Self-efficacy and academic performance among African-American male and female college students enrolled at a predominantly black institution: an investigative study

Gwendolyn Gail Rouse

Clark Atlanta University

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ABSTRACT

COUNSELING AND HUMAN DEVELOPMENT

ROUSE, GWENDOLYN GAIL B.A. MICHIGAN STATE UNIVERSITY, 1978

M.A. ATLANTA UNIVERSITY, 1987

SELF-EFFICACY AND ACADEMIC PERFORMANCE AMONG AFRICAN-AMERICAN MALE AND FEMALE COLLEGE STUDENTS ENROLLED AT A PREDOMINANTLY BLACK INSTITUTION: AN INVESTIGATIVE STUDY

Advisors: Dr. Carson Lee and Dr. Robert Smothers

Dissertation dated: May, 1992

The purpose of this study was to investigate the relationship between self-efficacy and academic performance among African-American male and female college students enrolled at a predominantly Black institution. Survey method was utilized to collect the data. Data were analyzed using the Pearson's Product-Moment Correlation Coefficient, Multiple Correlation and Student's t-Test. Results suggested that (1) there is no significant relationship between self-efficacy and GPA, (2) for males majoring in science, there was a significant relationship between the two variables, and (3) no difference was found between males' and females' self-efficacy scores. It was concluded that there are variables other than self-efficacy that influence academic performance. Further research is needed before any definitive statements can be made.
SELF-EFFICACY AND ACADEMIC PERFORMANCE AMONG AFRICAN-AMERICAN MALE AND FEMALE COLLEGE STUDENTS ENROLLED AT A PREDOMINANTLY BLACK INSTITUTION: AN INVESTIGATIVE STUDY

A DISSERTATION
SUBMITTED TO THE FACULTY OF CLARK ATLANTA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

BY
GWENDOLYN GAIL ROUSE
DEPARTMENT OF COUNSELING AND HUMAN DEVELOPMENT

ATLANTA, GEORGIA
MAY 1992
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First, I thank God for allowing me to reach another goal in my life. I dedicate this Ph.D to the uplifting and building of his kingdom. To Dr. Robert Smothers, thanks for your assistance. A special thanks to Dr. Carson Lee whose guidance enabled me to bring this project to fruition, thank you for looking beyond my faults and seeing my needs. Dr. Diane Plummer--my ram in the bush, I'll always be grateful to you for standing by me and believing in me. Dr. Lauretta Lyle, Mrs. Joyce Worrell, and Mrs. Helen Williams, I'm grateful for all of your assistance and words of encouragement. Last, but not least, to my family, my mother, Barbara Berry who has been by my side through this arduous task, thanks for praying for and with me and encouraging me to press on, you are the wind beneath my wings. To my stepfather, Leonard Berry, thanks for your encouragement. My sister's, Mickie and Maria, my brother, Billy, I say thank you for making my load a little easier to bear. To my nieces, Lisa, Sherda, Timary, and Jayme, my nephew, William, all of whom I love so dearly, the legacy is passed.
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Chapter 1

INTRODUCTION

Over the past decade, research on African-American students in higher education has focused primarily on their access, retention, persistence in college, and the implications of these processes regarding their future social and economic status. More recently, this research has been extended to investigate nonacademic factors, e.g., dispositional and situational variables, which influence the persistence of African-American students in higher education (Anderson 1989; Multon, Brown, & Lent 1991; Tracey & Sedlacek 1985; Williams & Leonard 1988).

Motivation, commitment, and self-efficacy have been identified as important nonacademic variables that may also influence African-American students' persistence and academic performance in higher education (Anderson 1989; Hodges 1988). Some researchers believe motivation and commitment are important internal attributes (Weiner, Frieze, Kukla, Reed, Rest, & Rosenbaum 1971). This study was focused on self-efficacy and its relationship to academic performance of African-American male and female students enrolled in a predominantly Black institution.
The nexus between self-efficacy and academic performance has recently been perceived as an important linkage in assessing students' persistence in college and obtaining the desired degree. Students who perceive themselves as self-efficacious tend to accept greater challenges, expend more effort, and may become more successful in reaching their goal of a college degree than do those who perceive themselves as less effective in meeting their goals (Bandura 1982; Betz & Hackett 1981; Lent, Brown, & Larkin 1984).

Bandura (1977, 1982) used the term "self-efficacy" to describe the belief individuals hold regarding what can be accomplished through their own efforts. These beliefs involve (1) what individuals believe they can accomplish and (2) how conceivable, strong, and effective their beliefs and efforts will be in accomplishing specific goals.

Perceived self-efficacy not only reduces anticipatory fears and inhibitions but through expectations of eventual success, it elicits coping efforts in the face of obstacles and aversive experiences. Self-efficacy expectations can determine how much effort individuals will expend and how long they will persist in reaching their goals. According to Bandura (1982), the stronger the efficacy, the more active the effort. If students' perceived self-efficacy for a certain task matches their estimates of how much the
task demands, the students will expend the efforts and persist in completing the task (Williams & Leonard, 1988).

Lent, Brown, and Larkin (1984) suggested that students' beliefs about their abilities to successfully complete educational requirements were predictive of subsequent academic performance. Students reporting relatively strong self-efficacy scores generally achieved higher grades and were much more likely to persist than those with low self-efficacy scores.

Most of the research on self-efficacy has examined its importance relative to college students' perceived career options, (Betz & Hackett 1981, 1983; Lent, Brown, & Larkin 1986). Only recently has research begun to look at the relevance between self-efficacy and academic performance (Multon, Brown, & Lent 1991). This research has been focused primarily on students enrolled in science and technical majors at predominantly White universities.

Statement of the Problem

The writer feels that nonacademic factors, such as levels of spirituality, homogeneity of faculty and peers, and campus environment, are as important or may be more important than grade point averages (GPA) and Scholastic Aptitude Test scores (SAT) in predicting academic achievement for African-American students. Self-efficacy, as revealed in work by Bandura (1977, 1982), has been more convincing than other nonacademic factors in predicting
academic performance among selected groups of college students. Lent, Larkin and Brown (1984, 1986, 1987) also point out, in their research, that self-efficacy is a strong predictor of academic performance. However, the majority of this research fails to directly address the relationship between self-efficacy and academic performance among African-American college students enrolled at predominantly Black institutions.

Because of the paucity of research that addresses the relationship between African-American students' academic performance and levels of self-efficacy, the writer was inspired to look at self-efficacy as it pertains to the differences in self-efficacy and academic performance among African-American students who are enrolled in predominantly Black institutions. Specifically, this research was concerned with determining whether or not self-efficacy of African-American students, attending a predominantly Black institution, was related to academic performance. In addition, this investigation was designed to determine (1) the relationship between self-efficacy and grade point average (GPA) of African-American college students majoring in science and technical areas, attending a predominantly Black institution, and self-efficacy and grade point average (GPA) for selected White subjects attending a predominantly White institution and majoring in science and technical areas, (2) differences in self-efficacy scores
for African-American male and female students in science and technical areas attending a predominantly Black institution, and (3) differences in self-efficacy scores for African-American male and female students who are nonscience majors.

Additionally, this study attempted to determine if a correlation exists between self-efficacy, Scholastic Aptitude Test scores, and grade point average (GPA) for African-American students, science and nonscience, attending a predominantly Black institution.

**NEED FOR THE STUDY**

The majority of the research on self-efficacy and academic performance involves White student populations enrolled at predominantly White institutions majoring in the science and technical fields (Lent, Brown, & Larkin 1984; Taylor & Betz 1983). However, there is little evidence of research that was focused on (1) self-efficacy and diverse disciplines and (2) self-efficacy and academic performance of African-American college students enrolled in a predominantly Black institution.

Some initial research suggests that the correlation between self-efficacy and academic performance is positive, e.g., Lent, Brown, & Larkin (1987). Therefore, more work is needed in the area of self-efficacy which includes students attending predominantly Black institutions, as compared with students attending predominantly White
institutions. Only through continued scientific investigations can a significant determination be made between how a person perceives his or her ability to reach desired goals and his or her academic achievement.

This type of information would be useful to those who work with students in general, as well as, African-American students in particular.

PURPOSE OF THE STUDY

The purpose of this study was to investigate the correlation between self-efficacy and academic performance. Specifically, this study explored the correlation between self-efficacy, Scholastic Aptitude Test (SAT) scores and grade point averages among African-American male and female college students enrolled at a predominantly Black institution.

NULL HYPOTHESES

To achieve the purpose of this study, the following Null Hypotheses were tested.

Hypothesis #1

There is no statistically significant correlation between self-efficacy scores and grade point average (GPA) of African-American participants majoring in science and technical areas.

Hypothesis #2

There is no statistically significant difference between the mean scores of self-efficacy and grade point
average for African-American students who score high on self-efficacy and students who score low.

Hypothesis #3

There is no statistically significant correlation between self-efficacy scores and grade point average (GPA) for African-American males majoring in science and technical areas.

Hypothesis #4

There is no statistically significant correlation between self-efficacy scores and grade point average for African-American females majoring in science and technical areas.

Hypothesis #5

There is no statistically significant correlation between self-efficacy and grade point average for African-American participants who are nonscience majors.

Hypothesis #6

There is no statistically significant correlation between self-efficacy and grade point average for African-American males who are nonscience majors.

Hypothesis #7

There is no statistically significant correlation between self-efficacy and grade point average for African-American females who are nonscience majors.

Hypothesis #8

There is no statistically significant difference
between the mean self-efficacy scores of African-American male participants and self-efficacy scores of African-American female participants majoring in science and technical areas.

Hypothesis #9

There is no statistically significant difference between the mean self-efficacy scores of African-American male and self-efficacy scores of African-American female participants who are nonscience majors.

Hypothesis #10

There is no statistically significant difference between mean self-efficacy scores of science and nonscience participants.

Hypothesis #11

There is no statistically significant difference between the mean grade point averages of science and nonscience participants.

Hypothesis #12

There is no statistically significant correlation between Scholastic Aptitude Test (SAT) scores and Self-Efficacy scores for African-American male and female students.

Hypothesis #13

There is no statistically significant correlation between self-efficacy and Scholastic Aptitude Test scores (SAT), self-efficacy and grade point average, and
Scholastic Aptitude Test scores (SAT) and Grade Point Average (GPA) for African-American male and female students.

Definition of Terms

For the purpose of this study, the following constructs have been operationally defined as listed below.

**Academic Performance.** Performance as measured by grade level and cumulative grade point average.

**Grade Point Average (GPA).** A cumulative grade point average between 0.0 and 4.0 on a 4-point scale.

**Self-Efficacy.** One's beliefs about his or her ability to execute a behavior required to produce a desired outcome as measured by Sherer's Self-Efficacy Scale.
CHAPTER II

REVIEW OF THE LITERATURE

This chapter attempts to delineate selected literature and research considered most relevant to the present investigation. The purpose of this section is to present background information on the evolution of Self-efficacy Theory. Specific variables to be investigated were: self-efficacy and academic performance. This review of the literature is organized into five sections. They are focused on the major variables of the study and their relevance to the academic performance of African-American students enrolled at a predominantly Black institution.

First, the theoretical foundation of self-efficacy is presented. Second, a general review of research on academic performance is provided which focuses on college students in general and African-American students in particular. Also included, are some factors that influence academic performance as it relates and impacts on the academic performance of African-American students. Thirdly, an in-depth look at the available literature is provided on self-efficacy and academic performance as it relates to (a) college students in general, (b) students' race, (c) students majoring in science and technical
fields, and (d) gender. Fourthly, a description is provided of self-efficacy instruments utilized in previous studies relating to self-efficacy and academic performance. Lastly, empirical research related to the major variables of this investigation will be presented.

Self-Efficacy

Self-efficacy, defined as one's belief about his or her ability to execute a behavior required to produce a desired outcome, was derived from Bandura's (1977) social learning theory. Self-efficacy theory asserts that personal mastery expectations are the primary determinant of behavioral change. According to this theory, two types of expectations exert powerful influences on behavior: outcome expectations or the belief that certain behaviors will lead to certain outcomes; and self-efficacy expectancy or the belief that one can successfully perform the behavior or task (Maddux, Sherer, & Rogers 1982).

According to Bandura (1977, 1982, 1986), self-efficacy expectations determine: (a) whether or not a person will begin to cope with a potentially unpleasant situation, (b) if the individual will work to accomplish a goal, (c) how much effort the individual expends to reach the goal, and (d) how long the individual will continue to work in the face of frustrations and aversions. As expected, Bandura (1986) concluded that people who believe they can effectively accomplish goals will begin sooner, work
harder, and continue to work longer than would those who do not believe they can effectively accomplish their goals.

