may be focused on other aspects of college (e.g. coursework, spending study time alone) and not realize the importance or benefits of being involved.

Results from this study show that students from the high-middle SES quartile have lower composite scores of academic and non-academic involvement, lower rates of participation in

academic activities, and low rates of volunteering. The combination of these factors suggests several possible causes. First, the targeting of low SES Black students for receipt of support services, counseling, mentoring and other forms of assistance at colleges and universities makes a significant difference in the ability and willingness of these students to engage in campus activities. Due to confounding factors (such as first-generation status, which could indicate limited exposure to college-educated adults or mentors) Black students in the low-middle SES quartile may also benefit from access to these services in college. In comparison, Black students in the high SES quartile may already have access to support systems, mentors, and networks outside of the campus setting that foster involvement in academic and non-academic activities as well as volunteering. However, Black students in the high-middle SES quartile may be left without either internal help from individuals on campus or support from home networks.

The differences between academic and non-academic involvement scores are also worth discussion; first, because academic involvement has a greater influence on the probability students will have higher educational expectations and second, there are SES differences in students' participation in varsity and non-varsity athletics. There are several reasons that students who are non-academically involved can have lower educational expectations than their peers. The culture that surrounds college athletics, particularly varsity sports at Division I schools does little to promote academic achievement or other areas of student development that would be beneficial to graduate education. Students are often directed into "easy courses" or "easy majors" where little is required or expected of them. In addition, many educational choices are made for athletes in order to ensure uniformity of scheduling for events such as practices or games (Beamon, 2010; Beamon & Bell, 2006; Benson, 2000). This leaves little room for varsity student athletes to become involved in other activities, build networks with their peers, or plan for

careers in “hard majors” (e.g. engineering, biology, mathematics). The emphasis on athletic achievement at the expense of educational attainment or career development also highlights how students who are academically involved are more likely to have higher educational expectations than their non-academically involved peers.

The second research question focused on exploring whether there are differences in students’ educational expectations based on SES and involvement. This research question sought to discover whether there were differences in students’ educational expectations based on SES and involvement while controlling for other background characteristics such as sex and high school GPA. To find whether there were differences in educational expectations based on these predictors, the study used independent samples *t*-test, crosstabs, and logistic regression analysis. Results from these tests showed that there were statistically significant differences in students’ educational expectations based on both SES and involvement.

Analysis of the mean academic and non-academic involvement composite scores and educational expectations show that students who have higher expectations (i.e. expect to earn an advanced degree) also have higher mean scores on both forms of involvement. There were statistically significant differences between the frequency of involvement and educational expectations with the exception of “using the web to access the school library” variable. Of the four remaining statistically significant academic involvement predictors, the highest percent of students who had low degree aspirations were also those who were “never” involved. In contrast, the highest percent of student who had high degree expectations (i.e. earning a master’s degree or higher) were those who were “often” involved. In other words, students who had the highest percent of “never” responses for variables measuring involvement seemed more likely expected to earn a bachelor’s degree or less. Among students who expected to earn a master’s or higher,

the greatest percent came from those who responded “often” for being involved. There were also statistically significant differences for all variables measuring volunteer participation and the same trend applied. With the exception of volunteering for a church-related group, all results showed that the highest percentages of students who expected to earn a bachelor’s degree or less were those who did not volunteer while students who expected to earn a master’s degree or higher showed greater percentages for students who did volunteer. Finally, examination of educational expectation and SES quartile shows that high SES quartile students had the highest percent that expected to earn a master’s or greater followed closely by low SES students. Low-middle SES quartile students had the highest percent that expected to earn a bachelor’s degree or less; high-middle SES quartile students had the second highest percent of students who expected to earn a bachelor’s degree or less. These differences were also statistically significant.

Logistic regression analysis was also used to find the probability odds of students having high educational expectations versus low educational expectations. Controlling for background characteristics (i.e. sex, parents’ education, high school GPA, institutional type) this study looked at the odds of higher educational expectations based on SES, involvement, and then a combination of the two. Accounting for SES and controlling for all other variables, the probability that a student will expect to earn a master’s degree or greater is the greatest for high SES quartile students and the lowest for low-middle SES quartile students. When examining the relationship of only involvement and volunteering, the probability that a student will expect to earn a master’s degree or greater is higher for those who are academically involved versus those who are non-academically involved. For the same rates of academic and non-academic involvement, students from high SES quartile backgrounds who are academic involved have the highest probability of expecting a master’s degree or greater; this group is followed by high SES

students who are non-academically involved, then low SES quartile students who are academically involved, high-middle SES quartile students who are non-academically involved, low SES students who are non-academically involved and low-middle SES students who are academically involved, and finally low-middle SES quartile students who are non-academically involved. Again, a combination of factors from different SES backgrounds and academic and non-academic involvement can help to further explain the outcomes of this analysis. For example, a Black student from a low SES background who is non-academically involved may prioritize athletics over academics and therefore see no value in graduate education. And while being involved is better than not being involved at all, the types of activities that are focused in in academic involvement may lend themselves more readily to students developing aspirations for graduate education than non-academic related activities.

The differences in students' expectations based on SES and involvement can also be a reflection of several other factors that relate to one's SES. Although this study controlled for parent's educational background, research on first-generation college students indicates that these students have less knowledge about postsecondary education in general, less family income or support, lower degree expectations, less academic preparation in high school, and are generally less likely to persist in higher education (Pascarella et al., 2004). These factors can help to explain why, without direct support from campus resources, low, low-middle, and even some high-middle SES Black students may be less involved and have lower educational expectations than their high SES peers.

Because first-generation status is linked to SES, for many Black students this can also indicate a lack of exposure to college-educated individuals in addition to a general lack of knowledge about college (Espinoza, 2011). Parents who have little educational experience

beyond high school are limited sources of information for the college-going process. While many parents desire college graduation as an outcome for their children, no academic or practical knowledge about how to get there means low, and low-middle and high-middle students fail to succeed, despite being qualified (Espinoza, 2011; Lareau, 1987; 2003). Without access to other adults who can provide information about the necessary educational skills and knowledge needed to participate in postsecondary education, first-generation students are likely to continue to struggle.

Finally, as was previously mentioned, students from lower SES backgrounds may have other priorities that make being involved and pursuing graduate education seem unlikely and unrealistic goals. For example, many low SES or first-generation students have to work (often in off-campus jobs) to help support their families or children (Pascarella et al., 2004). Having to invest time in other activities away from campus can also contribute to the likelihood of low SES students getting involved. Without any support systems in place, many Black students can struggle with the academic and social transition to postsecondary education. These challenges also make it less likely that lower SES students will become as involved as their peers. While examining the results of this study, it is important to keep in mind how these factors related to SES can influence findings.

The findings of this study based on the second research question present several topics for discussion. Results show that those who are more involved both academically and non-academically have higher educational expectations. The benefits of involvement may allow students to better navigate the collegiate milieu and to have access to the types of resources that make graduate education seem like a more viable option. Students who have higher involvement scores may be connected to several campus resources that provide them with information about

and examples of graduate school participation whereas those students with lower scores may not be as integrated into the campus community and therefore are missing these opportunities to become involved and to expand their educational expectations.

