Spring 2012

The Perceptions of Standardized Tests, Academic Self-Efficacy, and Academic Performance of African American Graduate Students: A Correlational and Comparative Analysis

Arleezah K. Marrah
Old Dominion University

THE PERCEPTIONS OF STANDARDIZED TESTS, ACADEMIC SELF-EFFICACY, AND

ACADEMIC PERFORMANCE OF AFRICAN AMERICAN GRADUATE STUDENTS: A

CORRELATIONAL AND COMPARATIVE ANALYSIS

by

Arleezah K. Marrah

B.A. May 2005, University of South Florida
M.A. August 2009, University of South Florida

A Dissertation Submitted to the Faculty of
Old Dominion University in Partial Fulfillment of the
Requirements for the Degree of

DOCTOR OF PHILOSOPHY

COUNSELING

OLD DOMINON UNIVERSITY
August 2012

Approved By:

Nina Brown (Dissertation Chair)

Steve Myran (Methodologist)

Edward Neukrug (Member)

ABSTRACT

THE PERCEPTIONS OF STANDARDIZED TESTS, ACADEMIC SELF-EFFICACY, AND ACADEMIC PERFORMANCE OF AFRICAN AMERICAN GRADUATE STUDENTS: A CORRELATIONAL AND COMPARATIVE ANALYSIS

Arleezah K. Marrah
Old Dominion University, 2012
Dissertation Chair: Dr. Nina Brown

The academic performance of African American students continues to be a concern for educators, researchers, and most importantly their community. This issue is particularly prevalent in the standardized test scores of African American students where they score on average one or more standard deviations below their Caucasian and Asian American counterparts, which may hinder their college enrollment, academic achievement, and educational attainment (Diaz, 1999; Walpole et. al., 2005). This issue has been examined by numerous studies and many researchers have attributed their underachievement to factors such as lower academic self-efficacy, stereotype threat, cultural test bias, and institutionalized racism (Kellow & Jones, 2008; Rosner, 2001; Steele, 1997). Despite the numerous studies that examined this issue, the academic performance of many African American students on standardized tests (i.e. SAT and GRE) remains poor (College Examination Board, 2012; ETS, 2001). This study examined the perceptions of standardized tests, standardized tests scores, academic self-efficacy, and academic performance of 247 African American graduate students, utilizing a correlational and comparative non-experimental research design. Findings from the study revealed that academic self-efficacy is a predictor of academic performance for African American graduate students. However, perceptions of standardized tests were

found to not predict academic performance. In addition, standardized test scores (GRE) were not significantly related to academic performance; however, GRE scores were related and predicted academic self-efficacy. Further statistical analysis found that there was a statistically significant difference in the academic performance between African American graduate students who had either higher or lower academic self-efficacy. However, there was no statistically significant difference in the academic self-efficacy between African American graduate students with negative and positive perceptions of standardized test.

ACKNOWLEDGEMENTS

I want to first give all the honor, praise, and glory to my Heavenly Father who comforted me, kept me, and provided for me during this chapter in my life. God, I am excited to see where You will take me next, and I promise to always put my trust in Your plans for my life. I want to thank my mother, Debra Thomas, who believes in my dreams and that I can achieve anything. I want to also thank my family for their overwhelming love and support. To my love, Brian, thank you for sharing those special moments with me where I was able to get away and simply enjoy life.

I would like to give a special thank you to all of my friends and colleagues who kept me focused and on track to complete this study. I would like to acknowledge LaShuana Dean and Sean Hall for all of their assistance with the statistics. I would also like to extend my appreciation to Dr. Tim Grothaus who helped me conquer my fear of writing and gain back my confidence.

A special thank you to Dr. Nina Brown, my chair. Dr. Brown, thank you for seeing a vision for my study, allowing me the room to grow and trust myself, and graciously providing your time, talents, and commitment to help me achieve one of my dreams. You will never truly know how much I appreciate all that you have done. To Drs. Myran and Neukrug, thank you for your support and commitment. To Old Dominion University, Counseling and Human Services graduate program, thank you for preparing and equipping me with the skills, knowledge, and experience to reach my goal of becoming a Counselor Educator.