Bandura's theoretical framework (1977, 1982, 1986) focused on the importance of self-referent thought in directing change and human behavior. That is to say, individuals can learn how to strengthen their efficacy expectations. Self-efficacy has been hypothesized to influence choice of behavioral activities, effort expended, persistence in the face of obstacles, and task performance (Bandura 1986).

Consideration of self-schemata (not directly related to self-efficacy, but has psychological implications) is essential for an understanding of the self-concept. Self-schemata are defined as cognitive categories or generalizations about the self. They affect the individual's expectations about what should and can be done in various situations and facilitate the maintenance of self-esteem. Self-esteem is defined as an overall judgment of personal worth or a self-evaluation (Schlenker 1980). In fact, the central tenet of Tesser's self-esteem maintenance model (Tesser & Campbell 1982) is that people are motivated to maintain a positive self-image. Not only do people want to believe they are competent, they often want others to believe this as well (Tesser & Campbell 1982). Furthermore, according to Tesser and Campbell (1982), "If a situation promises an inevitable loss in self-evaluation, the individual will behave so as to
minimize the loss. If a situation presents an opportunity to increase self-evaluation, then the individual will take the opportunity" (p.5).

Schlenker (1980) argued that, if what people think about themselves, how they evaluate their attributes, and what they believe they can accomplish given their attributes and the situation are known, then predictions can be made about their behavior.

The implications in these theoretical underpinnings are the notions that student may be motivated or committed to complete their goal of a college education but not succeed. If they do not believe in themselves or have not had a series of accomplishments, they may not put forth the proper effort to execute the task. There is evidence that motivational variables are highly correlated to academic performance for all students (Astin 1982; Gerardi 1990).

In summary, whether individuals make proper efforts to cope with problems and how long they persist in their efforts to change, are determined by the extent to which they believe they are capable of such change. Students are unlikely to make the effort for superior grades if they do not think it is possible (Anderson 1989).

Academic Performance

Traditionally, academic performance has been measured by cognitive variables, specifically, the student's cumulative college grade point average (GPA) and Scholastic Aptitude Test scores (SAT). A substantial body of research
has shown clearly that the student's SAT scores and grade point average in high school and college is a major indice of academic performance. Research has shown that a student's undergraduate GPA is more closely related to persistence than any other cognitive measure (Astin 1975; 1982; Tinto 1975).

After an in-depth search of the literature, it was found that the majority of research conducted on academic performance occurred in the early 1970s and 1980s. The reason being, during this time universities were focusing on how to increase enrollment and student retention (Aitken 1982; Bean 1980, 1982; Pascarella 1985; & Seigleman 1971).

Judy (1971) ascertained that a relationship existed between academic achievement, (i.e., GPA and high school average) and SAT Verbal, Mathematics and Total scores. Judy (1971), stated that there was a high correlation between high school performance and college GPA for both males and females.

Several authors (Astin 1975; Stanley 1971), concluded that the ability of the SAT to predict GPA was reliable. However, Seigleman (1971) and Pederson (1975) concluded that a low correlation existed between SAT and college GPA.

More importantly, recent research, pertaining to academic performance, reveals that cognitive, as well as environmental variables, seem to have bearings on the likelihood that students will succeed academically (Fleming
There is evidence to suggest that the success of students, especially African-American students, in an academic program is affected by their environmental perceptions. That is, it has been found that students who report higher GPAs, also report greater satisfaction with involvement in campus life according to Allen (1986) and Trippi and Stewart (1989).

**Factors Influencing Academic Performance**

Researchers have made attempts to identify variables, other than scholarship, that affect academic performance (Guthrie 1976; Jones 1980). For instance, Guthrie (1976) and Jones (1980) found that disadvantaged individuals perform academically less well than advantaged individuals. Much of the findings was attributed to test and cultural biases, which appeared to have impacted negatively on the performance of disadvantaged individuals.

Willingham (1985) found that persistence and extracurricular accomplishments are predictive of academic success. Astin (1975, 1985) and Stikes (1984) have also noted that students tend to be more successful, academically, if they participate in extracurricular activities than when they do not participate in activities outside of the classroom.

Investigations involving African-American students, indicate that community service, campus environment, levels
of spirituality, and parents' level of education can be used as predictors of academic success (Hughes 1987; Stikes 1984). Of these four factors, the two areas that have been investigated consistently are parents' levels of education and campus environment (Styles 1985).

The finding that family background characteristics contribute to African-American students' successes or failures in the academic environment should not be surprising according to Stage and Hossler (1989). For instance, York-Anderson and Bowman (1991) and Billson and Terry (1982) looked at the relationship between family background characteristics, e.g., parents' education, and the educational plans for their children. The results indicated that the parents' educational levels were positively correlated with their expectations for their children. That is to say, children whose parents had attended college were expected to attend college as well. However, parents of first generation children had lower expectations for college attendance than did parents of second generation children. These differences were statistically significant. The investigators contend that the data could explain the high attrition rate among first generation college students.

It seems that whether or not an African-American student is enrolled at a predominantly Black institution versus a White institution has an impact on his or her
success or failure as well. Hughes (1987) argues that predominantly White universities are perceived by African-American students as environments that are predominantly intellectually oriented, independence oriented, achievement oriented, and competition oriented. Such orientations are least likely to produce the best environment for African-American students, for whom socially oriented climates are valued. There is evidence that African-American students find predominantly White campuses alienating, and their performance is negatively affected (Allen 1985; Fleming 1984; Gunnings 1982). The environment of the student is said to have an impact on his or her subsequent growth and development, therefore, resulting either in the student's remaining in college until graduation or prematurely leaving college (Spaights, Kenner, & Dixon 1987).

Hughes (1987) explanation for the aforementioned phenomenon was that African-American students, at predominantly White institutions, were preoccupied with basic issues of "intellectual survival." In most cases, they realize that social, personal, emotional, and cultural development may be delayed or postponed while on these campuses; not because of the inability to balance academic and social goals, but because of the unpreparedness of the White university to plan for and respond to their social and developmental needs. Hughes (1987) contended that African-American students, in predominantly White
universities, consciously gauge and postpone the levels and intensities of their social, personal, emotional, and cultural developments.

The aforementioned interaction, between the institutional environment and the individual, appears to influence the student's level of commitment to the goal of graduation and commitment to the institution (Stoecker, Pascarella, & Wolfe 1988). For example, Fleming (1984) designed a longitudinal investigation to assess African-American students' matriculation in predominantly Black institutions in comparison to their matriculation in predominantly White universities. It was concluded that: (1) African-American males development suffers most on predominantly White campuses compared to their control of the turf on Black campuses; (2) African-American females are more assertive on predominantly White campuses and assume a matriarchal role on predominantly Black campuses; and, (3) predominantly Black institutions positively influence African-American students' cognitive development. This influence is not found on predominantly White campuses. Therefore this allows African-American students to reach their full potential and greater persistence in college. Fleming (1984) also focused on historically Black colleges in the South in relation to their environment. Fleming (1984) concluded that students at these colleges were well rounded students, intellectually and socially.
In addition, these students were happier with the decision to attend their particular college and satisfied with their academic performance.

Another factor which has been shown to influence academic performance is that of peer reference groups. For example, students compare their individual performance and standing to that of their peers. Devos (1980) investigated the importance of peer or reference groups in the development and academic success of African-American college students. Similarly, Gurin and Epps (1975), in a series of studies, looked at several historically Black colleges between 1964 and 1974 and concluded that the African-American students' sense of identity involves both uniquely personal and collective elements that result from social interactions and group identification, which are sometimes absent at predominantly White institutions. These findings could help explain the results from the work of Brookover and Passalacqua (1982). The data from this study indicated that African-American students, in predominantly Black institutions tended to estimate their self-concepts as higher than did White students who attended predominantly White schools.

In other words, researchers have shown through various studies, that academic performance and persistence of African-American college students, on predominantly Black campus can be attributed to the nurturing social
environment, integration of religious freedom, feelings of self-worth, promotion of cultural awareness, group identification, and other nonacademic factors in student development (Fleming 1984; Gurin & Epps 1975; Stikes 1984; Styles 1985; Tinto 1987). Whether or not students succeed or fail in school is not just a matter of their academic abilities. Of primary interest, to this investigation, is the impact of a highly regarded dispositional variable, namely, self-efficacy, on academic performance.

**Self-Efficacy and Academic Performance**

A growing number of studies has indicated that noncognitive factors (i.e., self-efficacy) are important in predicting successful academic performance among college students (Brown, Lent, & Larkin, 1987; Lent, Brown, & Larkin, 1984; Tracey & Sedlacek, 1985). The literature documents a dearth of research related to self-efficacy and academic performance among African-American college students.

Several theorists have recently recognized the relevance of self-efficacy theory to the understanding and prediction of career-relevant behavior such as academic performance (Brown, Lent, & Larkin, 1988; Hackett & Betz, 1981; Lent, Brown, & Larkin, 1986; Taylor & Betz, 1983). For instance, Hackett and Betz (1981) reported that an individual's efficacy expectations will determine both his or her perceived academic options and persistence.
Subsequent research involving primarily college students has investigated self-efficacy beliefs and has found it to be predictive of academic performance variables and persistence in certain academic majors (Betz & Hackett, 1981; Lent, Brown, & Larkin, 1986; Siegel, Galassi, & Ware, 1985).

There are several studies that support a positive relationship between self-efficacy and academic performance (Lent, Brown, & Larkin, 1987; Locke, Frederick, Lee, Bobko, 1984; Wood & Locke, 1987).

Lent, Brown, Larkin (1987) stated that persons with high self-efficacy scores and high scholastic aptitudes tend to achieve more favorable academic outcomes than those with lower self-efficacy and aptitude scores. This is in line with Bandura's (1982) and colleagues (Bandura & Cevrone, 1986; Bandura & Shunk, 1981) research in a number of setting investigating the causal power of self-efficacy. These researchers posit that self-efficacy has been found to influence: level of performance, task choice, and persistence. In an earlier study, though dated, but has relevance to this investigation, Locke & Bryan (1968) found that, for many tasks, including grade performance, given adequate ability, harder more challenging goals lead to higher task performance, than easier or less challenging goals. In a similar study, Goldfried and Robbins (1982) found that academic self-efficacy perceptions are equally
facilitative of academic performance across many levels of scholastic aptitude.

Shunk (1984) noted that although self-efficacy refers to performance expectations about capabilities in a particular domain of activity, more generic aptitudes and prior experiences can influence students' self-efficacy for learning new materials. He also pointed out that self-efficacy had divergent effects in achievement settings. From this perspective, self-efficacy can influence choice of activities. Students who hold a low sense of efficacy for acquiring cognitive skills may attempt to avoid tasks, whereas, those who judge themselves more efficacious have been found to participate more eagerly.

Self-efficacy also can affect motivation (Shunk 1984). When facing difficulties, students who hold a high sense of efficacy for learning expend greater effort and persist longer than those who doubt their capabilities (Bandura 1986).

There is evidence to suggest that students' decisions and actions are influenced by their cognition and motivations (Hodges 1988). Hodges (1988) contended that when perceived self-efficacy for a certain task matches the estimate of how much the task demands, individuals will tend to persist in completing the task. He also stated that if people believe that they can successfully complete a task, even in the face of obstacles or aversive
experiences, they will tend to make vigorous and persistent efforts to complete it. Furthermore, students' decisions to persist cover several kinds of acts: (1) re-enrolling for another college term, (2) staying enrolled in a class until the end of the term, (3) continuing to do the work assigned by the instructor, (4) making an effort to succeed, and (5) persisting when trouble occurs by increasing effort.

The self-efficacy model would similarly assume that students who judge themselves to be highly capable will select challenging tasks and show the type of high perseverance that ensures success. Therefore, self-efficacy is concerned with people's judgements of how well they can use the abilities they possess (Shunk 1984).

**Self-efficacy Race**

The majority of the literature, regarding self-efficacy and academic performance, has focused on White students enrolled at predominantly white institutions. To date, no evidence of research has been found that compares minority college students, specifically, African-American college students' self-efficacy and academic performance with that of White students. Therefore, the research discussed here focused on self-efficacy and academic performance pertaining to African-American students enrolled at predominantly White institutions.

Burlew (1980) found that aspirations, expectations,
self-concept of ability, and sense of control over outcomes were related to academic performance. Burlew (1980) further stated that these factors also predict educational attainment and retention of African-American students enrolled in institutions of higher education. In addition, there is also evidence that the desire and aspiration to continue one's education and to seek a prestigious job, have positive effects on post-secondary education participation. Findings indicated that those students who obtained high grade point averages (GPAs) as freshmen, and who perceived themselves as being more personally competent, efficacious, tended to perform academically (Burlew 1989).