Findings for this study show that the frequency of participation also matters. For example, students who visit their academic advisor often to discuss their plans may have a better grasp of what's necessary to get an advanced degree while students who never seek out their academic advisors may 1) not know what is needed to move on to graduate education and 2) not realize that this is even an option. The frequency of involvement and volunteering may be a way to indicate that students have a greater investment in the activities that they are participating in. These findings also seem to confirm research by Astin (1984, 1985) that suggests students will gain as much from their involvement as they put in. Those students who invest more time and energy will see greater results.

The differences between SES and involvement and educational expectations suggest several things about Black students' college experience. First, although background characteristics like SES cannot be changed, outcomes such as the ones from this study showing the high educational expectations of low SES may be a result of efforts to support this particular subpopulation. The fact that low SES quartile Black students have similar degree aspirations as high SES quartile students and higher degree aspirations than both low-middle and high-middle SES students is certainly an area for further study.

Regression analysis allows researchers to account for the influence of variables that are external to the college environment and reflect inputs that students bring with them prior to any forms of involvement in college. In addition, by controlling for other variables it allows for analysis of specific factors on educational expectations. In this study, logistic regression analysis

using SES and academic and non-academic involvement scores provides significant findings for both on educational expectations. Although preliminary results show that high-middle students are not as involved, the analysis in this study indicates that their educational expectations could be higher if they were involved at rates that were comparable to their peers.

Building on the first two questions, the third research question asks what types of involvement have the greatest influence on student expectations. The final question in this study seeks to better understand how specific forms of involvement, which includes volunteering, shape educational expectations. This study also used logistic regression analysis to explore which predictors had the greatest influence on educational expectations as well as which increased the probability of students expecting to earn a master's degree or greater. All variables except for volunteering with a conservation/environmental group were significant in predicting the odds of students' having higher educational expectations.

Consistent with what was found throughout the study, was the difference in academic versus non-academic involvement on educational expectations. While both forms of involvement are significant predictors for educational expectation, academic involvement increases the odds of students expecting to earn a master's degree or higher more than non-academic involvement. Other variables that were significant positive predictors of educational expectations are: volunteering with a political organization, volunteering with school or community organizations, and volunteering with a hospital or nursing home (in that respective order). These variables increased the odds of expecting a master's degree more than any other variables. Analysis from this study also showed that some forms of involvement actually decreased the odds of students having high educational expectations. Volunteering with a youth organizations, and volunteering

with a church related group all decrease the odds of students expecting to earn a master's degree or higher.

Results from this final analysis show that although many forms of involvement are important and have a significant relationship with educational expectations, there are differences in the size and direction of this relationship. There are several reasons why these forms of involvement may have positive or negative affects on educational expectations. One relationship may be that academic involvement may relate more closely to students' future educational goals than non-academic involvement. These activities could include working with faculty or participation in undergraduate research opportunities. Non-academic involvement in this study relates directly to sports and only sports, which may not be in-line with students future academic or professional goals.

The different forms of volunteering that increase the probability of students having high educational expectations may relate more to students' professional/career interest. Politics, education, and health care are three fields that are popular among Black college students. It may be that students who are already interested in these professions and already plan to pursue graduate education may be more inclined to be involved with these types of volunteering opportunities. These forms of involvement may also help students develop the skills and experience needed to continue on to graduate education. Student involvement in political organizations also contributes to the development of civic skills and politically relevant resources. These skills and resources include money, communication proficiency, political knowledge, greater group connections and networks, and a sense of efficacy (Taylor & Clerkin, 2011). The development of these skills may also contribute to students' academic success and increase interest in graduate degrees in similar professions. The expansion of networks could

help to explain why volunteering for a political organization has the greatest positive relationship and has the greatest increase in the probability of Black students expecting to earn master's degrees or higher. Future studies that disaggregate students based on major would be helpful in understanding these results.

Volunteering for church-related groups decreases the probability of a student having high educational expectations. There are several possibilities that could shape this outcome. First, it could indicate that some members of church-related groups cannot provide the academic, social, and cultural capital that would contribute to higher educational expectations for Black students. This type of involvement can also indicate a different set of priorities among students that may mean not placing a high value on advanced degrees (although they still expect to graduate from college). This is confirmed by research on southern Black students who gave religious, family, and community values priority over graduating from college (Thornton, 2004). Another study conducted by the Washington Post and the Kaiser Foundation found that the majority Black women and men (74% and 70% respectively) felt that religion or faith in God plays a very important roll in their lives (The Washington Post, 2012). In the same poll, Black men and women placed less importance on having a successful career, having free time, or being married. The importance of traditional cultural, religious, or spiritual involvement for Black students has highlighted how such participation can improve persistence and retention (Strayhorn, 2011). While results from this study show that such participation can decrease the probability of Black students expecting to earn advanced degrees, it is not an indication that these students do not expect to graduate from college at all. Finally, these findings do not necessarily contradict previous research that finds other positive benefits for Black students who participate in spiritual, religious, or church-related activities.

Relationship of the Findings to Prior Research

Although there is little research on involvement and SES that is specific to Black students in postsecondary education, the findings of this study offer support for and challenges to existing research. Looking at studies that have focused on involvement, race, educational expectation, and SES helped to provide a guiding framework for this study. The relationship of previous works to the current study offer further topics for discussion.

Astin's (1977, 1984, 1985) research and following works on student involvement have shown that both academic and non-academic forms of involvement not only have an affect on students' educational outcomes, but there is often positive outcomes associated with being involved (Guiffrida, 2004). The findings from this study confirm existing literature on student involvement that suggests students who are involved experience positive outcomes. For example, several studies have focused on the ways student involvement promotes cognitive development in students (Flowers, 2006; Terenzini et al., 1996). Some of these developments come from contact with faculty both in and outside of the classroom (Flower, 2006; Kuh, 1995). While this study did not look specifically at cognitive development, higher educational aspirations do relate to positive academic outcomes. Findings from this study confirm that students who are involved have greater educational expectations (or more positive outcomes) than their peers who are not involved. More specifically, student involvement can increase students' development and skills in areas such as vocational aspirations and leadership skills (Terenzini et al., 1996; Moore et al., 1998).

The findings from this study also confirm literature that addresses the differential impact of various forms of involvement. Academic and non-academic involvement in this study impact educational expectations differently. Analysis found that academic involvement has a greater

positive relationship with educational expectations than non-academic involvement. In fact, students who were academically involved showed much higher rates of high educational expectations than their peers who were non-academically involved. Research by Pascarella and Terenzini (2005) also suggest that student involvement in academic or cultural activities could be more important to cognitive development than other types of involvement, such as athletics or participation in Greek life. In one study examining the effect of athletic participation on critical thinking skills, athletes scored significantly lower on the test than non-athletes (Pascarella & Terenzini, 2005). Black students in this study who were academically involved were more likely to have high educational expectations than Black students who were non-academically involved, which supports the results of previous findings (Flowers, 2006; Pascarella & Terenzini, 2005).