TABLE OF CONTENTS

LIST OF TABLES

Table

CHAPTER I

INTRODUCTION

Graduate education has been critical for many African Americans in the improvement of their socioeconomic status in the United States (Gasman, Hirschfeld, & Vultaggio, 2008). Those who obtain an advance degree, such as a master's, doctorate, or professional degree, earn higher pay and gain increased social and economic capital (U.S. Census Bureau, 2012). Despite recent gains in the educational attainment for African Americans, statistics and research studies continue to show large discrepancies in their college enrollment, academic achievement, and degree attainment when compared to their Caucasian and Asian American counterparts (Carter & Wilson, 1996; Freeman, 1997; 1999; Journal of Blacks in Higher Education [JBHE], 2006; Nettles, 1991; U.S. Census Bureau, 2010; Walpole et al., McDonough, Bauer, Gibson, Kanyi, Toliver, 2005). This study focuses on the possible factors and causes for this alarming trend. Chapter 1 provides the background, statement of the problem, purpose and goal, research question, rationale, assumptions, theoretical orientation, overview of the study, and definitions of terms.

Background

Numerous studies have focused on the achievement gap between African American students and their peers at various education levels (Aronson & Inzlicht, 2004; Awad, 2007; Bowman & Howard, 1985; Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999; Cokley & Moore, 2007; Davis, 1994; Diaz, 1990; Dornbusch, Ritter, & Steinberg, 1991; Fordham & Ogbu, 1986; Kellow & Jones, 2008; Lee, 1984; Porter, 1990; Sellers, Chavous, & Cooke, 1998; Steele & Aronson, 1995; Williams & Leonard,

1988). Many of these studies have identified factors such as lower academic self-efficacy, stereotype threat, institutionalized racism, and cultural test bias as contributors to the low academic performance of African American students. Researchers have discussed ways to address these barriers; however, statistics continue to show that there has been little improvement in African American students' academic performance when compared to their Caucasian counterpart (National Center for Educational Statistics [NCES], 2011; Sellers et al., 1998).

Some of the literature discussing the academic performance of African American students focused on Albert Bandura's concept of academic self-efficacy. Academic self-efficacy refers to the belief that an individual can effectively meet the demands of their academic environment (Bandura, Caprara, Barbaranelli, Gerbino, & Pastorelli 2003; Fife, Bond, & Byars-Winston, 2011). Many research studies have found a positive relationship between academic self-efficacy and academic performance among African American students (Choi, 2005; Davis, Johnson, Miller-Cribbs, & Saunders, 2002; Einarson & Santiago, 1996; Johnson-Reid, Davis, Saunders, Williams, & Williams, 2005; Witherspoon, Speight, & Thomas, 1997). However, some studies have discovered that African American students may be more susceptible to experiencing lower academic self-efficacy than their Caucasian counterpart, which can negatively affect their academic performance (Aronson & Inzlicht, 2004; Cokley, 2000; Hughes & Demo, 1989; Oates, 2004; Oyserman, Gant, & Ager, 1995; Van Laar, 2000).

Researchers who found lower academic self-efficacy in African American students propose that self-efficacy may not be fostered in African American communities as it is in Caucasian communities (Gecas & Burke, 1995; Oates, 2004). Additionally,

other factors that may contribute to lower self-efficacy in many African American students include stereotypes about their intellectual abilities, lower expectations from schools and teachers, and restricted opportunities to develop their self-efficacy (Davis et al., 2002; Gecas & Burke, 1995; Kellow & Jones, 2008; Oates, 2004; Porter & Washington, 1979; Walpole et al., 2005; Witherspoon et al., 1997).