Tracey & Sedlacek (1984) had also noted that personal characteristics of African-American students, such as self-perceptions, could also be used to predict academic performance. These authors pointed out that positive self-concept and realistic self-appraisal to be predictive of academic success of African-American students during their first semester.

Williams & Leonard (1988) identified four variables as potentially important correlates in African-American students' persistence and academic progress: self-efficacy, racial identity, vocational interest and social and academic integration. Among these variables, Williams & Leonard (1988) found that cognitive measures (i.e., GPA and
SAT scores) were more important for African-American students than were noncognitive indices (i.e., self-efficacy). This finding differs from the results of studies (Tracey & Sedlacek, 1985) in which noncognitive variables were reported to be more relevant indices of African-American students' academic performance than were traditional measures.

Self-efficacy and College Major

The majority of the studies relating to self-efficacy and academic performance utilized subjects who were science and technical majors at predominantly White institutions. Lent, Brown, and Larkin (1984, 1986, 1987) prolific writers on self-efficacy and academic performance, have found that students majoring in science and technical areas are more likely to possess a high level of self-efficacy. These authors contend that students' beliefs about their abilities to complete the educational requirements of various science and engineering fields were predictive of subsequent academic performance.

Hackett and Betz (1981) hypothesized that self-efficacy beliefs are related to a person's range of perceived career options, and to persistence and success in their chosen fields. That is to say, that students who have high self-efficacy will major in those areas that require high performance (e.g., science and math). These students will also persist longer under adverse conditions,
than those who are less efficacious.

Taylor and Betz (1983) reported that relatively strong levels of self-efficacy were significantly predictive of levels of career indecision. Students reporting less confidence in their abilities to complete decision-making tasks were more undecided on college majors than those reporting higher levels of confidence. Attention has also been generated in the literature by the belief that vocational interests could determine the degree of an individual's satisfaction with, and success in, particular college majors (Barak 1981). Findings indicate that students achieve better outcomes when they select educational majors that are more compatible with their interests and their personality orientations.

According to LeBold, Linden, Jagacinski, and Shell (1983) and the Self-Directed Search Occupations Finder (Holland 1978), interest codes, (Investigative, Realistic, and Conventional), are characteristic of engineering and computer science orientations. Therefore, students scoring high on these codes were found to have high levels of self-efficacy. Hence, African-American students, who major in these technical areas and who have interest orientation that match group membership, should not only persist longer, but should also be more successful in achieving academic progress according to Williams and Leonard (1988). However, no evidence of studies have been found that
researched African-American students' self-efficacy and academic performance in diverse college majors.

**Self-efficacy and Gender**

The need for greater understanding of gender differences, as it relates to self-efficacy and academic performance, is being addressed by an increasing number of studies (Betz & Hackett 1981; Hackett 1985; Hackett & Betz 1983). However, there continues to be a dearth of research that adequately addresses self-efficacy and its impact on academic performance among African-American males and females. The research reported here serves as a baseline for future research, especially as it pertains to African-American male and female college students.

Gender differences in self-efficacy have been observed by Campbell and Hackett (1986) and Hackett and Campbell (1987). Women's efficacy expectations were more strongly affected by both the success and failure experiences than were men's self-efficacy expectations. Evidence also suggests that women are more likely to attribute successful performance to external causes, such as luck, rather than stable internal causes, for example, skill. This trend is reversed for males.

Hackett and Betz (1981) reported that college males' efficacy expectations were equivalent across traditionally male and female occupations, but that women's efficacy varied according to the gender appropriateness of
occupation—with higher efficacy expectations than men for traditionally female occupations and lower efficacy expectations for male-dominated occupations. Similarly, Post-Kammer and Smith (1986) and Layton (1984) found gender differences in self-efficacy for certain traditionally male and female occupations. They found statistically significant relations between self-efficacy and vocational interests. Post-Kammer and Smith (1986) also suggested that women may be more strongly influenced than men by self-efficacy when considering college majors.

Several researchers found strong relationships between prior math and science performance and college major among male and female students (Hackett 1985; Hendel 1980; Lent, Lopez, & Bieschke 1991). These researchers concluded that low self-efficacy expectations, as a result of prior experience, was a limiting factor among women's choices of science based majors and their perceived ability to perform adequately in this field. Therefore, self-efficacy is a joint predictor of academic performance.

It could be that females would benefit more if they learn that they can, indeed, exert personal control over various situations and obtain success and that their success can be attributed to stable causes. More research is needed in this area before any conclusive statements can be made.
**Description of Self-efficacy Instruments**

After an extensive search of the literature, it was found that there are limited instruments used in measuring self-efficacy and academic performance. The instruments discussed here are from previous studies on self-efficacy as it relates to academic performance. It is important to note that many studies utilized the same instrument (Hackett & Betz 1981; Lent, Brown, & Larkin 1984, 1986, 1987). Also, these instruments were designed to measure self-efficacy for students enrolled in science based majors.

The self-efficacy instrument utilized in numerous studies by Lent, Brown, and Larkin (1984, 1986, 1987), Brown, Lent, and Larkin (1988), and Lent, Larkin, and Brown (1989) measured two indices of self-efficacy strength: Self-Efficacy for Technical and Scientific Fields—Educational Requirements (ER-S) and Self-Efficacy for Academic Milestones (AM-S). The first measure required subjects to indicate their confidence in their abilities to complete the educational requirements of 15 science and engineering fields, using a 10-point scale ranging from completely unsure (1) to completely sure (10). Strength scores for educational requirements (ER-S) were calculated by dividing the summed strength estimates by 15, the total number of major and career fields. In contrast to ER-S, which requires efficacy ratings in relation to academic
major titles only (e.g., Electrical Engineer), the second measure of self-efficacy had subjects rate their abilities to perform specific accomplishments critical in science and engineering majors. Confidence ratings, also made on a 10-point scale, were summed across items and divided by the total number of items (11), yielding a measure of strength of self-efficacy for academic milestones (AM-S). Both scales have shown adequate psychometric properties; for example, internal consistency reliability, assessed by coefficient alpha, was .89 for both ER-S and AM-S. The two scales were moderately intercorrelated ($r = .52$).

Wood and Locke (1987) developed a 29-item self-efficacy scale consistent with Bandura's methodology. In this scale subjects were asked to indicate whether they could achieve a level of attainment (yes or no) and their degree of confidence in their abilities to perform at specific levels (on a 0 to 100 scale). Self-efficacy magnitude (SEM) was defined as the total number of yes responses self-efficacy strength (SES) was defined as the mean confidence rating for all items. SEM and SES for each task area were correlated with final grades received in courses. The correlation between all but one of the SES scores and grades were statistically significant at the .05 level of confidence. However, the SEM scales suffered from severe ceiling effect (and thus restriction of range) and were not statistically significantly correlated with
Betz and Hackett (1983) developed the Mathematics Self-efficacy Scale (MSES) to study math self-efficacy expectations. This scale contains 52 items identified as relevant to the study of math-related self-efficacy. The scale is composed of three subscales: (a) the math tasks subscale, consisting of 18 items involving "everyday" math tasks; (b) the math course subscale, consisting of 16 math-related college courses; and (c) the math problems subscale, consisting of 18 arithmetic, algebra and geometry problems.

For the course subscale, subjects were instructed to rate their confidence in their abilities to complete each course with a grade of "B" or better. For the math subscale, subjects rated their confidence in their abilities to successfully perform the tasks or solve problems. Confidence ratings for all scales were elicited on a 10-point continuum (0=no confidence, 9=complete confidence). Moderate item-total scores correlations for the MSES subscales and a high internal consistency reliability (coefficient alpha) for the total scale was .96.

With regard to self-efficacy scales utilized in a study pertaining to African-American college students, Williams and Leonard (1988) employed The Science and Engineering Career Questionnaire (Lent, Brown, & Larkin
This scale measured an individual's self-efficacy belief in being able to perform particular tasks or behaviors related to the sciences and engineering. The 30-item questionnaire consists of two components. One measures the "level" and the other measures the "strength" of self-efficacy expectations. The scale's internal consistency ranges from $r = .79$ to $r = .85$, and its validity is reported to be $r = .30$.

However, for the purpose of this investigation, it was found that the instrument constructed by Sherer, Maddux, Mercandante, Dunn, Jacobs, and Rodgers (1982) was more relevant. This self-efficacy scale was better able to measure the self-efficacy variable in this study. Also, this self-efficacy scale could be applied to a more diverse academic discipline. This scale contained 30-items divided into two subscales: (a) a 17-item general self-efficacy scale, and (b) a six-item social self-efficacy scale. Seven (7) items, although not used for scoring, were filler items. The items in the Self-efficacy scale focused on three areas: (a) willingness to initiate behavior, (b) willingness to use effort in completing the behavior, and (c) persistence in the face of adversity.

Research indicates that this self-efficacy scale has acceptable reliability and validity. Cronbach Alpha Reliabilities of .86 and .71 were obtained for the general self-efficacy scale and the social self-efficacy scale,
respectively. Subjects, responding to the Self-efficacy scale, were requested to rate each item on the scale utilizing the six-point Likert-type scale ranging from "strongly disagree" to "strongly agree." Construct and criterion validities for the scale were correlated with several personality measures, such as, Rotter's (1966) Internal and External Personality Inventory and Gurin, Lao and Beattie (1969) Personality Inventory.

Related Research

Self-Efficacy has recently received considerable attention in the literature. The research has focused on predominantly White science and technical majors at predominantly White universities. To date, no evidence of studies has been found that examines self-efficacy and academic performance among African-American college students enrolled at predominantly Black institutions. It remains unclear if the findings presented here, which have examined self-efficacy among the White college student population, apply to African-American students enrolled at a predominantly Black institution.

Self-efficacy and Academic Performance

As previously discussed, self-efficacy appears to offer an enhanced understanding of the academic performance of college students. Lent, Brown, and Larkin (1984) examined the relation of self-efficacy beliefs to subjects' persistence and success in pursuing science and engineering
college majors.

Subjects in this study consisted of 42 students, 28 males and 14 female undergraduates, enrolled in a career and educational planning course for a 10-week period. The study was focused on science and engineering fields. Students completed several measures of self-efficacy, which involved their perceived abilities to fulfill the educational requirements and job duties of a variety of technical and scientific occupations.

Findings indicated that subjects who reported high self-efficacy for educational requirements generally achieved higher grades. It was also found that students in the technical and scientific majors persisted longer than did those with low self-efficacy. Therefore, both level and strength of self-efficacy appear related to academic outcome according to Lent, Brown, and Larkin (1984).

In a 1986 study conducted by Lent, Brown and Larkin explored the relation of self-efficacy beliefs to educational and vocational choice and performance. This study assessed the extent to which self-efficacy beliefs along with other variables, predict academic grades, persistence, and perceived career options in students considering science and engineering majors.

Subjects for this study consisted of 105 undergraduates (75 men and 30 women) enrolled in a 10 week career and educational planning course. The participants
were primarily freshmen and sophomores with a mean chronological age of 20 years. Subjects completed measures of self-efficacy, self-esteem, expressed vocational interest and range of perceived vocational options in technical and scientific fields. Hierarchical regression analysis, among the variables, were completed to examine the contribution of each variable in predicting academic performance. Results indicated that self-efficacy contributed significant variance to the prediction of grades, persistence and career options in science and technical fields.

In another study, Brown, Lent and Larkin (1989) investigated the interactive effects of self-efficacy beliefs on the relationship of scholastic aptitude and academic outcomes, achievement and persistence. Subjects included in this study consisted of 70 students (53 men and 17 women) enrolled in a ten-week career planning course for undergraduates. Participants were primarily freshmen and sophomores, with a mean chronological age of 19.84. Subjects were administered the self-efficacy scale for educational requirements (ER-S) in technical and scientific fields, and the self-efficacy for academic milestones (AM-S). The first scale (ER-S) rated the students' personal confidence in their abilities to complete educational requirements in science and engineering fields. The second measure (AM-S) required subjects to rate confidence in
their abilities to perform specific accomplishments critical to success in more science and engineering majors.

Results of this study revealed that the strength of students' beliefs in their abilities to complete successfully a variety of science and engineering tasks facilitated academic performance and persistence in their selected major.