One of the areas in involvement literature that is still fairly unexplored relates to differences in involvement based on SES. In this study, there were significant differences between students in different SES quartiles relating to their involvement and educational expectations. The findings in this study support previous research that suggest increased involvement for low SES students can help overcome academic and socioeconomic disadvantages (Strayhorn, 2010; Wapole, 2003). In a study on low SES Black and Latino undergraduate males and access to social and cultural capital, Strayhorn (2010) found that Black males benefited significantly from their involvement in college activities. Results from this investigation affirm these findings by showing that students from low SES quartiles who are highly involved can have higher educational expectations than their peers. Although this particular study controlled for the effect of sex on student educational expectations, it is still significant in that Black students from low SES quartiles benefit from college involvement.

This investigation has confirmed several previous findings related to college student involvement, however it is also important to highlight some of the contradictions that have come from this study. For example, research on involvement has shown that highly involved students typically come from educated and affluent families, that they have good grades in high school and do well on college entrance exams, and are more likely to aspire to advanced degrees (Astin, 1977). This finding has been supported by other studies that have examined college student involvement with a focus on SES (Strayhorn, 2010; Wapole, 2003); students from high SES backgrounds are more involved and have better educational outcomes. This may be an issue that requires further investigation. Based on the results of this study, students in the lowest SES quartile are not the least involved, nor do they have the lowest probability odds of expecting a master's degree or higher. High-middle SES quartile students have high rates of never being involved and low-middle SES students have the lowest probability odds of expecting a master's degree or higher based on analysis in this research. These distinctions are an important addition and change to previous research. Moving beyond a dichotomous high SES/low SES understanding of differences between students, especially Black students in college is an important finding from this study.

Previous studies on Black college student involvement have focused on the specific types of activities students chose to participate in, especially those who attend PWIs. Black students' involvement in BGLOs, minority student groups, gospel choirs, and other ethnic organizations has often been linked to positive outcomes (Harper and Kimbrough 2006; Strayhorn, 2011; Sutton & Kimbrough, 2001). Unlike the previous research, this study sought to quantify the relationship between these specific forms of participation and Black students' educational expectations. In fact, volunteering with a church-related group (which are often cited as sources

of support for Black students in postsecondary education) gives Black students one of the lowest probabilities of expecting to earn a master's degree or higher. Results from this study show that for Black students, involvement or volunteer with church related groups causes the greatest drop in the odds of these students expecting to earn a master's degree or higher. This negative association with church-related involvement is one that previously has not been addressed by research on Black college students' involvement.

Implications for Practice, Research and Theory

Implications for Practice. The findings of this study have several practice implications for many groups. First, the findings of this study are important to Black college students and their parents, of all socioeconomic backgrounds. Information in this investigation confirms the importance of involvement in college as essential to improving students' educational outcomes and raising graduate school expectations. For those students who may have low expectations or parents who wish to encourage graduate education, this study offers empirical evidence of how participation in specific groups and organizations can increase the likelihood that students will expect to go on to graduate school. This research is also valuable to Black families from different SES backgrounds because it highlights the fact that SES status alone may not be enough to ensure high educational expectations for students. Particularly for students from high-middle SES backgrounds, a lack of participation can lead to poor educational outcomes and low educational expectations. Analysis from this study can give families information on the importance of being involved both in and outside of the classroom. Often, parents may focus on just the academic aspects of college and fail to encourage their children to become involved. Because of the findings in this study, parents of all Black students in postsecondary education,

regardless of SES, should be informed about the positive benefits of involvement and advised to support student participation in extracurricular activities. Parents should be sure to talk about the benefits of being involved and volunteering with their children as much as they may discuss the importance of academics.

The results from this research are also particularly important to student affairs administrators and practitioners. For those who direct extracurricular and other involvement activities on campus, the findings of this study offer support for the positive outcomes of these activities. In addition, the present investigation provides data on how specific forms of involvement have differing relationships to students' educational expectations. Using this information, educators in student affairs may seek to advocate for programs that focus on volunteering with political organizations, community organizations, or hospitals or nursing homes. These types of volunteering show the highest probabilities that students will have high educational expectations. Promoting high expectations not only encourages Black students to go on to graduate school, an area in which they continue to be underrepresented, but it also provides support for other positive outcomes. Being able to provide research that supports the aims and goals of existing programs as well as guiding the formation of future programs that seek to support Black students in postsecondary education are both significant benefits to practitioners from this study. Those in student affairs may also benefit from the findings in this study because they provide justification for programming that targeted Black students from all SES backgrounds not only those Black students who were identified as low SES.

Individuals who are involved with making policy and funding decisions about issues in higher education could also gain from the findings in this study. First, the findings from this research continue to support significant literature on the positive benefits of involvement for

students in postsecondary education. Based on these findings, policy makers (at the institutional, state, and federal level) have information that can justify the formation and funding of programs that promote involvement for Black students. For example, a program such as the Ronald E. McNair Postbaccalaureate Achievement program, which fosters undergraduate research opportunities and seeks to prepare students to go on to graduate studies, is a form of academic involvement that can promote high educational expectations for students. However, analysis from this study also shows that participation in programs such as these is valuable to all Black students, not just the ones who are from low SES backgrounds. Along these lines, the results of this investigation also offer evidence to policymakers that show the need for student programming that is not limited by SES requirements. Findings in this study show that without the impact of involvement, high and high-middle SES Black students can also have low educational expectations. In order to promote better educational outcomes for Black students in postsecondary education, policymakers should consider expanding programming and funding that does not target only low-income students. The McNair program is a prime example of a program that could significantly benefit high-middle and high SES students by increasing their educational expectations and promoting other positive educational outcomes. By including Black students in these programs who are not from low SES backgrounds also increases the probability that a student will expect to attend graduate school.

Implications for future research. The findings from this study offer several options for stakeholders interested in improving the educational outcomes of Black students in higher education. This research also presents an opportunity to inform future research. Issues in higher education related to race, class, involvement, student programming still require further research that can move theory and practice forward. The current study examined differences in

educational expectations of Black college sophomores based on SES and involvement. While this is an important contribution to the literature on involvement and Black students, there are several areas for future research to develop. The first area for future research to expand would be a study that looked at differences in Black student involvement that looked at educational outcomes such as GPA, retention, and graduation rates. While educational expectations are an important measure of students' future plans, a study that focused on other outcomes may be able to provide more information on how involvement affects college-going rates among Black students. Such a study would go beyond showing that involvement had a positive impact on student development and offer empirical evidence on how involvement could possibly help improve retention and graduation rates for Black students.

The research in this study sought to understand the affect of involvement of Black students in different SES groups on educational expectations. Moving forward from the findings in this study, future research should seek to discern what differences exist between Black men and women of different SES groups and their involvement in postsecondary education. Currently, Black men are significantly underrepresented in higher education at a much greater rate than Black women. These differences in representation may have an impact on the types of activities students seek to become involved and their involvement both in and outside of the classroom. Such a study would serve to develop the literature on involvement in several ways. First it would offer insight into both Black male and Black female participation in postsecondary education and the affects of SES and their involvement on various educational outcomes. This study would also contribute to the literature on Black women in higher education overall. There is very little research that examines the combination of race, gender, class, and involvement on educational outcomes.