Other studies have looked at the academic performance of African American students on standardized tests and point out how disproportionately lower their test scores are when compared to their Caucasian counterparts (College Board, 2012; ETS, 2010). In 2011, the College Board reported that the average score on the verbal section on the SAT was 428 for African Americans compared to 528 for Caucasian, a gap of 100 points. On the math section, the average score was 427 for African Americans and 535 for Caucasian, a gap of 108 points. Thus, African Americans scored on average 104 points below their Caucasian counterparts on the SAT in 2011. Additionally, this trend has also been seen on the Graduate Record Exam (GRE) where in 2006-2007 the average combined score (verbal and quantitative) for African Americans was 814 compared to 1055 for Caucasian and 1028 overall, which is an average difference of 214 points between African Americans and their peers (ETS, 2008).

Despite the disproportionate test scores among African American students, past studies have provided evidence that African Americans who scored low on the GRE and other standardized tests have graduated at high rates (Bieker, 1996; Harnett & Payton, 1977; Scott & Shaw, 1985). However, no current studies have replicated these findings with the revised SAT and GRE tests. Other studies have argued that standardized test scores might be inconclusive at accurately predicting African American students'

academic success, and oftentimes, overpredicted or underpredicted their academic achievement in college (Bridgeman, McCamley-Jenkins, & Ervin, 2000; Crouse & Trusheim, 1988; Culpepper & Davenport, 2009; Kobrin, Camara, & Milewski, 2002; Houston, 1983; Noble, 2003; Young, 2001).

Other studies have concluded that African American students perform poor on standardized tests due to cultural and statistical test bias (Franklin, 2007; Freedle & Kostin, 1988; Micceri, 2007; Mumpower, Nath, & Stewart, 2002; Nettles & Nettle, 1999; Rosner, 2001; Sacks, 1999; Scott & Shaw, 1985; Strenio, 1981). Nevertheless, researchers have countered these findings and assert that standardized test scores are predictive of African American students academic performance, especially those students who attend a Historically Black College or University (HBCU; Astin, Korn, & Green, 1987; Fleming, 2002; Fleming & Garcia, 1998; Holt, Bleckmann, & Zitzmann, 2006; Kim, 2003; Kuncel & Hezlett, 2007; Kuncel, Wee, Serafin, & Hezlett, 2009; Zheng et al., 2002). Fleming (2002) found that African Americans who attend HBCUs instead of Predominately White Institutions adjust better socially and academically to college, which accounts for higher predictive validity between their standardized test scores and their 1st year in college.

Additionally, other researchers in support of standardized testing believe that claims of testing bias, racial, gender, and socioeconomic (SES) differences in test scores are criticisms based on "myths" and "hearsay" and that it is important that the American public have knowledge about testing (Sackett, Borneman, & Connelly, 2008; Sackett, Schmitt, Ellingson, & Kabin, 2001; Sackett & Wilk, 1994; Stricker, Rock, & Burton, 1993). Sackett et al., (2008) respond to common criticisms about high-stakes

standardized testing and take the position that these criticisms are based on incomplete evidence. Three main criticisms that they address in their study are: (1) lower minority group mean scores show that test are bias; (2) the differences that exist among groups maybe due to different experiences, opportunities, and domain interest; and (3) socioeconomic status (SES) influences test scores and motivational factors explain group differences.

However, despite the controversy surrounding the issue of test bias on standardized tests, African American students are continuing to receive low scores on standardized tests such as the SAT and GRE, which may create barriers for many to gain entry into higher education institutions. In addition to poor standardized test scores, researchers have looked at how stereotype threat may influence the academic performance of African American students (Aronson & Inzlicht, 2004; Kellow & Jones, 2008; Steele & Aronson, 1996). Steele and Aronson (1995) introduced the term *stereotype threat,* which refers to apprehensions individuals feel when performing in an area in which their group is stereotyped to show deficient competence. In their 1995 study, Steele and Aronson examined stereotype threat on the intellectual testing abilities of African American undergraduate students and found that the students who were exposed to negative stereotypes about their race had lower standardized test scores than their White counterparts. Steele and Aronson concluded that stereotype threat leads to poor performance on standardized test and lower confidence for African American and other minority students.