In 1987, Lent, Brown, and Larkin explored the differential contributions of three theoretically based variables: self-efficacy, interest congruence, and consequence thinking of students considering science and engineering fields. The subjects were 105 students (75 men and 30 women employed in Lent et al., 1986) enrolled in a one-quarter (10 week) career and educational planning course for undergraduates considering science and engineering majors. Subjects completed measures of self-efficacy, career indecision, and self-esteem. Also, several measures were obtained from university records, including PSAT scores, college grades, and declared majors. Results of multiple regression analysis indicated that self-efficacy was most useful of the three variables in predicting grades and persistence in science and technical majors.

Multon, Brown and Lent (1991) used a Meta-Analytic Investigation to test the hypotheses that self-efficacy beliefs relate positively to academic performance and
academic persistence. The researchers conducted this investigation by using 39 studies that included the following: a) a measure of self-efficacy, b) a measure of academic performance, and 3) sufficient information to calculate appropriate effect size estimates. The results revealed positive and statistically significant correlations between self-efficacy and academic performance and persistence across a wide variety of subjects, experimental designs, and assessment methods utilized in the studies.

A study conducted by Lent, Lopez, and Bieschke (1991) explored (a) the relationships of four hypothesized sources of efficacy information (personal performance accomplishments, vicarious learning, social persuasion, and emotional arousal) to mathematics self-efficacy percepts and (b) the relations among self-efficacy, outcome expectations, interest in mathematics-related college courses, and choice of science based majors. Subjects utilized in this study were 138 (53 men and 85 women) introductory psychology students.

The instruments utilized in this study were the Mathematics Self-efficacy Index, consisting of a slightly revised version of Betz and Hackett's (1983) Mathematics Self-efficacy Scale. Subjects were asked to indicate their confidence in being able to complete a variety of mathematics-related college courses with a grade of "B" or
better. Responses ranged from no confidence at all (0) to complete confidence (9). This measure differed from the original only in that certain courses needed to be retitled and one course items were omitted to reflect local course offerings.

The perceived course of mathematics self-efficacy information was assessed with a 40-item instrument designed for this study. The measure consisted of four 10-item scales corresponding to the four primary sources of efficacy (1) personal accomplishment, (2) vicarious learning, (3) social persuasion, (4) emotional arousal. Half of the items were positively worded and half were negatively worded.

Mathematics course interests were assessed with a 15-item scale asking subjects to indicate their degree of interest in each of the courses listed on the mathematics self-efficacy measure. Responses were obtained on a 10-point scale ranging from strongly disinterested (0) to strongly interested (9). Higher scores implied stronger interest or positive outcome expectations.

Finally, the science-relatedness of career choice was assessed by classifying subjects' expressed choices according to a 5-point science-nonscience continuum. Lower scores characterized fields with a relative absence of math and science content, whereas higher scores reflected progressively greater scientific emphasis.
Results indicated that the efficacy informational sources were significantly predictive of and helped explain gender differences in mathematics self-efficacy, that outcome expectations complemented self-efficacy in predicting interest and choice indices, and that the effects of self-efficacy on science-related major choice were mediated by interest.

The findings of these studies have relevance for researchers interested in the assessment of factors that influence students' academic success. However, there are limitations to these studies in that they have failed to generally address the issues of African-American college students. Another need would be to research students who were not already enrolled in a career planning course and to utilize participants who were not enrolled at predominately White universities.

Self-efficacy, Academic Performance and Race

In self-efficacy studies that were relevant to African-American college students, Steward (1989) studied the relationship between the self-concept of Black university students at a large predominantly White institution and their academic persistence. Findings generally supported previous research identifying the importance of self-efficacy in academic performance to African-American students.

Subjects for this study consisted of forty, 18 year-
old freshmen. This African-American sample consisted of 24 females and 14 males enrolled at a predominately white university. The subjects completed a Demographic Questionnaire (SDQ) and the Personal Competency Rating Scale (PCI). The PCI consisted of 30 items designed to assess the extent to which individuals perceived themselves to possess competencies in four areas: social, personal, problem solving, and functional.

The findings indicated that those students who obtained higher freshmen GPAs and who perceived themselves as being more personally competent, tended to persist academically when a follow-up study was done after the first semester of the participants' fourth academic year.

Additionally, Abatso (1982) conducted a study which did not measure self-efficacy, but has similarity to self-efficacy and academic performance. This study focused on self-concept of academic ability. There were 265 freshmen to determine whether there was an identifiable coping personality related to academic performance and retention for Black college students. The participants, from a small, historically Black, private institution, were administered a questionnaire during freshmen orientation week. The instrument measured self-concept of academic ability, locus of control, expectancy of success and failure, perception of the opportunity structure, coping, and verbal ability.
The findings of this study indicated that students who had persisted, learned personality attributes and coping skills that gave them a sense of control over events in their academic environment. Therefore, this control enabled them to persist in the education process. As stated previously, self-efficacy and the ability to exert personal control in one's life are significantly related (Bandura 1986).

Williams and Leonard (1988) examined the relationship between the academic progress of Black undergraduates in technical programs and racial identity, self-efficacy, college environment, and vocational interests. The study was conducted at a large, eastern, land grant university.

The sample consisted of a randomly selected sample group of 115 Black male and 91 Black female undergraduates who were majoring in computer science or engineering. Four instruments were utilized to collect the data: 1) The Science and Engineering Career Questionnaire (Lent et al., 1983) a 30 item questionnaire, which measured an individual's self-efficacy belief in being able to perform particular tasks or behaviors related to sciences and engineering; 2) The Racial Identity Attitude Scale (Parham & Helms, 1981) consisting of 48 items that measured four types of attitudes that Black individuals are said to experience as they search for more authentic identity; 3) The Vocational Preference Inventory (VPI) (Holland 1978)
which consisted of a 160 occupational items grouped among 11 scales. Six of the scales were related to interests and the other five pertain to personality assessment; 4) The Academic and Social Integration Inventory (Pascarella & Terenzini 1980) based on Tinto's (1975) model on persistence and withdrawal process in higher education. This 34-item scale measures five dimensions related to the college environment.

In addition, information was collected on the student's SAT scores, high school and college GPAs and socioeconomic status (SES). The findings showed that the combined contributions of GPA and SAT were greater than contributions of the research variables (self-efficacy, racial identity, vocational interests, and college environment). Also, cognitive measures were more important for Black students than were noncognitive indices. This is in contrast to the findings of Tracey and Sedlacek (1985) in which they found noncognitive variables to be more relevant indices of Black academic achievement than were traditional measures. However, it should be noted that this study found self-efficacy to be highly correlated with academic performance as pointed out in previous research (Lent et al., 1983, 1986, 1987). Students who scored high on self-efficacy achieve higher levels of academic progress than did students scoring lower on self-efficacy.

The studies mentioned here support the literature that
self-efficacy is an important correlate in predicting academic performance. Although the subjects in the aforementioned studies were African-American students, enrolled at predominantly White institutions, it is still necessary to further research the relationship between self-efficacy and academic performance among African-American college students enrolled at predominantly Black institutions. Also, it is important to note that, the study included African-American students. Comparisons of self-efficacy and academic performance among African-American males and White males and comparisons of African-American females and White females are not possible since the study did not report data broken down into these categories. Further research would be needed to examine if there would be a difference by race and by gender.

Self-Efficacy and Gender

Betz and Hackett (1981) examined the relationship between gender differences and self-efficacy with regard to the educational requirements and job duties of ten traditionally male and ten traditionally female occupations across the six Holland (1985) themes which were: Creative, realistic, artistic, social, and enterprising. Results of this study indicated that college males' efficacy expectations were equivalent across traditionally male and female occupations. However, women's efficacy beliefs vary according to gender-appropriateness of the occupation, with
higher efficacy expectations than men for traditionally female occupations and lower efficacy expectations for male-dominated occupations. Consistent with these results, Layton (1984) found that women's self-efficacy for traditionally female occupations was higher than for nontraditional fields.

Siegel, Galassi, and Ware (1985) conducted an investigation testing the predictive power of two models of mathematics performance: Social learning model (including self-efficacy and outcome expectations, math skills, and incentives) and a math aptitude and anxiety model. Participants were undergraduate students enrolled in an introductory mathematics course.

Results of Siegel, et al (1985) study revealed the superiority of the social learning model over the aptitude and anxiety model in predicting performance on the final examination in the math course. The social learning model accounted for 55% of the variance in math performance, as compared to 16% being accounted for by the math aptitude and anxiety model. Within the social learning model, strength of self-efficacy, skills, incentives, and outcome expectations accounted for unique increments in performance variation.

Wheeler (1983) compared a self-efficacy model to an expectancy and valence model in predicting occupational preferences of male and female college students. Wheeler
operationalized self-efficacy in a manner substantially different from that employed in previous studies. He allowed participants to select occupations on a continuum ranging from low to high in terms of percentage of women employed in the traditional occupation. Subjects' perceptions were then assessed to match ability with perceived ease of success in each occupation.

Results indicated that both self-efficacy and occupational valence were statistically significantly related to occupational preferences, but that self-efficacy was the stronger predictor of the two. Gender differences in self-efficacy were observed and found to relate to the relative percentages of males and females in the seventeen occupations. Gender differences in self-efficacy were also statistically significantly correlated with gender differences in preferences.

The relation of self-efficacy beliefs to occupational consideration in college students was also explored by Ayres (1980). Subjects utilized in the study were 78 males and 110 female undergraduates. Specifically, Ayres assessed self-efficacy with regard to actual tasks required of four occupations, i.e., physician, nurse, college professor, teacher; correlating subjects' self-efficacy ratings with their consideration of these same four occupations. The occupations studied were intended to reflect both gender traditional and nontraditional and math and nonmath
dimensions of occupational choices.

The results of this study showed a statistically significant relationship between self-efficacy expectations and occupational consideration. Although no overall gender differences were found, gender differences were observed with respect to specific tasks, e.g., men scored higher on mathematics and science related items while women's efficacy expectations were higher on stereotypical feminine behaviors such as caring for those who were ill and teaching.

A study by Schoen and Winocur (1988) assesses self-efficacy as it related to women who were already in the work force. This investigation was noteworthy in that it focused on women's aspirations in regard to career moves. Participants for this study were both males and females in academia. The subjects were administered a questionnaire regarding career interests and an Academic Self-Efficacy scale which consisted of 78 questions that measured task performance. It was hypothesized that females would have weaker self-efficacy beliefs in relation to research and administrative tasks. The results of this study supported the hypothesis.

Given the importance of the apparent contribution of self-efficacy to academic performance, and the limited information available regarding gender and African-American students, additional research is needed. The need for this
type information is critical for educators, counselors, and administrators at predominantly Black institutions and those who serve African-American students in predominantly White institutions. Accordingly, the current investigation was designed to assess self-efficacy and academic performance among African-American male and female college students who are enrolled at a predominantly Black institution.

A Recapitulation

The present investigation was concerned with noncognitive factors, i.e., dispositional variables that influence academic performance among African-American students. Of major concern was the extent to which self-efficacy affects academic performance. The prediction calls for a positive relationship between self-efficacy and academic performance, that is, as self-efficacy level increases, so would the student's grade point average (GPA). A second major concern was the possible existence of gender effects on African-American students' self-efficacy scores. It was predicted that African-American females would not score significantly different on the self-efficacy scale than African-American males. The possible effects of other personal factors, such as parental education, living status, standardized test scores, educational aspirations, and extracurricular activities were also examined for exploratory purposes.
CHAPTER III
METHODOLOGY

Survey research techniques were utilized to conduct this study. The methods are listed below.

Site and Setting

The site for this study was a large metropolitan city located in the Southeastern United States. This site was chosen because the information needed to complete the study could be obtained.

The specific setting for this study was a historically Black coeducational institution, with approximately 3,400 students offering both graduate and undergraduate degrees. This institution was selected by the researcher because of its (1) large African-American student population and (2) the willingness of the institution's personnel to permit the researcher to carry out the investigation.

Subject Pool

The subject pool for this study consisted of undergraduate students enrolled in General Psychology during the Spring semester of the 1990-91 academic year. This is a General Education course in which the majority of students are required to take for completion of graduation requirements.
Sample

The population utilized consisted of two hundred and twenty students who were present in the General Psychology classes on the days the data were collected by the researcher. The participants had to meet the following criteria: (1) willingness to participate in the study, (2) time to complete the survey instrument, (3) sign the Student Consent Form, and (4) give the researcher permission to obtain their grade point averages. Students who chose not to participate were excused from the classroom.

Instrument Description

The survey instrument consisted of two sections, referred to as Section A and Section B. Section A was designed to obtain demographic information. Section B, is used to measure self-efficacy (see Appendix C).

Section A - Demographics

The demographic section consisted of 14 items designed to collect vital statistics on the respondents relative to race, gender, age, marital status, student status, living status, parental education, Scholastic Aptitude Test (SAT) scores, American College Testing (ACT) scores, college major, educational aspirations, high school racial makeup, student participation, and church attendance.