The current study was restricted to Black students who were full-time and enrolled at a four-year institution. Another important direction for future research would be to distinguish between full-time and part-time students as well as further investigate the differences that may exist between Black students at various institutions. Going forward, future studies could examine differences between and within different institutional settings. For example, studies could look at differences in SES, involvement and educational outcomes for Black students at HBCUs or compare them to Black students at PWIs. Such institutional studies can provide important additions to current literature on Black students in different institutional settings. This addition to the literature could also apply to differences between full-time and part-time Black students at different institutions as well. Such studies could highlight important differences between Black students of different SES groups, where they go to college, how they choose to become involved (or not), and the impact of these factors on their educational outcomes.

This quantitative investigation used empirical data from a large national dataset that has longitudinal data on students beginning in 2002. Future studies on Black students in different SES groups and involvement could also be qualitative in nature. Results from the current study are an important start to better understanding how involvement affects Black students of different SES backgrounds. However, qualitative studies on this topic have the potential to offer a more nuanced understanding of the experiences of Black students in high, high-middle, and low-middle SES groups and their choices surrounding involvement. Longitudinal mixed-methods studies can provide future researchers with an improved understanding of how trends in Black students' involvement may be influenced by other background characteristics, such as SES. Such a study would be an important contribution to the literature on involvement by using

qualitative and quantitative data to offer a more comprehensive understanding of Black students' outcomes in higher education.

Implications for theory. Results from this study show statistically significant differences between full-time Black students in different SES quartiles and their involvement, statistically significant differences between Black students in different SES quartiles and their educational expectations, and statistically significant differences between different forms of involvement and educational expectations. This research also found that although students from the high SES quartile had higher educational expectations and greater mean involvement composite scores, this finding did not apply consistently for all SES quartiles. Low SES quartile students did not have the lowest involvement scores or educational expectations. High-middle and low-middle SES quartile students in this study showed consistently low rates of involvement, volunteering, and educational expectations.

These findings may indicate a need for greater research on Black middle SES students. Many theories on the poor performance of Black students in postsecondary education are based on the premise that barriers due to low SES are what cause so many to struggle in postsecondary education. Often, researchers theorize that low SES Black students do not have access to the social, academic, or cultural resources that many White students have access to. This premise is often confirmed in many studies that focus on barriers for low SES Black students. However, this theoretical framing is flawed. First, it ignores the heterogeneity among Black students in postsecondary education, particularly around issues of class. Second, such theories fail to explain how and why more affluent Black students who have access to such resources prior to college also continue to struggle. The findings in this study clearly demonstrate the need for theory in education that accounts for differences among Black students that do not automatically link

higher SES status with higher involvement or educational expectations and outcomes. Analysis from this study shows that low-middle and high-middle SES quartile students make-up the overwhelming majority of students who expect to earn a bachelor's degree or less. Theory on Black student performance in higher education needs to expand to account for differences *between* Black students based on SES.

The current investigation found that the majority of the students in the sample expected to continue on to graduate education, with the probability being more likely for those who were academically involved and who volunteered. Examining the educational expectations for Black students is another important area in which theory can expand. Much of the literature on postsecondary education focuses on the undergraduate experience and students successfully graduating. The results of this study highlight the fact that while Black students may expect to participate in graduate education, this may not often be the reality. Theory that provides better understanding of how SES and involvement affect long-term outcomes would be a significant contribution to the current literature.

One of the primary predictors in this study was involvement and how it influenced outcomes for Black students. The results of this study provide important information about differences for Black students of different SES backgrounds and on how involvement can affect expectations. This is a significant contribution to the literature on student involvement. While there has been considerable growth in the literature on Black student involvement in higher education literature, there is still substantial work to be done to better understand how involvement in college impacts Black students' outcomes. Involvement theory has often been conceptualized, tested, and generalized using primarily White students. Often Black students are used as a comparison group rather than the focus of research. This study show that theory on

involvement needs to grow in order to offer plausible explanations about how Black students interact with their environment and how involvement can promote or even hinder positive outcomes.

Limitations of the Study

Similar to any research investigation, there are several limitations that need to be considered when interpreting the results of this study. First, a limitation of this study is related to the dataset chosen for analysis. The ELS:2002 from the NCES is available for public use, however there are several variables throughout this dataset that have restricted access. Information such as institutional selectivity, SAT and ACT scores, grant and loan acceptance, and major are not available in the public dataset. Limited access to variables such as these also limits the analysis that can be conducted in order to answer the proposed research questions. For example, there may be differences in Black students involvement based on institutional selectivity, but this is a factor that cannot be considered in the current analysis. There may also be a correlation between students choice of major and educational expectations, however this is also an issue that cannot be addressed without more data. Without access to the full dataset, there may be several significant background and institutional factors that simply cannot be accounted for which could possibly provide a better model for analysis.

Another limitation that is also related to the chosen dataset is the operationalization of variables. That is to say, the variables in this study have been previously measured and defined by the NCES. Therefore, the results of this analysis are restricted by the predetermined measures of variables. SES, one of the predictors in the study, exists as a variable already created by the

NCES. This also means that analysis can be limited due to the inability to use variables that specifically measure factors related to the proposed research questions.

A final limitation of this dataset that has substantial consequences for this study is the availability of follow-up data. The final planned follow-up for ELS: 2002 took place in 2012. However, the actual data from this follow-up is not yet available to the public. Without access to this data, this study was unable to look at long-term consequences or educational outcomes (i.e. graduation, graduate school attendance) of Black students involvement in higher education. Although educational expectations are an important measure of students' educational commitment and beliefs about their place in postsecondary education, they cannot substitute information on concrete outcomes such as yearly retention or graduating GPA.

In line with the limitations to this study presented by the dataset, there are also sampling limitations. The most recent data available from ELS: 2002 surveys among several groups, students who are sophomores in college. This results in a sample that only contains students who are sophomores in college, or students who should be sophomores in college. This limitation also means that any analysis cannot compare different groups of students (i.e. freshman, seniors) at the same point in time. While the benefit of a longitudinal study is seeing the change in a single group of students over time, it limits the ability to compare different student groups.

Another limitation of this study relates to the methodology of the analysis. In order to answer the proposed research questions, the data was restricted to only full-time Black students as of January 2006 who were enrolled at a four-year public institution. These restrictions eliminate the possibility for analysis between racial/ethnic groups, part-time and full-time, and other institution types. These restrictions also limit the generalizability of the findings in this study.

Finally, when interpreting the results of this study caution should be used to avoid over-interpretation of the results. While most of the predictor variables were found to be statistically significant, this analysis is based on a weighted sample of students using correlation-based tests that could have some influence on the findings from the regression analysis. However, because this research is focused on Black college students, using a weighted sample can provide more accurate results. The importance of the findings in this study is still relevant despite the discussed limitations.

Conclusion

The purpose of this study was to measure SES differences in the relationship between Black college students' involvement and their educational expectations. Three research questions guided the analysis in this study: a) How do Black students differ in their involvement based on SES, b) Are there differences in students' educational expectations based on SES and involvement, c) What types of involvement have the greatest influence on student expectations? Specifically, this study sought to understand the ways in which SES and involvement interact for Black students and how these factors could positively or negatively impact their educational outcomes and expectations. In addition, this study also sought to further investigate the ways in which SES acts as a significant predictor for Black student outcomes for all students, not simply those who are from low SES backgrounds.