Since Steele and Aronson's (1995) groundbreaking study, other studies have continued to replicate their earlier findings and have demonstrated how stereotype threat

continues to negatively influence the academic performance of African American students (Aronson & Inzlicht, 2004; Kellow & Jones, 2008; Okeke, Howard, Kurtz-Costes, & Rowley, 2009; Taylor & Walton, 2011; Walpole et al., 2005). Additionally, Aronson and Inzlicht (2004) examined stereotype threat among African American students and concluded that these students may not have a clear perception of their academic performance and may suffer from a fragile academic self-confidence, which may lead to unstable academic self-efficacy.

Despite the attention that these studies bring to the issue of African American students' academic performance, many studies have continued to focus on high school and undergraduate college students and not graduate students, who have more experience with standardized testing. In addition, no studies have looked at the relationship between standardized test scores, academic self-efficacy, stereotype threat, perceptions of standardized test scores, and the academic performance of African American graduate students.

Statement of the Problem

The academic performance of African American students has been examined by numerous studies and many researchers have partially attributed their underachievement to factors such as low academic self-efficacy, stereotype threat, test bias, and institutionalized racism (Kellow & Jones, 2008; Rosner, 2001; Steele, 1997). Despite the numerous studies that examined this issue, the academic performance of African American students in the United States remains poor in most educational domains (JBHE, 2006; NCES, 2011). This phenomenon is particularly evident in standardized test scores for the SAT and GRE where African American students, on average, score one

or more standard deviations below their Caucasian and Asian American counterparts, which may hinder their access to college and graduate school (Diaz, 1999; Walpole et. al., 2005).

Additionally, studies that examined the academic performance of African American students and their academic self-efficacy show mixed results. However, for those studies that found lower academic self-efficacy for African American students also found that it was correlated with poor academic performance. Aronson and Inzlicht (2004) found that African American students in their study who were susceptible to stereotype threat also had an unstable academic self-efficacy, which interfered with their academic achievement (i.e. poor performance on standardized tests). Therefore, it is essential to understand the relationship between academic self-efficacy and the academic performance of African American students.

Understanding the complex relationship between standardized test scores, academic self-efficacy, and academic performance is important in helping to develop concrete solutions to help increase the educational attainment of African American students at all academic levels, especially for graduate students. Therefore, the current study focused primarily on African American graduate students. It sought to understand the effects of their perceptions of standardized test scores and the relationship with academic self-efficacy and academic performance.

Purpose and Goal

This study examined the relationship between the perceptions of standardized test scores, academic performance, and academic self-efficacy for African American graduate students. The goal of this study was to promote awareness about how African American

graduate students perceive standardized test scores and how it may influence their academic self-efficacy in order to provide insight and clarity on how the relationship between these variables influences their academic performance.

Research Question

Is there a relationship between measured academic self-efficacy, GRE scores, perceptions of standardized test scores, academic self-confidence, and academic performance for a sample of African American graduate students?

Rationale

The academic performance of African American students continues to be a concern for educators, researchers, and most importantly their community. This issue is particularly prevalent with regard to standardized test scores of African American students (College Board, 2011; ETS, 2000; Nettles, 2008). If the academic performance of African American students continues to remain low, educational achievement will be more difficult to obtain. One main construct that researchers have found to be positively correlated with academic performance is academic self-efficacy. However, studies have shown that African American students are more susceptible to lower academic self-efficacy (Aronson & Inzlicht, 2004; Cokley, 2000; Hughes & Demo, 1989; Oates, 2004; Oyserman et al., 1995; van Leer, 2000).

Additionally, there is a lack of research on the academic self-efficacy and perceptions of standardized tests of African American graduate students. Many studies that investigate the academic performance of African American students have used either high school or undergraduate students or graduate students who have more experience with standardized tests such as the SAT and GRE. However, no studies have examined

the relationship between perceptions of standardized tests, standardized tests, academic self-efficacy, and academic performance among African American graduate students and the role that these variables play in their academic achievement.

Assumptions of the study

The following assumptions were made when conducting this research study:

1. Academic self-efficacy is related to academic performance and achievement (Choi, 2005; Bong, 1999; Lent, Brown, & Larkin, 1986; Zimmerman, 2000; Zimmerman et al., 1992).