Section B - Sherer's Self-Efficacy Scale.
Sherer, Maddux, & Jacob (1982) Self-Efficacy scale
(hereafter referred to as Sherer) was the instrument utilized to measure the noncognitive variable in this study. Specifically, this scale was used to obtain pertinent information concerning the subjects' perceptions of their abilities to reach desired goals. It contained 30 items divided into two subscales: (a) a 17 item general self-efficacy scale, and (b) a six item social self-efficacy scale. Seven (7) items, although not used in scoring, were filler items. The items in the scale focused on three areas: (a) willingness to initiate behavior, (b) willingness to use effort in completing the behavior, and (c) persistence in the face of adversity.

Sherer's Self-efficacy scale has acceptable reliability and validity. A Cronbach Alpha reliability value of .86 was calculated for the general self-efficacy scale and .71 for the social self-efficacy scale. Subjects responding to the Self-Efficacy scale were requested to rate each item on the scale, utilizing the six point Likert-type scale ranging from "strongly disagree" to "strongly agree." Construct and criterion validities for the scale were correlated with several personality measures, such as, Rotter's (1966) Internal and External Personality Inventory and Gurin, Lao and Beattie, (1969) Personality Inventory.

Procedures

There were three study periods for this research: The
Pre-Research Period, Research Period, and the Post-Research Period. These periods and the procedures for each are detailed below.

**Pre-Research Period:**

Procedure 1: The researcher obtained permission to gather information for the study from the Associate Provost and Dean of Student Affairs and the Chairperson of the Department of Psychology. This process included:

a. writing a letter to the Associate Provost and Dean of Student Affairs, asking permission to conduct the study (see Appendix A), and

b. writing a letter to the Chairperson of the Department of Psychology, asking permission to utilize students in each section of General Psychology for the study (see Appendix B).

Procedure 2: The researcher contacted each General Psychology instructor to obtain permission to come to his or her classroom for data collection, to confirm class time, to get the room number, and to obtain the number of students in the class.

**Research Period:**

Procedure 3: The researcher reported to each class at the designated time and place to administer the instrument. The researcher introduced the study and the instrument to the subjects.

Procedure 4: The researcher distributed the
instrument and provided pencils to all of the subjects in each class (see Appendix C).

Procedure 5: The researcher explained the instrument and answered questions posed by subjects.

Procedure 6: The researcher repeated Procedures 3-5 until all instruments had been collected.

Post-Research Period:

Procedure 7: After data had been collected from all classes, the research period was terminated.

Data Collection

All data for this study were collected by the researcher.

Data Analyses

Frequency analyses, Measures of Central Tendency, Pearson's Product Moment Coefficient of Correlation, and Student's t-Test were utilized to analyze the data.

Student Consent Form

A Student Consent Form was utilized to obtain permission from subjects to gather information regarding their GPAs from the Office of the Registrar (see Appendix D).

Human Subject Contract

No Human Subject Contract was needed because no direct services were provided to the subjects.
CHAPTER IV

RESULTS

This study investigated self-efficacy and academic performance among African-American males and females enrolled at a predominantly Black Institution of higher education. The results for this study are presented in two sections. Section A includes results of the demographic data obtained from the respondents. Section B contains results of the analyses from data related to the null hypotheses.

Section A Demographic Profile

Demographic data were collected using 14 close-ended and open-ended questions regarding the survey respondents. They were: race, gender, age, marital status, students' classification, living status, parental education, SAT scores, ACT scores, college major, educational aspirations, high school racial makeup, student participation, and church attendance.

RACE

Table 1 presents data relative to survey participants' race. Participants were asked how they preferred to be identified. For example, some participants preferred to be identified as African-American as opposed to being
Table 1.—Participants Racial Demographical Characteristics
[by Race in Frequency and Percents (N=220)]

<table>
<thead>
<tr>
<th>Race</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>104</td>
<td>47.2</td>
</tr>
<tr>
<td>Afro-American</td>
<td>25</td>
<td>11.4</td>
</tr>
<tr>
<td>Black</td>
<td>85</td>
<td>38.6</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>No Response</td>
<td>5</td>
<td>2.3</td>
</tr>
<tr>
<td>Total</td>
<td>220</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Of the 220 survey respondents in Table 1, 104 or (7.3%) identified themselves as African-American, 25 or (11.4%) as Afro-American, and 85 or (38.6%) as Black. Thus, the majority of the respondents identified themselves as African-American and only 25 identified themselves as Afro-American.

GENDER

For the purpose of this investigation, it was necessary to group participants by gender. Table 2 reports gender of survey respondents.
Table 2 reports that there were 220 participants in this study, 58% were identified as male and 73.6% were identified as female. Therefore, the majority of respondents were female.

**AGE**

Data were also collected regarding the ages of survey respondents. The ages of the respondents are presented in Table 3.
were above age 25. A majority of the participants, therefore, were between 17-19 years of age.

**MARITAL STATUS**

Survey respondents were asked their marital status. Marital status is shown in Table 4.

Table 4.--Participants Marital Demographical Characteristics Status [by Marital Status in Frequency and Percents (N=220)]

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single, never married</td>
<td>215</td>
<td>97.7</td>
</tr>
<tr>
<td>Married</td>
<td>4</td>
<td>1.8</td>
</tr>
<tr>
<td>Divorced</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>220</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 4 indicates that, of the 220 survey respondents, 97.7% were single, 1.8% were married, and .5% were divorced. Therefore, the great majority (97.7%) of the sample had never been married.

**STUDENT CLASSIFICATION**

Table 5 presents data showing the characteristics of the participants by grade level.
Table 5.—Students' Classification [in Frequency and Percents (N=220)]

<table>
<thead>
<tr>
<th>Student Classification</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen</td>
<td>65</td>
<td>29.5</td>
</tr>
<tr>
<td>Sophomore</td>
<td>115</td>
<td>52.3</td>
</tr>
<tr>
<td>Junior</td>
<td>27</td>
<td>12.3</td>
</tr>
<tr>
<td>Senior</td>
<td>13</td>
<td>5.9</td>
</tr>
<tr>
<td>Total</td>
<td>220</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 5 reports the classification of the 220 survey respondents. Of the 220 respondents 29.5% were freshmen, 52.3% were sophomores, 12.3% were juniors, and 5.9% were seniors. Therefore, the typical survey respondent was a sophomore.

PRESENT LIVING STATUS

The data in Table 6 indicate the present living status of the survey participants.

Table 6.—Participants Present Living Status [in Frequency and Percents (N=220)]

<table>
<thead>
<tr>
<th>Present Living Status</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both Parents</td>
<td>66</td>
<td>30.0</td>
</tr>
<tr>
<td>Mother Only</td>
<td>50</td>
<td>22.7</td>
</tr>
<tr>
<td>Father Only</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>Other Relative</td>
<td>14</td>
<td>6.4</td>
</tr>
<tr>
<td>Other (Non-Relative)</td>
<td>83</td>
<td>37.7</td>
</tr>
<tr>
<td>No Response</td>
<td>6</td>
<td>2.7</td>
</tr>
<tr>
<td>Total</td>
<td>220</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 6 shows that, of the 220 survey respondents, 30.0% lived with both parents, 22.7% lived with mother only, .5% lived with father only, 6.4% lived with other relative, 3.7% responded to "other", and 2.7% gave no response to this item. The 3.7% responding to others suggested that they lived with someone unrelated. Thus, most respondents (37.7%) live with someone other than a family member.

**SCHOLASTIC APTITUDE TEST SCORES (SAT)**

According to the data in Table 7, the majority of survey respondents reported taking the SAT. The scoring range of the SAT is 400-1600, (200-800 Math and 200-800 Verbal).

<table>
<thead>
<tr>
<th>SAT Scores</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>600-800</td>
<td>79</td>
<td>54.0</td>
</tr>
<tr>
<td>900-1100</td>
<td>16</td>
<td>11.0</td>
</tr>
<tr>
<td>1200-Above</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>52</td>
<td>35.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>147</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

It should be noted that 52 of the subjects answered the question relative to the SAT as not applicable. However, of the participants responding to this question, 79, as indicated in Table 7, scored between 600-800, 16 scored between 900-1100, and no participants scored above
1200 on the verbal and math section of the SAT combined. Thus, as can be seen in Table 7 the majority of those responding to this question stated their performance on the SAT was between 600-800 when the two variables (verbal and math) were combined.

**AMERICAN COLLEGE TEST SCORES (ACT)**

The data in Table 8 indicate the ACT scoring range of survey respondents. The scoring range for the ACT is 0-45.

Table 8.—Participants' American College Testing Scores (ACT) [in Frequency and Percents (N=220)]

<table>
<thead>
<tr>
<th>ACT Scores</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Applicable</td>
<td>125</td>
<td>56.8</td>
</tr>
<tr>
<td>0-7</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>8-12</td>
<td>5</td>
<td>2.3</td>
</tr>
<tr>
<td>13-16</td>
<td>32</td>
<td>14.5</td>
</tr>
<tr>
<td>17-30</td>
<td>49</td>
<td>22.3</td>
</tr>
<tr>
<td>No Response</td>
<td>8</td>
<td>3.6</td>
</tr>
</tbody>
</table>

| Total              | 220       | 100.0   |

The data in Table 8 show that, 56.8% of the subjects did not take the ACT. For those students who took the ACT, the distribution of scores was as follows: .5% scored between 0-7, 2.3% scored between 8-12, 14.5% scored between 13-16, and 22.3% scored between 17-30. Therefore, of those
who took the ACT, the largest number scored between 17-30.

**College Major**

For the purpose of data collection relevant to this investigation, survey respondents were asked to report their college major. These data are presented in Table 9.

**Table 9.—Participants' College Major [in Frequency and Percents (N=220)]**

<table>
<thead>
<tr>
<th>College Major</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Science</td>
<td>169</td>
<td>76.8</td>
</tr>
<tr>
<td>Science</td>
<td>45</td>
<td>20.4</td>
</tr>
<tr>
<td>Undecided</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>No Response</td>
<td>5</td>
<td>2.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>220</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 9 reveals that, of the 220 survey respondents, 76.8% were non-science majors and 20.5% were science majors. Therefore, the majority (76.8%) of the survey respondents were non-science majors.

**EDUCATIONAL ASPIRATION**

Survey respondents were asked if they planned to continue their education beyond the Bachelor's degree. Table 10 indicates the educational aspiration of the survey respondents.
Table 10.--Participants' Educational Aspiration [in Frequency and Percents (N=220)]

<table>
<thead>
<tr>
<th>Educational Aspiration</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 yr. degree</td>
<td>40</td>
<td>18.2</td>
</tr>
<tr>
<td>M.A./M.S.</td>
<td>81</td>
<td>36.8</td>
</tr>
<tr>
<td>Ed.S.</td>
<td>2</td>
<td>.9</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>62</td>
<td>28.2</td>
</tr>
<tr>
<td>JD/MD</td>
<td>28</td>
<td>12.7</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>.9</td>
</tr>
<tr>
<td>No Response</td>
<td>5</td>
<td>2.3</td>
</tr>
<tr>
<td>Total</td>
<td>220</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 10 indicates that 18.2% of the survey respondents considered obtaining only a 4 year college degree (B.A. or B.S.) 36.8%, a M.A. or M.S. degree .9%, an Ed.S. degree, 28.2% a Ph.D. degree, and 12.7% a JD or MD degree. Therefore, the majority (78.6%) of the sample indicated that their goal was to obtain further education beyond the B.A. or B.S. degree.

HIGH SCHOOL RACIAL MAKE-UP

Survey respondents were asked for the racial make-up of their high schools. The data in Table 11 indicate that the majority of survey respondents attended predominantly Black high schools.
Table 11.—Participants' High School Racial Make-up [in Frequency and Percents (N=220)]

<table>
<thead>
<tr>
<th>High School Racial Make-up</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primarily Black</td>
<td>101</td>
<td>45.9</td>
</tr>
<tr>
<td>Primarily White</td>
<td>55</td>
<td>25.0</td>
</tr>
<tr>
<td>About 50% Black and 50% White</td>
<td>41</td>
<td>18.6</td>
</tr>
<tr>
<td>Other</td>
<td>22</td>
<td>10.0</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>220</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

The data reported in Table 11 show that, 101 (45.9%) survey respondents attended a predominantly Black high school, 55 (25.0%) attended a predominantly White high school, and 41 (18.6%) attended a high school that was about 50% Black and 50% white. Thus, the largest number (45.9%) of the survey respondents attended predominantly Black high schools.