There were several statistically significant findings from this study. First, Black students do differ in their levels and types of involvement based on SES. In addition, low SES Black students do not have the lowest levels of involvement. High-middle and low-middle SES quartile students had consistently low levels of involvement. Students also showed statistically

significant differences in their educational expectations when I controlled for background characteristics and used SES and involvement as predictors in the regression model. Lastly, volunteering for a political organization significantly increased the probability that students would have high educational expectations and expect to earn a master's degree or higher.

This research is important in several ways. Many of the findings in this study confirm research that has previously been done on student involvement. The current investigation supports the literature on positive outcomes being associated with higher levels of student involvement. The results of this study also confirm that academic involvement provides greater gains for Black students than non-academic involvement. Just as important are the findings from this study that are counter to past research. Most importantly may be the contradiction between past literature that suggest that more affluent students will be more involved, have better educational outcomes, and higher aspirations than their peers. The results of this analysis show this to not be true. High-middle SES quartile students had the highest rates of not being involved for nearly all involvement measures in this study. Both the findings that support and contradict previous research on Black student involvement are important to moving investigations on this issue forward. Scholars should continue to find better ways to measure and understand factors, such as involvement, that can contribute to the success of *all* Black students in postsecondary education.

The results of this study further the investigation into issues in higher education that relate to race, class, and student success. Overall, these results have import for educators those who work in student affairs and provide access to support systems for Black students in college. Education scholars and practitioners must continue to seek ways in which to better serve college students, especially underrepresented populations. This study offers insight into the ways in

which Black students differ and how these differences have the potential to influence their educational outcomes and expectations. What this study also shows is that much more attention is needed to discern how background traits such as SES create differences in the educational experience of Black students. We can no longer afford to rely on outdated or unchallenged assumptions about the needs of Black students in higher education if we ever hope to improve their college outcomes.

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APPENDIX A

DESCRIPTIVE STATISTICS OF STUDY VARIABLES

Table A.1

Descriptive statistic of study variables

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Student's race/ethnicity-composite	47021	3	3	3.00	.000	.000	.
Institution 4Yr Public	47021	1	1	1.00	.000	.000	.
Sex	47021	0	1	.56	.002	.496	-.258 .011 -1.933 .023
Parents highest education	47021	0	7	3.91	.009	1.867	-.181 .011 -1.125 .023
GPA for all courses taken in the 9th - 12th grades - categorical	43680	0	6	4.00	.006	1.301	-.387 .012 -.069 .023
SES Quartile	47021	0	3	1.57	.005	1.064	-.084 .011 -1.225 .023
Graduate educational expectation	31794	0	1	.98	.001	.134	-7.217 .014 50.093 .027
Talk with faculty	47021	0	2	1.35	.003	.591	-.282 .011 -.672 .023
Meet with Advisor	46588	0	2	1.43	.003	.609	-.573 .011 -.595 .023
Coursework at library	46636	0	2	1.43	.003	.671	-.763 .011 -.544 .023
Use web to access library	47021	0	2	1.56	.003	.614	-1.091 .011 .129 .023
Nonvarsity sports	46943	0	2	.52	.003	.727	1.022 .011 -.392 .023
Varsity sports	46755	0	2	.31	.003	.668	1.867 .011 1.830 .023
Other extracurriculars	47021	0	2	1.04	.004	.763	-.075 .011 -1.280 .023
Academic Involvement	46204	0	10	6.80	.009	1.858	-.865 .011 1.246 .023

Table A.1 (cont.)

	N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
Nonacademic Involvement	46678	0	4	.84	.005	1.145	1.194	.011	.403	.023
Whether performed volunteer/ community service work in past 2 years	46826	0	1	.63	.002	.484	-.526	.011	-1.723	.023
Volunteered with youth organization	28955	0	1	.22	.002	.412	1.373	.014	-.114	.029
Volunteered with school/community organizations	29216	0	1	.41	.003	.492	.351	.014	-1.877	.029
Volunteered with political organization	29292	0	1	.23	.002	.422	1.275	.014	-.374	.029
Volunteered with church-related group	29372	0	1	.50	.003	.500	.006	.014	-2.000	.029
Volunteered with neighborhood/ social action associations	29193	0	1	.47	.003	.499	.101	.014	-1.990	.029
Volunteered with hospital or nursing home	29075	0	1	.24	.002	.425	1.242	.014	-.459	.029
Volunteered with education organizations	29297	0	1	.29	.003	.456	.902	.014	-1.186	.029
Volunteered with conservation/ environmental group	29097	0	1	.05	.001	.208	4.378	.014	17.172	.029
Volunteer frequency	29372	0	2	.94	.004	.694	.075	.014	-.927	.029
Valid N (listwise)	16662									

APPENDIX B

CROSSTABS OF SES AND INVOLVEMENT

Table B.1

Crosstab of SES and talking with faculty

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
	Never	Count	0	709	1154	1037	2900
		% within SES Quartile	0.0%	5.7%	8.5%	9.2%	6.2%
Talk with faculty	Sometimes	Count	5944	6063	6540	6403	24950
		% within SES Quartile	62.2%	48.4%	47.9%	56.7%	53.1%
	Often	Count	3614	5750	5951	3856	19171
		% within SES Quartile	37.8%	45.9%	43.6%	34.1%	40.8%
Total		Count	9558	12522	13645	11296	47021
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.2

Crosstab of SES and meeting with advisor

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
	Never	Count	73	620	1861	376	2930
		% within SES Quartile	0.8%	5.0%	13.6%	3.5%	6.3%
Meet with advisor	Sometimes	Count	4943	4416	4098	7154	20611
		% within SES Quartile	51.7%	35.3%	30.0%	65.9%	44.2%
	Often	Count	4543	7486	7686	3333	23048
		% within SES Quartile	47.5%	59.8%	56.3%	30.7%	49.5%
Total		Count	9559	12522	13645	10863	46589
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.3

Crosstab of SES and doing coursework at the library

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
	Never	Count	484	1330	1415	1551	4780
		% within SES Quartile	5.1%	10.6%	10.4%	14.2%	10.2%
Coursework at library	Sometimes	Count	4399	4425	4746	3442	17012
		% within SES Quartile	46.0%	35.3%	34.8%	31.5%	36.5%
	Often	Count	4675	6766	7484	5920	24845
		% within SES Quartile	48.9%	54.0%	54.8%	54.2%	53.3%
Total		Count	9558	12521	13645	10913	46637
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.4

Crosstab of SES and using the web to access the library

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Web to access library	Never	Count	601	456	1826	209	3092
		% within SES Quartile	6.3%	3.6%	13.4%	1.9%	6.6%
	Sometimes	Count	2072	3323	4609	4363	14367
		% within SES Quartile	21.7%	26.5%	33.8%	38.6%	30.6%
	Often	Count	6885	8742	7210	6725	29562
		% within SES Quartile	72.0%	69.8%	52.8%	59.5%	62.9%
	Total	Count	9558	12521	13645	11297	47021
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.5