2. Standardized test scores, such as the GRE, may not accurately predict the academic performance of African American graduate students (Bridgeman et al., 2000; Crouse & Trusheim, 1988; Culpepper & Davenport, 2009; Kobrin et al., 2002; Houston, 1983; Noble, 2003; Sternberg & Williams, 1997; Young, 2001)

3. African American graduate students may be experiencing stereotype threat, which could influence their academic and test performance (Kellow & Jones, 2008; Nasim, Roberts, Harrell, & Young, 2005; Steele & Aronson, 1995; Steele, 1997).

Theoretical Orientation

Albert Bandura's Social Cognitive Theory (SCT) proposes that individuals are self-organizing, proactive, vicarious, self-regulating, and self-reflective beings (1986). A key component of SCT is that individuals are their own agents who are consistently involved in their personal development (Parajes, 2002). One essential feature to this sense of agency is an individual's self-belief that enables him or her to exercise a measure of control over his or her thoughts, feelings, and actions (Bandura, 1986; Parajes, 2002). Ultimately, what an individual thinks, believes, and feels will affect his

or her behavior (Bandura, 1986). Therefore, if an individual feels that he or she is not competent at a given task, he or she may not engage in the task due to one's beliefs about their lack of ability.

The belief an individual holds about himself or herself is at the core of SCT and is defined as one's self-efficacy (Parajes, 2002). Self-efficacy is the "belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995, p. 2). It is believed to be the source of an individual's motivation, well-being, and personal accomplishment since it corresponds with one's belief about him or herself (Bandura, 1997; Parajes, 2002). Many studies have shown empirical evidence that self-efficacy is involved in almost every aspect in a person's life (Bandura, 2002; Bussey & Bandura, 1999; Magaletta & Oliver, 1999; McAuley & Blissmer, 2000; Miller & Dollard, 1941). Therefore, self-efficacy is a significant aspect of an individual's behavior, and it is important to be cognizant of how one perceives his or her abilities rather than the reality of his or her abilities (Parajes, 2002).

A category of self-efficacy that is specifically related to academic achievement is *academic self-efficacy*, which is defined as an individual's belief that he or she can be successful at a chosen level on a specific academic task or attain a specific academic goal (Bandura, 1997; Eccles & Wigfield, 2002; Elias & Loomis, 2002; Gresham, 1988; Linnenbrink & Pintrich, 2002; Schunk & Pajares, 2002). The theory behind academic self-efficacy is that a person is more likely to choose activities and tasks that he or she feels confident performing and will tend to avoid those tasks that he or she does not feel confident about completing (Bandura, 1994). In addition, academic self-efficacy has a tendency to vary in strength as the tasks or activity varies in complexity. For example, a

student may have high academic self-efficacy in basic math but low academic self-efficacy in pre-algebra. Because of this, he or she may be less inclined to participate in a pre-algebra course.

Additionally, studies have shown that students with high academic self-efficacy also perform well academically (Lent, Brown, & Larkin, 1984). Lent and colleagues discovered that students with higher academic self-efficacy received higher grades and were more persistent in their academic studies than students with lower academic self-efficacy. In addition, the authors found that academic self-efficacy was also related to standardized test scores, academic self-concept, and self-efficacy. Therefore, when examining a student's academic performance, one should always consider the state of their academic self-efficacy, as it is important to their academic achievement.

Overview of Study

The dissertation committee and the Institutional Review Board (IRB) at Old Dominion University have approved this study. Current degree-seeking African American graduate students were located across all major disciplines as participants for the study. Sources for locating possible participants included contacting African American graduate student organizations, networks, and graduate programs. The participants self-identified as African American and have taken the GRE within five years. After the participants were identified and located, an email was sent to them requesting their participation in the current study. The email included a summary of the study: a brief description of what participation involves, a consent form, and the benefits of participating in the study. In addition, the email included the links to the demographic form and assessments. Assessments included the College Academic Self-Efficacy Scale

(CASES; Owen & Froman, 1988), that measured the academic self-efficacy of African American graduate students, and the Perceptions of Standardized Tests Questionnaire (PSTQ) that was developed for this study, measured African American graduate students' perceptions about standardized tests.