**Parents' College Education Completed**

Survey respondents were asked to indicate their parents' level of education. Specifically, if their parents' graduated from college. The data in Table 12 show the survey respondents' report of their parents' college education completed.
Table 12.—Participants' Parents' College Education Completed by Parents [in Frequency and Percents (N=220)]

<table>
<thead>
<tr>
<th>Parents' College Education Completed</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother Only</td>
<td>45</td>
<td>20.5</td>
</tr>
<tr>
<td>Father Only</td>
<td>22</td>
<td>10.0</td>
</tr>
<tr>
<td>Both Parents</td>
<td>52</td>
<td>23.6</td>
</tr>
<tr>
<td>Neither Parent</td>
<td>101</td>
<td>45.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>220</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

It can be seen in Table 12 that, 20.5% of the respondents reported having a mother who graduated from college, 10.0% reported having a father who graduated from college, 23.6% reported both parents graduating from college, and 45.9% reported that neither parent had graduated from college. Therefore, the largest number of survey respondents (45.9%) reported that neither parent had obtained a college degree.

**STUDENT PARTICIPATION**

Data relevant to survey respondents participation in extracurricular activities are presented in Table 13.
Table 13.—Students' Participation in Extracurricular Activities [in Frequency and Percents (N=220)]

<table>
<thead>
<tr>
<th>Student Participation</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus Activities</td>
<td>85</td>
<td>38.6</td>
</tr>
<tr>
<td>Community and Church Activities</td>
<td>67</td>
<td>30.4</td>
</tr>
<tr>
<td>Other</td>
<td>45</td>
<td>20.5</td>
</tr>
<tr>
<td>No Response</td>
<td>23</td>
<td>10.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>220</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Examination of Table 13 reveals that 38.6% of the survey respondents participated in campus activities and 30.5% participated in community and church activities. Therefore, more than half of the survey respondents participated in activities either on campus or in the community.

**CHURCH ATTENDANCE**

The data in Table 14 indicate church attendance by survey respondents.

Table 14.—Participants' Church Attendance [in Frequency and Percents (N=220)]

<table>
<thead>
<tr>
<th>Church Attendance</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>35</td>
<td>16.0</td>
</tr>
<tr>
<td>Once A Month</td>
<td>54</td>
<td>24.5</td>
</tr>
<tr>
<td>Twice A Month</td>
<td>43</td>
<td>19.5</td>
</tr>
<tr>
<td>Three Times A Month</td>
<td>37</td>
<td>16.8</td>
</tr>
<tr>
<td>Every Sunday</td>
<td>45</td>
<td>20.5</td>
</tr>
<tr>
<td>No Response</td>
<td>6</td>
<td>2.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>220</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

In Table 14, the data indicate that, of the 220 survey respondents,
respondents, 15.9% never attended church, 24.4% attended church once a month, 19.5% attended church twice a month, 16.8% attended church three times a month, 20.5% attended church every Sunday, 2.7% gave no response to this item. Therefore, most participants (81.3%) attended church at least once a month.

Summary

The typical survey respondent was identified as an African-American single female between the chronological ages of 17-19 years. The typical survey respondent was a sophomore, living with someone other than family. Additionally, of the survey respondents who took the SAT, fifty-four percent (54%) scored between 600-900; and of those who took the ACT, 22.3% scored between 17-30. The typical survey respondent was a non-science major. Most often they aspired to obtain a M.A. or M.S. degree and reported having attended a predominantly Black high school. It was also observed that a majority of the parents was not a college graduate. In addition, most students participated in campus activities and attended church at least once a month.

Section B: Presentation and Analysis of Data Relevant to the Null Hypotheses

The present investigation was undertaken to determine if self-efficacy scores of African-American students, attending a predominantly Black institution, were related
to their academic performance. Null Hypotheses were tested.

The first null hypothesis was that there was no statistically significant correlation between Self-Efficacy scores and grade point averages for African-American participants majoring in science and technical areas. In order to test this hypothesis, a Pearson Product-Moment Correlation Coefficient was calculated between first semester (Fall 1990) grade point averages (GPA) and self-efficacy scores for the survey respondents.

A correlation value of .247 (df 31) was found between the two variables and was not found to be statistically significant. Therefore, the Null hypothesis of no statistically significant relationship could not be rejected (see raw data for this correlation in appendix E).

Null hypothesis number two stated that there is no statistically significant difference between self-efficacy and grade point average for African-American students who score high on self-efficacy and students who score low. To further validate these findings, the sample was divided into two groups (1) high self-efficacy and (2) low self-efficacy as shown in Table 15.
Table 15.—High and Low Self-efficacy Scores (SE) and Grade Point Averages (GPA) of African-American Participants Majoring in Science and Technical Areas

<table>
<thead>
<tr>
<th>SE Scores</th>
<th>GPA</th>
<th>SE Scores</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>112</td>
<td>2.3</td>
<td>86</td>
<td>3.2</td>
</tr>
<tr>
<td>106</td>
<td>3.7</td>
<td>86</td>
<td>2.4</td>
</tr>
<tr>
<td>105</td>
<td>2.7</td>
<td>86</td>
<td>2.1</td>
</tr>
<tr>
<td>104</td>
<td>3.2</td>
<td>85</td>
<td>2.2</td>
</tr>
<tr>
<td>102</td>
<td>2.3</td>
<td>85</td>
<td>2.1</td>
</tr>
<tr>
<td>98</td>
<td>3.8</td>
<td>84</td>
<td>2.5</td>
</tr>
<tr>
<td>94</td>
<td>2.0</td>
<td>82</td>
<td>2.4</td>
</tr>
<tr>
<td>93</td>
<td>2.8</td>
<td>82</td>
<td>2.4</td>
</tr>
<tr>
<td>92</td>
<td>2.0</td>
<td>80</td>
<td>3.0</td>
</tr>
<tr>
<td>92</td>
<td>2.8</td>
<td>78</td>
<td>2.2</td>
</tr>
<tr>
<td>91</td>
<td>3.7</td>
<td>77</td>
<td>2.5</td>
</tr>
<tr>
<td>91</td>
<td>3.2</td>
<td>75</td>
<td>4.5</td>
</tr>
<tr>
<td>91</td>
<td>2.5</td>
<td>73</td>
<td>3.3</td>
</tr>
<tr>
<td>91</td>
<td>1.9</td>
<td>72</td>
<td>3.3</td>
</tr>
<tr>
<td>88</td>
<td>2.6</td>
<td>72</td>
<td>2.6</td>
</tr>
<tr>
<td>88</td>
<td>2.4</td>
<td>56</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>53</td>
<td>1.8</td>
</tr>
</tbody>
</table>

mean 96.12 2.7 77.17 2.4
SD 7.36 .625 9.8 .669

As shown in Table 15, a mean value of 96.12 was computed for self-efficacy and mean value of 2.7 was computed for grade point average for participants high in self-efficacy and mean value of 77.17 for self-efficacy and mean value of 2.4 for grade point average for participants low in self-efficacy. There was no statistically significant difference found between mean grade point average for the high and low self-efficacy groups. Therefore, null hypothesis number two was retained.
To further determine the influence of high and low self-efficacy on grade point average, these variables were also investigated for a selected group of White subjects majoring in science/technical areas. Table 16 reveals the means, standard deviations, and t values for high and low self-efficacy scores for both White and African-American subjects majors in science/technical areas.

Table 16.—Statistical Data on Self-efficacy [Means, Standard Deviations, and t Values for High and Low Self-efficacy Groups by Race (N=58)]

<table>
<thead>
<tr>
<th>Groups</th>
<th>High</th>
<th>Low</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m</td>
<td>sd</td>
<td>m</td>
</tr>
<tr>
<td>African-American Science and Technical Majors</td>
<td>2.74 .62</td>
<td>2.42 .66</td>
<td>1.43</td>
</tr>
<tr>
<td>White Science and Technical Majors**</td>
<td>3.17 .53</td>
<td>2.61 .37</td>
<td>2.58*</td>
</tr>
</tbody>
</table>

*P<.05  
**(adapted from Lent, et.al., 1984)

Similar to Table 15, Table 16 also shows that a mean of 2.74 was found for African-American subjects with high self-efficacy and a mean of 2.42 for African-American subjects with low self-efficacy scores. In addition, Table 16 shows a mean of 3.17 for White students high in self-efficacy and 2.61 for White subjects low in self-efficacy. The t-test value of 1.43 indicated that there was no statistically significant difference between the African-
American subjects who scored high and low on the self-efficacy scale; however, the t value of 2.58 indicated a significant difference between the White subjects who were high and low.

Hypothesis number three stated that there is no statistically significant relationship between self-efficacy scores and grade point average (GPA) for African-American male participants. To test this hypothesis, a Pearson Product Moment Correlation Coefficient was calculated between the self-efficacy scores and grade point average (GPA). The results are reported in Table 17.

Table 17.—Correlation Between Self-efficacy and Grade Point Average (GPA) of African-American Male Participants Majoring in Science and Technical Areas (N=8)

<table>
<thead>
<tr>
<th>Self-efficacy Scores</th>
<th>GPA</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>106</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>102</td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td>92</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>91</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>86</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>.5</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>1.8</td>
<td>.623*</td>
</tr>
</tbody>
</table>

*p<.05

The data shown in Table 17 indicate that there was a statistically significant correlation (r=.623) between self-efficacy scores and grade point averages. Thus, the results indicate that the Null hypothesis was not retained.
Also, an attempt was made in this investigation, to determine the correlation between self-efficacy scores and grade point averages of African-American female students majoring in science and technical areas. The small correlational value of .071 was found to indicate no statistically significant correlation between the two variables. Thus, null hypothesis number four was upheld.

To analyze the data for null hypothesis five, a Pearson Product-Moment Correlation Coefficient was calculated between self-efficacy scores and grade point averages. A correlational value of .091 was found between the two variables, which was not statistically significant.

In an attempt to determine the acceptance or rejection of null hypothesis number six, a correlation was calculated between self-efficacy scores and grade point averages for nonscience male participants. The small correlation of .107 found between self-efficacy scores and grade point averages for these subjects was statistically not significant. This finding resulted in retaining null hypothesis number six.

In carrying out this research there was no statistically significant correlation (r= .065) between self-efficacy scores and grade point averages for African-American female participants who were nonscience majors. This resulted in retaining null hypothesis number seven.

Null hypothesis number eight stated that there is no
statistically significant difference between the mean self-efficacy score of the African-American male participants and the mean self-efficacy score of African-American female participants majoring in science and technical areas and attending a predominantly Black institution. The means and difference between self-efficacy scores of the two groups are presented in Table 18.

Table 18.--Mean Difference Between Self-efficacy Scores of African-American Male Participants and African-American Female Participants Majoring in Science and Technical Areas

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean Self-efficacy Scores</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>8</td>
<td>88.625</td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>25</td>
<td>85.640</td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td></td>
<td>2.985</td>
<td>0.563</td>
</tr>
</tbody>
</table>

It can be seen in Table 18, that the mean self-efficacy scores were similar for male and female participants of this study. Therefore, the small mean difference of 2.985 between the scores for the two groups was not statistically significantly different at the .05 level of confidence; and, thus, not permitting rejection of null hypothesis number eight.

The investigation of self-efficacy scores for the non-science male and female participants revealed that there was no statistically significant difference between the
means of their self-efficacy scores. The data in Table 19 show the difference between the self-efficacy scores for the two groups (raw score data are reported in appendix F).

Table 19.—Difference Between Self-efficacy Scores of African-American Male Participants and Self-efficacy Scores of African-American Female Participants Non-science Majors

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean Self-efficacy Scores</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>44</td>
<td>82.705</td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>131</td>
<td>85.344</td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td></td>
<td>2.639</td>
<td>1.098</td>
</tr>
</tbody>
</table>

Table 19 shows that a "t" value of 1.098 was calculated between the mean scores of males and the mean scores of females. This value of 1.098 was not statistically significant different at the .05 level of confidence.

Null hypothesis number ten states that there is no statistically significant difference between self-efficacy scores of science and non-science majors. To analyze data relative to this null hypothesis, a t-test was calculated on the mean difference between the self-efficacy scores of science and non-science majors and is presented in Table 20.
As shown in Table 20, the mean self-efficacy score for African-American science majors was 86.364, and 84.402 for non-science majors. There was no statistically significant difference found between the two means. Thus null hypothesis number ten was retained.

Null hypothesis number eleven stated that there was no statistically significant difference between grade point average of science and non-science majors. The t value found between the two means is presented in Table 21.
The small t-test result of .487, shown in Table 21, for the difference between the two means was not statistically significantly different, thus, not permitting rejection of the null hypothesis.