Crosstab of SES and nonvarsity sports participation

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Nonvarsity sports	Never	Count	6886	8046	9099	5078	29109
		% within SES Quartile	72.0%	64.3%	66.7%	45.3%	62.0%
	Sometimes	Count	2186	2080	3386	3643	11295
		% within SES Quartile	22.9%	16.6%	24.8%	32.5%	24.1%
	Often	Count	487	2395	1159	2499	6540
		% within SES Quartile	5.1%	19.1%	8.5%	22.3%	13.9%
	Total	Count	9559	12521	13644	11220	46944
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.6

Crosstab of SES and varsity sports participation

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Varsity sports	Never	Count	7798	9011	12069	8634	37512
		% within SES Quartile	81.6%	73.5%	88.4%	76.4%	80.2%
	Sometimes	Count	794	1994	66	991	3845
		% within SES Quartile	8.3%	16.3%	0.5%	8.8%	8.2%
	Often	Count	966	1251	1510	1672	5399
		% within SES Quartile	10.1%	10.2%	11.1%	14.8%	11.5%
	Total	Count	9558	12256	13645	11297	46756
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.7
Crosstab of SES and other extracurricular activities

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Other extracurriculars	Never	Count	2438	4615	4349	1293	12695
		% within SES Quartile	25.5%	36.9%	31.9%	11.4%	27.0%
	Sometimes	Count	4344	5230	4708	5256	19538
		% within SES Quartile	45.4%	41.8%	34.5%	46.5%	41.6%
	Often	Count	2776	2676	4587	4747	14786
		% within SES Quartile	29.0%	21.4%	33.6%	42.0%	31.4%
Total		Count	9558	12521	13644	11296	47019
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.8
Crosstab of SES and whether performed volunteer service

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Whether performed No volunteer/community service work in past 2 years	No	Count	3786	5408	4785	3474	17453
		% within SES Quartile	40.4%	43.2%	35.1%	30.8%	37.3%
	Yes	Count	5577	7113	8860	7822	29372
		% within SES Quartile	59.6%	56.8%	64.9%	69.2%	62.7%
Total		Count	9363	12521	13645	11296	46825
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.9
Crosstab of SES and volunteering with youth organizations

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Volunteered with youth organization	No	Count	4765	4924	7324	5658	22671
		% within SES Quartile	85.4%	69.2%	82.7%	76.4%	78.3%
	Yes	Count	812	2188	1536	1746	6282
		% within SES Quartile	14.6%	30.8%	17.3%	23.6%	21.7%
Total		Count	5577	7112	8860	7404	28953
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.10
Crosstab of SES and volunteering with school/community organizations

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Volunteered with school/community organizations	No	Count	3040	3972	5202	4918	17132
		% within SES Quartile	54.5%	55.8%	58.7%	64.2%	58.6%
	Yes	Count	2538	3141	3658	2747	12084
		% within SES Quartile	45.5%	44.2%	41.3%	35.8%	41.4%
Total		Count	5578	7113	8860	7665	29216
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.11

Crosstab of SES and volunteering with political organizations

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Volunteered with political organization	No	Count	3223	6204	7895	5197	22519
		% within SES Quartile	57.8%	88.2%	89.1%	66.4%	76.9%
	Yes	Count	2354	828	966	2625	6773
		% within SES Quartile	42.2%	11.8%	10.9%	33.6%	23.1%
Total		Count	5577	7032	8861	7822	29292
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.12

Crosstab of SES and volunteering with church-related groups

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Volunteered with church-related group	No	Count	1719	3942	4326	4743	14730
		% within SES Quartile	30.8%	55.4%	48.8%	60.6%	50.1%
	Yes	Count	3858	3171	4535	3079	14643
		% within SES Quartile	69.2%	44.6%	51.2%	39.4%	49.9%
Total		Count	5577	7113	8861	7822	29373
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.13

Crosstab of SES and volunteering with neighborhood/social action associations

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Volunteered with neighborhood/social action associations	No	Count	2779	4447	4210	3893	15329
		% within SES Quartile	50.0%	62.5%	47.5%	50.8%	52.5%
	Yes	Count	2775	2666	4651	3772	13864
		% within SES Quartile	50.0%	37.5%	52.5%	49.2%	47.5%
Total		Count	5554	7113	8861	7665	29193
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.14

Crosstab of SES and volunteering with hospitals/nursing homes

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Volunteered with hospital or nursing home	No	Count	3600	5775	6399	6430	22204
		% within SES Quartile	64.6%	84.7%	72.2%	82.2%	76.4%
	Yes	Count	1977	1041	2461	1392	6871
		% within SES Quartile	35.4%	15.3%	27.8%	17.8%	23.6%
Total		Count	5577	6816	8860	7822	29075
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.15

Crosstab of SES and volunteering with education organizations

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Volunteered with education organizations	No	Count	3276	5438	7155	4803	20672
		% within SES Quartile	58.7%	76.5%	81.4%	61.4%	70.6%
	Yes	Count	2301	1675	1630	3019	8625
		% within SES Quartile	41.3%	23.5%	18.6%	38.6%	29.4%
Total		Count	5577	7113	8785	7822	29297
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.16

Crosstab of SES and volunteering with conservation/environmental groups

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Volunteered with conservation/environmental group	No	Count	5125	6675	8161	7822	27783
		% within SES Quartile	96.6%	93.8%	92.1%	100.0%	95.5%
	Yes	Count	178	438	700	0	1316
		% within SES Quartile	3.4%	6.2%	7.9%	0.0%	4.5%
Total		Count	5303	7113	8861	7822	29099
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table B.17

Crosstab of SES and volunteer frequency

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Volunteer frequency	Less than once a month	Count	842	3194	1219	2687	7942
		% within SES Quartile	15.1%	44.9%	13.8%	34.4%	27.0%
	At least once a month, but not weekly	Count	3146	3453	5139	3384	15122
		% within SES Quartile	56.4%	48.6%	58.0%	43.3%	51.5%
	At least once a week	Count	1589	465	2502	1751	6307
		% within SES Quartile	28.5%	6.5%	28.2%	22.4%	21.5%
Total		Count	5577	7112	8860	7822	29371
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

APPENDIX C

CROSSTABS OF EDUCATIONAL EXPECTATIONS, SES, AND INVOLVEMENT

Table C.1

Crosstab of educational expectation and SES quartile

			SES Quartile				Total
			Low	Low-middle	High-middle	High	
Graduate education expectation	Bachelor's degree or less	Count	2604	5026	4327	2582	14539
		% within SES Quartile	27.2%	40.1%	31.7%	22.9%	30.9%
	Master's degree or higher	Count	6954	7495	9318	8714	32481
		% within SES Quartile	72.8%	59.9%	68.3%	77.1%	69.1%
Total		Count	9558	12521	13645	11296	47020
		% within SES Quartile	100.0%	100.0%	100.0%	100.0%	100.0%

Table C.2

Crosstab of educational expectation and talking with faculty

			Talk with faculty			Total
			Never	Sometimes	Often	
Graduate education expectation	Bachelor's degree or less	Count	1445	10165	2928	14538
		% within Talk with faculty	49.8%	40.7%	15.3%	30.9%
	Master's degree or higher	Count	1455	14784	16242	32481
		% within Talk with faculty	50.2%	59.3%	84.7%	69.1%
Total		Count	2900	24949	19170	47019
		% within Talk with faculty	100.0%	100.0%	100.0%	100.0%