The PSTQ was developed using Gehlbach and Brinkworth's (2011) six steps in scale development. These six steps are as follows:

(1) Review of the literature

(2) Interviews and/or focus groups with five to seven African American graduate students

(3) Synthesize the literature review with data from the interviews and/or focus group data

(4) Develop scale items

(5) Expert validation with three faculty members at Old Dominion University

(6) Cognitive pretesting

All of these steps were taken to help establish a reliable and valid questionnaire scale. A sample of 247 participants was used to collect data on perceptions of standardized test scores among African American graduate students.

Participants that agreed to the study and completed the assessments had their responses collected and analyzed in SPSS 20. The data were analyzed using two statistical tests: a multiple regression analysis and an analysis of variance (ANOVA). The multiple regression analysis helped to determine if a relationship existed between perception of standardized tests, standardized tests scores, measured academic self-efficacy, and academic performance for African American graduate students, and the

ANOVA was used to explain if differences existed in the academic self-efficacy and perceptions of standardized tests of African American graduate students. After the data were analyzed, the researcher reported the findings in chapter four.

Definition of terms

The following operational definitions served as a frame of reference for the language used in this study.

African American

African American or Black citizens or residents of the United States who have origins or ancestry in any of the black populations or racial groups of Africa

Academic Achievement

For this study, academic achievement is defined as standardized test scores (e.g., GRE), grades (e.g., from high school, undergraduate, graduate), and overall academic ability and performance outcomes (e.g., grade point average).

Graduate Student

A student who continues studies after receiving a bachelor's degree (wordnetweb.princeton.edu). For this study, graduate students are defined as those who are current part-time or full-time degree seeking master's, Ed, or Ph.D. graduate students.

Standardized Test

Any empirically developed examination with established reliability and validity as determined by repeated evaluation of the method and results (e.g., GRE).

Stereotype Threat

Stereotype threat refers to being at risk of confirming, as self-characteristic, a negative stereotype about ones' cultural group (Steele, 1997)

Academic Self-efficacy

A person's confidence in their ability to organize, execute, and regulate performance in order to solve a problem or accomplish a task at a designated level of skill and ability (Bandura, 1994). Academic self-efficacy refers to a person's conviction that they can successfully achieve at a designated level in a specific academic subject area.

CHAPTER II

REVIEW OF THE LITERATURE

The goal of this study was to examine the relationships between perception of standardized tests such as the SAT and GRE, academic self-efficacy, and academic performance among African American graduate students. The purpose of this chapter is to present an overview of the current literature about the research topic. This chapter will begin with a synopsis of African Americans' history in education, higher education, and Counselor Education. Next is an examination of the history of standardized testing and its impact on racial minorities with a focus on cultural bias in standardized testing among African Americans. There will also be a discussion on academic self-efficacy among African American students, and a discussion on academic self-efficacy instruments. Presented last are gaps in the literature and how the current study helped to fill these gaps.

African Americans' History in Higher Education

From 1840 through 1954, public schools in the United States were legally segregated by race and protected by the constitutional law of separate but equal that stated Caucasian and African American students were to attend separate schools that were equal in their educational services, facilities and public accommodations (Brown v. Board: Timeline of School Integration in the U.S., 2004). Although the law required equal services for both Caucasian and African American schools, many schools in the African American community were of poor quality and received less or no funding compared to Caucasian schools. Due to poor schooling and lack of proper educational

services, many African American students experienced lower educational attainment than did Caucasian students.

In 1954, the U.S. Supreme Court ruled in favor of Brown in *Brown v. the Board of Education of Topeka, KS* that separate schools were inherently unequal which led to the desegregation of public schools in the United States (Brown v. Board of Education, 347 U.S. 483 1954). Despite this ruling by the U.S. Supreme Court, African American students still experienced racial discrimination and poor treatment while trying to obtain an education. Kador and Lewis (2007) assert that after the *Brown v. Board Education* ruling, Predominantly White Institutions (PWIs) continued to struggle with accepting African American students.