Null Hypothesis number twelve focused on the correlation between Scholastic Aptitude Test scores and self-efficacy. The small correlation coefficient of .168 between the two variables did not permit rejection of null hypothesis number twelve.

In order to further investigate the variables of this study, a correlation coefficient was calculated between Scholastic Aptitude Test (SAT) scores and grade point average (GPA), self-efficacy and grade point averages (GPA), and Scholastic Aptitude Test scores (SAT) and self-efficacy. The correlation coefficients for these variables are found in Table 23 (see appendix G showing raw score data for these correlations).

Table 22.—Correlation Between Scholastic Aptitude Test (SAT) Scores, Self-efficacy Scores and Grade Point Averages (GPA) (N=111)

<table>
<thead>
<tr>
<th></th>
<th>SAT</th>
<th>Self-Efficacy</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT</td>
<td>1.00</td>
<td>.16</td>
<td>.13</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>.16</td>
<td>1.00</td>
<td>.07</td>
</tr>
<tr>
<td>GPA</td>
<td>.13</td>
<td>.07</td>
<td>1.00</td>
</tr>
<tr>
<td>SAT<em>Self-efficacy</em>GPA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 22 shows that there was a very small correlation found between SAT and self-efficacy (.16), SAT and GPA (.13), and self-efficacy and GPA (.07). The t-test result for these correlation indicated that they were not statistically significant at the .05 level of confidence. Thus, the null hypothesis stated for these factors could not be rejected.

Summary

Demographic Profile

This chapter presented results of demographic data including race, gender, age, marital status, students' classification, students' present living status, SAT scores, ACT scores, college major, educational aspiration, parents' educational background, high school racial makeup, student participation, and church attendance. Demographic data were analyzed using descriptive statistics. In addition to analyzing the results of the demographic data this chapter also analyzed data relevant to self-efficacy, aptitude, gender, race, and college academic performance.

Personal Background. As stated previously, the majority of respondent was identified as being African-American, female, between 17-19 years of age, and single. Furthermore, the sample included freshmen, sophomores, juniors, and seniors, with the majority (52.3%) of the participants being sophomores. Additionally, the largest number (37.7%) of the participants lived independently of
their parents and family members.

**Educational background.** In regard to standardized admission tests, the majority of the students took the SAT. These students (54%) scored between the range of 600-900. As indicated previously, some students (N=87) being from states where the ACT is given, took the ACT instead of the SAT. Of those participants, the largest (22.3%) scored between the range of 17-30.

When the participants were asked to indicate if they were science or non-science majors, the great majority (76.8%) indicated that they were non-science majors. Additionally, most participants indicated that they aspired to obtain a degree beyond the bachelor's level.

Also, participants were asked to indicate the racial make-up of their high schools. The largest number of respondents (46%) indicated that they attended predominantly Black high schools.

When the survey respondents were asked about their parents' educational backgrounds, 101 respondents indicated that neither parent had obtained a college degree. Thus, respondents were classified as being first-generation college students.

In regard to extracurricular activities, the largest number (39%) indicated that they did participate in activities on campus. In this same respect (24.5%) attended church at least once a month.
Summary of Results

Statistical analysis, relevant to the retention and rejection of the null hypotheses stated for this investigation, revealed the following findings:

1. There was no statistically significant correlation between self-efficacy and grade point average for African-American participants majoring in science and technical areas.

2. There was no statistically significant difference between self-efficacy mean scores and grade point averages for African-American students who scored high on self-efficacy and students who scored low.

3. Analysis of the data revealed that a statistically significant correlation was found between self-efficacy scores and grade point average for African-American males majoring in science and technical areas.

4. The findings for this research indicated that there was no statistically significant correlation between self-efficacy scores and grade point averages for females majoring in science and technical areas.

5. Data analysis revealed that, for African-American male and female participants who were nonscience majors, no statistically significant relationship was found between self-efficacy scores and grade point averages.

6. Findings indicate that no statistically significant relationship was found between self-efficacy
and grade point average for African-American males who were non-science majors.

7. Results indicate that there was no statistically significant correlation found between self-efficacy scores and grade point averages for non-science majors.

8. Results revealed that there were no statistically significant differences found between the mean self-efficacy scores of male participants and mean self-efficacy scores of female participants majoring in science and technical areas.

9. Analysis of the data showed that there was no statistically significant difference between mean self-efficacy scores for African-American male and female nonscience majors.

10. There was no statistically significant difference between mean self-efficacy scores of the science and nonscience participants.

11. The findings indicated that there was no statistically significant difference between mean grade point average of science and nonscience participants.

12. Findings showed that there was no statistically significant correlation between Scholastic Aptitude Test scores (SAT) and self-efficacy scores for science and nonscience participants.

13. Analysis of revealed that there was no statistically significant correlation between Scholastic
Aptitude Test scores and self-efficacy scores, Scholastic Aptitude Test scores and grade point averages (GPA), and self-efficacy and grade point average for the science and non-science participants.
CHAPTER V

DISCUSSION

Perusal of the literature indicates that most research designed to assess the correlation between self-efficacy and academic performance, has been conducted with predominantly White students enrolled at predominantly White institutions according to Lent, et. al., (1984, 1986, 1987) and who were science and technical majors. This is to say that there has been little research that has investigated self-efficacy and diverse disciplines and self-efficacy and academic performance of African-American college students enrolled at predominantly Black institutions. Therefore, the present investigation was designed to assess the correlation between self-efficacy and academic performance among African-American male and female college students enrolled at a predominantly Black institution of higher education.

Demographic Profile

The demographic characteristics of the African-American students, used in this investigation are: (1) female, between 17-19 years of age, (2) classified as a sophomore, (3) first generation college student, and (4) nonscience major. The demographic profile is somewhat
consistent with past research (e.g., Lent, Brown, Larkin, 1984; Stikes, 1984), for example, age, student classification, student participation, and church attendance. However, previous research investigated participants who were science and technical majors. The majority of the participants in the current investigation were nonscience majors, who participated in campus, community, and church activities. Studies have found that students who participate in extracurricular activities tend to possess high self-efficacy; and thus, are more likely to perform better academically (Hughes, 1988; Styles, 1989). Nonetheless, there is no support for this contention by the results from this study.

Past research (e.g., Billson & Terry, 1982; York-Anderson & Bowman, 1991), also suggested that the parents' educational backgrounds affect students' aspirations and their determination to complete their degree programs. It is noteworthy, however, that the first generation college students in this study had aspired to obtain professional or graduate degrees notwithstanding the fact that their parents had not completed any higher education.

Summary of Findings

Self-efficacy and Academic Performance

In regards to self-efficacy and academic performance, the collection, analysis, and presentation of the data were guided by seven null hypotheses. Although previously
stated, each null hypothesis will be restated for the
purpose of organizing the discussion.

The first null hypothesis stated that there was no
statistically significant correlation between self-efficacy
and academic performance for African-American college
students. To analyze the data for rejection or acceptance
of this null hypothesis, Fall semester, 1990, grade point
averages were used. Given the results of the data, a
statistically significant correlation was not found between
self-efficacy scores and grade point averages for African-
American participants majoring in science and technical
areas. Thus, there was insufficient evidence to reject
this null hypothesis.

The results of this investigation support the position
that there are variables other than self-efficacy that
impact on the academic performance of African-American
college students majoring in science and technical areas.
This is consistent with related literature which indicates
that African-American students' academic performance can be
assessed by other factors, such as campus activities,
community involvement, etc. (Fleming, 1984; Gurin & Epps,
1975; & Hughes, 1987).

It was also hypothesized that there was no
statistically significant difference between the self-
efficacy mean score and grade point average for students
who scored high on self-efficacy and students who scored
low. To determine the difference between the two groups of subjects, the participants were divided into two groups: (1) high self-efficacy and grade point average and (2) low self-efficacy and grade point average. Those students reporting relatively high self-efficacy scores achieved somewhat higher grade point averages than those with low self-efficacy scores. However, their performance was not different enough from that of the participants low in self-efficacy for the difference to be statistically significant. Therefore, the null hypothesis could not be rejected.

By comparison, the selected White subjects, who scored high on self-efficacy had significantly higher grade point averages than those who scored low on self-efficacy. This is consistent with previous studies (Hackett & Betz, 1984; Lent, Larkin, & Brown, 1984, 1986, 1987) showing that self-efficacy expectations are related to indices of academic performance. These findings indicate that further research is needed before any conclusive comparison can be made between African-American students and white students.

It was also hypothesized that there was no statistically significant correlation between self-efficacy and grade point average for African-American male participants majoring in science and technical areas. This null hypothesis had to be rejected because the finding indicated that there was a statistically significant
correlation between self-efficacy and grade point average. Studies related to this findings also have indicated that, for science majors, self-efficacy plays an important role in academic performance (Brown, Lent, Larkin 1983; Hackett, 1985; Lent, Brown, Larkin, 1984; Lent, et. al., 1986; Wood and Locke, 1987). Thus, this information should have a significant bearing on further research.

Null hypothesis number four stated that there is no statistically significant correlation between self-efficacy and grade point average for African American females majoring in science and technical areas. This hypothesis was retained, in that no statistically significant correlation was found between female self-efficacy scores and their grade point averages.

The findings in this research support studies by Betz and Hackett (1981, 1983) Hackett (1985) and Taylor and Betz (1983), who found that women in science tend to have low efficacy expectations. Further, corroboration was reported in a study by Fox, Brody, and Tobin, (1980) and Sells (1980) which indicated that a lack of mathematic preparation for females resulted in premature options for women and minorities, thus, serving to bar women from science and technical fields.

Given this, for the African-American females majoring in science in the present investigation, factors other than self-efficacy appear to contribute to their academic
performance and persistence.

Null hypothesis number five stated that there is no statically significant correlation between self-efficacy and grade point average for non-science majors in a predominantly Black institution. This null hypothesis was retained. Analysis of the results indicated that no conclusive statement can be made concerning this correlation. This conclusion supports Anderson's (1989) finding that more research is needed to determine to what extent factors other than self-efficacy impact the academic performance of non-science majors.

Null hypotheses number six and number seven were related to self-efficacy for male and female non-science majors. The correlation found between the two variables for both sexes, was not statistically significant, and thus, the null hypotheses related to self-efficacy and grade point average for both sexes were retained. These results are consistent with studies by Anderson (1989), Stikes (1984), and Styles (1985), which suggest that academic performance of African-American students can be enhanced by other variables (e.g., cultural environment, homogeneity of faculty and peers).

Based on these findings, it can be concluded that no definitive statements can be made regarding the correlation of self-efficacy and academic performance of African-American students, thus more indepth research is needed in
Self-efficacy and Gender

An attempt was made in this research to determine the difference between self-efficacy of African-American males and females majoring in science and technical areas. The findings relative to this difference resulted in retaining the null hypothesis established for gender and self-efficacy. It seems that both male and female science majors believe that they have the required skills and are thus motivated to complete their college education.

The majority of studies relative to self-efficacy surveyed in the literature (e.g., Betz & Hackett, 1983; Hackett, 1985, Lent & Hackett, 1987; Taylor & Betz, 1983) focused on gender and college students attending predominantly White institutions. This is to say that there is very little evidence of research found focusing on self-efficacy of African-American males and females. This underscored the writer's contentions that there is a dire need for more research in this area.

The findings in this investigation indicated that nonscience females scored somewhat higher on self-efficacy than nonscience males; however, this finding revealed that the difference was not statistically significant. Therefore, null hypothesis nine was upheld.

It is important to note that the nonscience females' self-efficacy scores were higher than nonscience males, and
that science males scored higher in self-efficacy than science females. This result appears to suggest that nonscience females feel more confident in their ability to reach desired goals than nonscience males. The results appear to be in the reverse for self-efficacy of science males and females. This, of course, does not support most findings in the literature regarding self-efficacy and gender (Betz & Hackett, 1981; Hackett & Betz, 1981; Schoen, 1988).

Null hypothesis number ten stated that there was no statistically significant difference between the self-efficacy mean scores of science and technical majors and nonscience majors. The statistical analysis supported this null hypothesis. The writer was unable to find studies to support or refute this finding. Thus, it appears, to the writer, that there is a paucity of research that has dealt specifically with the difference between self-efficacy of science and nonscience majors.

It was also hypothesized that there was no difference statistically significant between the grade point averages of science and nonscience majors. The t-test value found concerning the difference between grade point average of science and nonscience majors was not statistically significant. It should be pointed out, however, that, even though the difference was not statistically significant, the mean grade average for nonscience majors was slightly
higher than for science majors. Consequently, there remains a critical need to research this further.