Table C.3

Crosstab of educational expectation and meeting with advisor

			Meet with advisor			Total
			Never	Sometimes	Often	
Graduate education expectation	Bachelor's degree or less	Count	1251	7069	6220	14540
		% within Meet with advisor	42.7%	34.3%	27.0%	31.2%
	Master's degree or higher	Count	1679	13542	16828	32049
		% within Meet with advisor	57.3%	65.7%	73.0%	68.8%
Total		Count	2930	20611	23048	46589
		% within Meet with advisor	100.0%	100.0%	100.0%	100.0%

Table C.4

Crosstab of educational expectation and doing coursework at the library

			Coursework at library			Total
			Never	Sometimes	Often	
Graduate education expectation	Bachelor's degree or less	Count	1795	5458	7286	14539
		% within Coursework at library	37.6%	32.1%	29.3%	31.2%
	Master's degree or higher	Count	2985	11554	17559	32098
		% within Coursework at library	62.4%	67.9%	70.7%	68.8%
Total		Count	4780	17012	24845	46637
		% within Coursework at library	100.0%	100.0%	100.0%	100.0%

Table C.5

Crosstab of educational expectation and using the web to access the library

			Web to access library			Total
			Never	Sometimes	Often	
Graduate education expectation	Bachelor's degree or less	Count	940	4426	9174	14540
		% within Web to access library	30.4%	30.8%	31.0%	30.9%
	Master's degree or higher	Count	2152	9941	20388	32481
		% within Web to access library	69.6%	69.2%	69.0%	69.1%
Total		Count	3092	14367	29562	47021
		% within Web to access library	100.0%	100.0%	100.0%	100.0%

Table C.6

Crosstab of educational expectation and nonvarsity sports participation

			Nonvarsity sports			Total
			Never	Sometimes	Often	
Graduate education expectation	Bachelor's degree or less	Count	9998	2589	1952	14539
		% within Nonvarsity sports	34.3%	22.9%	29.9%	31.0%
	Master's degree or higher	Count	19110	8706	4587	32403
		% within Nonvarsity sports	65.7%	77.1%	70.1%	69.0%
Total		Count	29108	11295	6539	46942
		% within Nonvarsity sports	100.0%	100.0%	100.0%	100.0%

Table C.7

Crosstab of educational expectation and varsity sports participation

			Varsity sports			Total
			Never	Sometimes	Often	
Graduate education expectation	Bachelor's degree or less	Count	11845	270	2425	14540
		% within Varsity sports	31.6%	7.0%	44.9%	31.1%
	Master's degree or higher	Count	25666	3575	2974	32215
		% within Varsity sports	68.4%	93.0%	55.1%	68.9%
Total		Count	37511	3845	5399	46755
		% within Varsity sports	100.0%	100.0%	100.0%	100.0%

Table C.8

Crosstab of educational expectation and other extracurricular activities

			Other extracurriculars			Total
			Never	Sometimes	Often	
Graduate education expectation	Bachelor's degree or less	Count	6612	5737	2191	14540
		% within Other extracurriculars	52.1%	29.4%	14.8%	30.9%
	Master's degree or higher	Count	6084	13801	12596	32481
		% within Other extracurriculars	47.9%	70.6%	85.2%	69.1%
Total		Count	12696	19538	14787	47021
		% within Other extracurriculars	100.0%	100.0%	100.0%	100.0%

Table C.9

Crosstab of educational expectation and whether performed volunteer service

			Whether performed volunteer/community service work in past 2 years		Total
			No	Yes	
Graduate education expectation	Bachelor's degree or less	Count	5960	8579	14539
		% within Whether performed volunteer/community service work in past 2 years	34.1%	29.2%	31.0%
	Master's degree or higher	Count	11493	20793	32286
		% within Whether performed volunteer/community service work in past 2 years	65.9%	70.8%	69.0%
Total		Count	17453	29372	46825
		% within Whether performed volunteer/community service work in past 2 years	100.0%	100.0%	100.0%

Table C.10

Crosstab of educational expectation and volunteering with youth organization

			Volunteered with youth organization		Total
			No	Yes	
Graduate education expectation	Bachelor's degree or less	Count	7466	1113	8579
		% within Volunteered with youth organization	32.9%	17.7%	29.6%
	Master's degree or higher	Count	15206	5170	20376
		% within Volunteered with youth organization	67.1%	82.3%	70.4%
Total		Count	22672	6283	28955
		% within Volunteered with youth organization	100.0%	100.0%	100.0%

Table C.11

Crosstab of educational expectation and volunteering with school/community organization

			Volunteered with school/community organizations		Total
			No	Yes	
Graduate education expectation	Bachelor's degree or less	Count	5754	2825	8579
		% within Volunteered with school/community organizations	33.6%	23.4%	29.4%
	Master's degree or higher	Count	11378	9259	20637
		% within Volunteered with school/community organizations	66.4%	76.6%	70.6%
Total		Count	17132	12084	29216
		% within Volunteered with school/community organizations	100.0%	100.0%	100.0%

Table C.12

Crosstab of educational expectation and volunteering with political organizations

			Volunteered with political organization		Total
			No	Yes	
Graduate education expectation	Bachelor's degree or less	Count	7557	1022	8579
		% within Volunteered with political organization	33.6%	15.1%	29.3%
	Master's degree or higher	Count	14962	5750	20712
		% within Volunteered with political organization	66.4%	84.9%	70.7%
Total		Count	22519	6772	29291
		% within Volunteered with political organization	100.0%	100.0%	100.0%

Table C.13

Crosstab of educational expectation and volunteering with church-related groups

			Volunteered with church-related group		Total
			No	Yes	
Graduate education expectation	Bachelor's degree or less	Count	3387	5193	8580
		% within Volunteered with church-related group	23.0%	35.5%	29.2%
	Master's degree or higher	Count	11343	9450	20793
		% within Volunteered with church-related group	77.0%	64.5%	70.8%
Total		Count	14730	14643	29373
		% within Volunteered with church-related group	100.0%	100.0%	100.0%

Table C.14

Crosstab of educational expectation and volunteering with neighborhood/social action associations

			Volunteered with neighborhood/social action associations		Total
			No	Yes	
Graduate education expectation	Bachelor's degree or less	Count	5270	3287	8557
		% within Volunteered with neighborhood/social action associations	34.4%	23.7%	29.3%
	Master's degree or higher	Count	10060	10576	20636
		% within Volunteered with neighborhood/social action associations	65.6%	76.3%	70.7%
Total		Count	15330	13863	29193
		% within Volunteered with neighborhood/social action associations	100.0%	100.0%	100.0%

Table C.15

Crosstab of educational expectation and volunteering with hospitals/nursing homes

			Volunteered with hospital or nursing home		Total
			No	Yes	
Graduate education expectation	Bachelor's degree or less	Count	7410	1170	8580
		% within Volunteered with hospital or nursing home	33.4%	17.0%	29.5%
	Master's degree or higher	Count	14795	5701	20496
		% within Volunteered with hospital or nursing home	66.6%	83.0%	70.5%
Total		Count	22205	6871	29076
		% within Volunteered with hospital or nursing home	100.0%	100.0%	100.0%