In the mid 1960s to early 1970s, there was a strong social and political movement to increase the enrollment of African Americans in higher education institutions, particularly at PWIs. In 1964, the U.S. Congress enacted Title VI of the Civil Rights Act that banned discrimination based on race, color, religion or national origin in any federal funded college or university (King & Chepyaptor-Thomson, 1996). As a result, affirmative action guidelines were enacted to increase access to higher education institutions for racial minorities, resulting in many higher education institutions aggressively recruiting racial minorities into their universities (King & Chepyaptor-Thomson, 1996).

For the first time in American history, African Americans had equitable access to receiving a good education. This movement led to many African Americans having increased opportunity to raise their social and economic status and experience the same opportunities as their Caucasian counterparts. During the late 1970s, the country

experienced an economic crisis that led to many universities losing federal funding which supported programs that assisted in recruiting and retaining African Americans in higher education institutions (King & Chepyaptor-Thomson, 1996; Lavin & Cook, 1990). The support for social policies and programs that aided African Americans in pursing degrees in higher education had diminished greatly due to America's poor economy and Caucasians lack of interest in race-based government social programs. This caused the number of African Americans enrolling in graduate programs to decline significantly (King & Chepyaptor-Thomson, 1996; Lavin & Cook, 1990).

African Americans' Role in Higher Education

According to Gasman et al. (2008), graduate education has been critical in the improvement of African Americans' socioeconomic status in the United States. Those who obtain a college degree earn higher pay and gain increased social and economic capital (U.S. Census Bureau, 2010). In addition, those who hold an advanced degree such as a master's, doctorate, or professional degree earn significantly more than individuals with a high school degree (JBHE, 2006, 2007; U.S. Census Bureau, 2008, 2010). The U.S. Census Bureau (2008) published that individuals who obtain advanced degrees (e.g., masters, doctorate, and professional degrees), earned 215% more annual income than individuals with a high school degree. It would appear that African Americans who receive a graduate education have a higher probability of earning more than those with a high school degree and that can lead to an increase in their social and economic capital.

The Council of Graduate Schools (2011) published statistics that showed that African Americans' graduate enrollment increased 1.6 % starting in 2009 to 2010.

African Americans and Hispanics had the largest annual growth rate of 5.9% in graduate education. African Americans were leading in total enrollment gains from 2000 through 2010 with an annual increase of 8.2% in comparison to their Caucasian counterparts' 2.2% increase (Council of Graduate School, 2011). Despite the recent gains African Americans have made in enrolling in graduate school, recent data indicate that they continue to lag behind Caucasian students in enrolling and attaining graduate degrees (Gasman et al., 2008; JBHE, 2006, 2007; Micceri, 2007; U.S. Census Bureau, 2008, 2010, 2011).

African Americans earned 9% of the Masters degrees awarded in 2000, and 7% of doctoral degrees awarded compared to Caucasians who earned 80% of the Masters degrees awarded and 81% doctoral degrees awarded (U.S. Census Bureau, 2012). Nine years later in 2009, African Americans increased their percentages of earned graduate degrees to 12% of the Masters degrees awarded and 9% of the doctoral degrees awarded. Caucasians earned 73% of the Masters degrees awarded and 78% of the doctoral degrees awarded (U.S. Census Bureau, 2012). These numbers indicate a 5% increase of graduate degrees awarded to African Americans between the years of 2000-2009 and are reflective of their U.S. population; however, studies continue to discuss the poor academic performance, high attrition rates, and retention issues that African Americans experience when trying to obtain graduate education (Gasman et al., 2008; Green, 2008; Kador & Lewis, 2007; Schwartz, Bower, Rice, & Washington, 2003).