**Scholastic Aptitude Test (SAT) Scores and Self-Efficacy**

Null hypothesis number twelve stated that there is no statistically significant correlation between the SAT scores and self-efficacy scores. Results in this study support the null hypothesis in that there was no statistically significant correlation between SAT scores and self-efficacy. This suggests that for minority students something other than self-efficacy influences SAT scores. This differs from Brown, Lent, and Larkin (1989) who noted in their study of predominantly White subjects that there is a high correlation between SAT scores and self-efficacy.

**Scholastic Aptitude Test (SAT) Scores, Self-Efficacy, and Grade Point Averages**

Null hypothesis number thirteen stated that there is no statistically significant correlation between Scholastic Aptitude Test scores and self-efficacy, SAT and grade point averages, and self-efficacy and grade point averages. The findings revealed that there is virtually no statistically significant correlation between these variables for the African-American students attending a predominantly Black institution. This also differs from studies by Brown, Lent and Larkin (1984) and Lent et. al., (1991) which also revealed a high correlation between SAT, self-efficacy, and
GPA for White students. In addition, it is important to note that Williams and Leonard (1988) found a positive correlation between these variables for Black students who were enrolled at a predominantly White institution. Caution must be taken however, not to generalize the findings beyond the participants in this study.

Conclusion

The problem of retaining African-American college students until graduation will continue to be a major focus for counselors and educators in the years to come. For instance, statistics indicate that there will be fewer African-American students entering college in the 1990s (Marks, 1986). Additionally, the current destructive climate (e.g., economics, drugs, Black-on-Black crime, etc.) is taking its toll on students presently enrolled in institutions of higher learning.

It is therefore, critical for all concerned parties to empirically assess self-efficacy factors which have been shown to impact academic performance. Based on the patterns of results from this study, it appears that noncognitive factors, other than self-efficacy, could be as important for African-American students as they are for White students. However, more research is needed in this area.

It would be premature at this stage to claim that these data clearly refute previous findings. There is a
dearth of studies that includes African-American students in the sample. Most studies singled out students seeking science degrees, excluding non-science degrees. The steps that have been taken in this study suggest that the correlation between self-efficacy and academic performance among African-American students is unclear. Before a truly integrative theory in this problem area can be developed, it will be necessary to ensure that the experiments include all the key variables included in this study.

**Limitations of the Study**

Prior research investigated SAT as a common predictor of academic performance, usually with White subjects (Betz and Hackett, 1983). The present study utilized self-efficacy and SAT scores, as well as, the gender of African American students to determine correlates of academic performance. Analyses were conducted on the total population of a Psychology course, rather than by classification (i.e., freshmen, sophomore, juniors, and seniors. Ideally, there should be representation by each class level so that the research will reflect a cross section of the student population.

Additionally, the typical respondent in this study was female. More representation between gender may be warranted in future research if the goal is to make predictions and develop theories in this regard.
**Recommendations for Future Research**

The following recommendations for further investigations are based on the findings of this study:

1. that future researchers examine self-efficacy among African-American students enrolled at predominantly White institutions and compare them to African-American students who are enrolled at predominantly Black institutions to determine if there are similarities.

2. that future research should include a longitudinal study to examine self-efficacy and persistence of African-American students.

3. that future research should focus on the extent that other variables, such as, campus environment, faculty and peer interactions, and spirituality impact on African-American students' level of self-efficacy.

4. that future researchers should investigate how African-American males and females respond to each of the self-efficacy subscales, namely, general self-efficacy and social self-efficacy.

5. that future research explore the impact of perceived self-efficacy on college major choices among African-American college students.

The information from the current investigation points to the need of more systemic research in this area. If the
recommendations, briefly outlined above are considered, researchers could come closer to understanding the correlation between self-efficacy and academic performance among African-American college students in particular, as well as, other ethnic groups in general.

**Implications for Counseling**

Results of the present study have several implications for counselors. Based on the results from the current investigation, counselors should:

1. provide individual and/or group counseling for students who need help with their self-efficacy as it relates to grade point average.
2. identify first generation African-American college students and provide a support system while they are pursuing their college education.
3. provide workshops and seminars to promote a positive self-concept which in turn promotes academic success for African-American students.
4. identify and conduct individual and group counseling sessions for students who are contemplating withdrawal from the institution because of their negative self-concepts (i.e. self-efficacy).
5. identify students experiencing academic difficulties early and provide counseling and tutoring assistance.
6. assess incoming students and provide preventive counseling for all students entering the institution who appear to be high-risk.
References


APPENDIXES
Appendix A
Letter to Associate Provost/Dean of Student Affairs

607 Weatherly Dr.
Stone Mountain, GA 30083

March 1, 1991

Dear

As a doctoral candidate in the Department of Counseling and Human Development, I am interested in conducting a study with the students of University. This study is concerned with self-efficacy and academic performance of African-American college students. I am writing to ask your approval to conduct the study.

To gather the information, I will need the participation of the undergraduate students enrolled in Psychology 211 during the Spring Term, 1991. I would like to collect these data during the month of March, 1991. Attached is an administrative agreement giving me permission to conduct the study and a copy of the survey. After completion of the study, I will forward the results to your office.

Should you have any questions regarding this study, please do not hesitate to call me at 880-8044.

Sincerely,

Gwendolyn Gail Rouse
Doctoral Candidate
Department of Counseling and Human Development
Appendix A

ADMINISTRATIVE AGREEMENT

This Administrative Agreement between _____ University and the researcher. This represents a contract between the two partners as denoted by a detailed list of rights and responsibilities of each listed below. This agreement will remain in force until the research has been terminated.

On the part of________ University:

a. will allow the research to be completed at
   ________ University;

b. to provide access to research subjects who will participate; and

c. to notify subjects of date(s) and time(s) of their participation.

On the part of Ms. Gwendolyn Gail Rouse, researcher, Ms. Rouse agrees to:

a. administer the survey to students enrolled in
   General Psychology, Spring semester 1991;

b. to explain the survey, provide instruction to all participants and answer any questions;

c. to have all participants sign student consent form; and

d. to collect all data.

_________________________  __________________________
Associate Provost/Dean of Students  Date

_________________________  __________________________
Researcher  Date
Appendix B

Letter to Chairperson Department of Psychology

607 Weatherly Dr.
Stone Mountain, GA 30083

March 1, 1991

Dear

As a doctoral candidate in the Department of Counseling and Human Development, I am interested in conducting a study with the students of University. This study is concerned with self-efficacy and academic performance of African-American college students. I am writing to ask your approval to conduct the study.

To gather the information, I will need the participation of the undergraduate students enrolled in Psychology 211 during the Spring Term, 1991. I would like to collect these data during the month of March, 1991. Attached is a copy of the survey. After completion of the study, I will forward the results to your office.

Should you have any questions regarding this study, please do not hesitate to call me at 880-8044.

Sincerely,

Gwendolyn Gail Rouse
Doctoral Candidate
Department of Counseling and Human Development
INSTRUCTIONS: This survey is designed to be administered to each student enrolled in Psychology 211 Spring, 1991. The purpose of this survey is to gather information regarding students' level of self-efficacy and academic performance. Please take a few minutes to answer items in section A, D, & C. All information will be held in the strictest of confidence.

Please check below if you would like a copy of the abstract of the final results of this study when it is completed.

_____YES  _____NO

Thank you for your cooperation.
Appendix C
Survey Instrument

SECTION A: DEMOGRAPHIC INFORMATION

INSTRUCTIONS: Please answer each question by placing a check or writing in the information that best describes you.

1. Race/Ethnicity    2. Sex    3. Classification
   b. Afro-American    b. Female   b. Sophomore
   c. Black           c. Junior
   d. Non-Black/other  d. Senior

4. Marital Status 5. Age  6. I presently live with:
   a. Single,       a. 17-19  a. both parents
    never married   b. 20-21  b. mother only
   b. Married      c. 22-24  c. father only
   c. Separated    d. 25+   d. other relative
   d. Divorced     e. 25+   e. other
   e. Widowed       (specify)

7. Parents' education background. 8. College admission
   Are your parents college graduates? SAT score
   a. mother only         a. not applicable
   b. father only         b. 0-7
   c. both parents        c. 8-12
   d. neither parent      d. 13-16
                            e. 17-30
                            f. 31-36
                            g. 31-36

9. College admission 10. Intended/actual college major
   ACT scores
   a. not applicable   (Specify)
   b. 0-7
   c. 8-12
   d. 13-16
   e. 17-30
   f. 31-36
   (Specify)

11. Educational aspirations
   a. 4 yr. degree
   b. M.A./M.S.
   c. Ed.S.
   d. Ph.D.
   e. J D/MD
   f. other

12. High school racial make-up 13. Presently participate
   a. primary Black
   b. primary White
   c. About 50% Black and 50% White
   d. other
   (Specify)

14. How often do you attend church?
   a. never
   b. once a month
   c. twice a month
   d. three times a month

15. (Specify)
Appendix C

Survey Instrument

SECTION B: Sherer's Self-efficacy Instrument

INSTRUCTIONS: This questionnaire is a series of statements about your personal attitudes and traits. Each statement represents a commonly held belief. Read each statement and decide to what extent it describes you. There are no right or wrong answers. You will probably agree with some of the statements and disagree with others. Please indicate your own personal feelings about each statement below by marking the letter that best describes your attitude or feeling. Please be very truthful and describe yourself as you really are, not as you would like to be.

MARK:
A = If you Disagree Strongly with the statement
B = If you Disagree Moderately with the statement
C = If you neither agree nor disagree with the statement
D = If you Agree Moderately with the statement
E = If you Agree Strongly with the statement

1. I like to grow house plants. A B C D E
2. When I make plans, I am certain I can make them work. A B C D E
3. One of my problems is that I cannot get down to work when I should. A B C D E
4. If I can't do a job the first time, I keep trying until I can. A B C D E
5. Heredity play the major role in determining one's personality. A B C D E
6. It is difficult for me to make new friends. A B C D E
7. When I set important goals for myself, I rarely achieve them. A B C D E
8. I give up on things before completing them. A B C D E
9. I like to cook. A B C D E
10. If I see someone I would like to meet, I go to that person instead of waiting for him or her to come to me. A B C D E
11. I avoid facing difficulties. A B C D E
12. If something looks too complicated, I will not even bother to try it. A B C D E
13. There is some good in everybody. A B C D E
14. If I meet some one interesting who is soon stop trying to make friends with that person. A B C D E
15. When I have something unpleasant to do, I stick to it until I finish it. A B C D E
16. When I decide to do something, I go right to work on it. A B C D E
Appendix C

Survey Instrument

17. I like science.  
18. When trying to learn something new, I soon give up if I am not initially successful.  
19. When I'm trying to become friends with someone who seems uninterested at first, I don't give up very easily.  
20. When unexpected problems occur, I don't handle them well.  
21. If I were an artist, I would like to draw children.  
22. I avoid trying to learn new things when they look to difficult for me.  
23. Failure just makes me try harder.  
24. I do not handle myself well in social gatherings.  
25. I very much like to ride horses.  
26. I feel insecure about my ability to do things.  
27. I am a self-reliant person.  
28. I have acquired my friends through my personal abilities at making friends.  
29. I give up easily.  
30. I do not seem capable of dealing with most problems that come up in my life.
Appendix D

STUDENT CONSENT FORM

STUDY PURPOSE: To study the relationship between self-efficacy and academic performance.

RESEARCHER: Gwendolyn Gail Rouse, Ph.D. Candidate
Department of Counseling and Human Development School of Education
Clark Atlanta University
Atlanta, GA 30314

Information for Subjects: You are being asked by the researcher to participate in a research project. Your participation is strictly voluntary and will have no effect on your academic standing within the university. The information you provide will be held in the strictest of confidence.

Participation in this study will consist of the following:

a. completing the attached survey regarding your personal attitudes and traits.

b. allowing the researcher to obtain information on the students GPA from the Registrar.

c. reading and signing the consent form.

Subjects Consent:

I understand that participation in this study is strictly voluntary and that I am free to terminate my participation in the project at any time. I also give permission to the researcher permission to obtain information regarding my GPA from the Registrar. I further understand that the information provided will be held in the strictest of confidence.

I hereby give my consent to participate in this study as described above by completing the survey and the signing of this consent form.

Date ____________________________ Signature ____________________________
Appendix E
Self-efficacy Scores and Grade Point Average for Science/Technical Majors

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Appendix F
Self-Efficacy Scores for Male and Female Participants:
NonScience Majors

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Appendix G
Scholastic Aptitude Test Scores (SAT), Self-efficacy Scores, and Grade Point Averages (GPA) for Participants (n=111)