Table C.16

Crosstab of educational expectation and volunteering with education organizations

			Volunteered with education organizations		Total
			No	Yes	
Graduate education expectation	Bachelor's degree or less	Count	6821	1758	8579
		% within Volunteered with education organizations	33.0%	20.4%	29.3%
	Master's degree or higher	Count	13851	6867	20718
		% within Volunteered with education organizations	67.0%	79.6%	70.7%
Total		Count	20672	8625	29297
		% within Volunteered with education organizations	100.0%	100.0%	100.0%

Table C.17

Crosstab of educational expectation and volunteering with conservation/environmental groups

			Volunteered with conservation/environmental group		Total
			No	Yes	
Graduate education expectation	Bachelor's degree or less	Count	8579	0	8579
		% within Volunteered with conservation/enviro nmental group	30.9%	0.0%	29.5%
	Master's degree or higher	Count	19203	1315	20518
		% within Volunteered with conservation/enviro nmental group	69.1%	100.0%	70.5%
Total		Count	27782	1315	29097
		% within Volunteered with conservation/enviro nmental group	100.0%	100.0%	100.0%

Table C.18

Crosstab of educational expectation and volunteer frequency

			Volunteer frequency			Total
			Less than once a month	At least once a month, but not weekly	At least once a week	
Graduate education expectation	Bachelor's degree or less	Count	2252	3821	2506	8579
		% within Volunteer frequency	28.4%	25.3%	39.7%	29.2%
	Master's degree or higher	Count	5690	11301	3802	20793
		% within Volunteer frequency	71.6%	74.7%	60.3%	70.8%
Total		Count	7942	15122	6308	29372
		% within Volunteer frequency	100.0%	100.0%	100.0%	100.0%

APPENDIX D

PREDICTIVE LOGISTIC REGRESSION EQUATIONS & PROBABILITIES

All equations show a one (1) unit increase in order to compare outcomes.

$$p = e^{(b_1 x_1 + b_2 x_2 + b_3 x_3 \dots -a)} / 1 + e^{(b_1 x_1 + b_2 x_2 + b_3 x_3 \dots -a)}$$

$$p = e^{(-.144*SES_LowMiddle)+(.094*SES_HighMiddle)+(.326*SES_High)+(.184*Acad_Involv)+(.025*Nonacad_Involv)+(-.153*YouthOrg)+(.284*SchoolComm)+(.599*Political)+(-.118*Church)+(.107*Neighborhood)+(.267*Hospital)+(.225*Education)+(.066*Monthly)+(.037*Weekly)-(.487)} / 1 + e^{(-.144*SES_LowMiddle)+(.094*SES_HighMiddle)+(.326*SES_High)+(.184*Acad_Involv)+(.025*Nonacad_Involv)+(-.153*YouthOrg)+(.284*SchoolComm)+(.599*Political)+(-.118*Church)+(.107*Neighborhood)+(.267*Hospital)+(.225*Education)+(.066*Monthly)+(.037*Weekly)-(.487)}$$

Logistic Regression Equation for SES

$$p = e^{(-.144*SES_LowMiddle)+(.094*SES_HighMiddle)+(.326*SES_High)-(.487)} / 1 + e^{(-.144*SES_LowMiddle)+(.094*SES_HighMiddle)+(.326*SES_High)-(.487)}$$

Table D.1

Probability of expecting a master's degree or greater by SES

Variable	Regression Equation	Probability
Low SES	$e^{(.487)} / 1 + e^{(.487)}$	62%
Low-middle SES	$e^{(.343)} / 1 + e^{(.343)}$	58%
High-middle SES	$e^{(.581)} / 1 + e^{(.581)}$	64%
High SES	$e^{(.813)} / 1 + e^{(.813)}$	69%

Logistic Regression Equation for Involvement/Volunteering

$$p = e^{(.184*Acad_Involv)+(.025*Nonacad_Involv)+(-.153*YouthOrg)+(.284*SchoolComm)+(.599*Political)+(-.118*Church)+(.107*Neighborhood)+(.267*Hospital)+(.225*Education)+(.066*Monthly)+(.037*Weekly)-(.487)} / 1 + e^{(.122*Sex)+(.184*Acad_Involv)+(.025*Nonacad_Involv)+(-.153*YouthOrg)+(.284*SchoolComm)+(.599*Political)+(-.118*Church)+(.107*Neighborhood)+(.267*Hospital)+(.225*Education)+(.066*Monthly)+(.037*Weekly)-(.487)}$$

Table D.2

Probability of expecting a master's degree or greater by involvement

Variable	Regression equation	Probability
Academic involvement	$e^{(.671)} / 1 + e^{(.671)}$	66%
Non-academic involvement	$e^{(.512)} / 1 + e^{(.512)}$	63%
Volunteer youth org	$e^{(.334)} / 1 + e^{(.334)}$	58%
Volunteer community org	$e^{(.771)} / 1 + e^{(.771)}$	68%
Volunteer political org	$e^{(1.086)} / 1 + e^{(1.086)}$	75%
Volunteer church org	$e^{(.369)} / 1 + e^{(.369)}$	59%
Volunteer neighborhood org	$e^{(.594)} / 1 + e^{(.594)}$	64%
Volunteer hospital org	$e^{(.754)} / 1 + e^{(.754)}$	68%
Volunteer education org	$e^{(.712)} / 1 + e^{(.712)}$	67%
Volunteer less than monthly	$e^{(.487)} / 1 + e^{(.487)}$	62%
Volunteer monthly	$e^{(.553)} / 1 + e^{(.553)}$	63%
Volunteer weekly	$e^{(.524)} / 1 + e^{(.524)}$	63%

Logistic Regression Equation for SES & Involvement

$$p = e^{(-.144*SES_LowMiddle)+(.094*SES_HighMiddle)+(.326*SES_High)+(.184*Acad_Involv)+(.025*Nonacad_Involv)-(-.487)} / 1 + e^{(-.144*SES_LowMiddle)+(.094*SES_HighMiddle)+(.326*SES_High)+(.184*Acad_Involv)+(.025*Nonacad_Involv)-(-.487)}$$

Table D.3

Probability of expecting a master's degree or greater by SES and involvement

Variable	Regression equation	Probability
Academic involvement/Low SES	$e^{(.671)} / 1 + e^{(.671)}$	66%
Academic involvement/Low-middle SES	$e^{(.527)} / 1 + e^{(.527)}$	63%
Academic involvement/High-middle SES	$e^{(.765)} / 1 + e^{(.765)}$	68%
Academic involvement/High SES	$e^{(.997)} / 1 + e^{(.997)}$	73%
Non-academic involvement/Low SES	$e^{(.512)} / 1 + e^{(.512)}$	63%
Non-academic involvement/ Low-middle SES	$e^{(.368)} / 1 + e^{(.368)}$	59%
Non-academic involvement/ High-middle SES	$e^{(.606)} / 1 + e^{(.606)}$	65%
Non-academic involvement/High SES	$e^{(.838)} / 1 + e^{(.838)}$	70%