Several research studies focused on factors that create barriers that affect African Americans' enrollment, recruitment, and retention in graduate school (Aronson & Inzlicht, 2004; Gasman et al., 2008; Green, 2008; Kador & Lewis, 2007; King &

Chepyator-Thomas, 1996). Many of these studies show that African American graduate students continue to feel isolated by faculty and peers, lack of mentorship, and have less academic and financial support while in their graduate programs (Gasman et al., 2008; Green, 2008). In addition, these issues were frequently experienced by African Americans students who were attended PWIs (Green, 2008; Kador & Lewis, 2007). Other factors included lack of faculty of color, institutionalized racism, and low academic expectations from faculty (Holcomb-McCoy & Bradley, 2005; King & Chepyator-Thomas, 1996).

African Americans in Counselor Education

Similar to the low numbers of African Americans in graduate schools across the United States, Henfield, Owens, and Witherspoon (2011) study showed that African Americans only represented 5.3% of students in counselor education graduate programs. Additionally, Bradley and Holcomb-McCoy's (2004) study revealed that African Americans represented only 3.4% of counselor educator faculty. Some factors that contribute to the significantly low enrollment in these graduate programs are ineffective recruitment and retention strategies as well as lack of diversity in faculty in graduate programs (Bradley & Holcomb-McCoy, 2003; Henfield et al., 2011). Additionally, many African American students and faculty in these graduate programs continue to experience isolation, lack of mentoring, marginalization, socialization issues, and discrimination that can lead to high attrition rates (Henfield et al., 2011). Bradley and Holcomb-McCoy (2003) argue that the lack of diversity in these programs may lead to a critical social justice issue if African Americans are not effectively recruited resulting in the profession poorly reflecting the rapidly changing racial demographics of the United States.

In order to address this issue, the Council for Accreditation of Counseling and Related Educational Programs (CACREP) Standards states that accredited counselor education institutions must demonstrate "systematic efforts to attract, enroll, and retain a diverse group of students and to create and support an inclusive learning community" (p. 4, 2009). CACREP specifically focused on the recruitment and retention of African-Americans in counselor education graduate programs to help increase diversity in the profession (Henfield et al., 2011). Despite this call of action from CACREP, studies continue to show that these graduate programs lack diversity of African Americans in their programs (Bradley & Holcomb-McCoy, 2004; Henfield et al., 2011; Johnson, Bradley, Knight, & Bradshaw, 2007).

Standardized Testing and African American Students

Cultural Bias and Predictive Validity

Standardized tests have been criticized for the past three decades for a variety of technical and social reasons (Nettles & Nettles, 1999). The main prominent social reasons are the cultural bias of their content and the use of the test to discriminate unfairly against the poor, women, and racial minorities (Franklin, 2007; Freedle & Kostin, 1988; Nettles & Nettle, 1999; Sacks, 1999; Strenio, 1981). The technical reasons have been the poor accuracy of standardized tests' predictive validity for racial minorities, particularly African American students academic performance in college.

Test bias refers to scores that are influenced by irrelevant characteristics like the test takers' race, gender, family, and socioeconomic status, which undermine the validity of the test (Koretz, 2008; Strenio, 1981). Many studies have examined test bias in standardized tests and some researchers believe that they are inherently culturally biased,

which negatively influences the scores of racial minorities and favors Caucasians and the wealthy (Berk, 1982; Connor & Vargyas, 1992; Duran, 1994; Elford, 2002; Franklin, 2007; Freedle & Kostin, 1991; Gifford, 1989; Gross, 1988; Gunn & Singh, 2004; Hacker, 1992; Hackett, Holland, Pearlman, & Thayer, 1987; Hoover, Politzer, & Taylor, 1991; Jencks, 1998; Jensen, 1980; Kidder & Rosner, 2003; McIntosh Commission, 1994; Reynolds & Brown, 1984 ; Rogers, Dorans, & Schmitt, 1986; Schmitt & Crone, 1991; Schmitt & Dorans, 1990; Schmitt, Dorans, Crone, & Maneckshana, 1991; Silverman, 1990; Sue, 1999; Taylor & Lee, 1991).

Other studies have focused on the technical issues with standardized tests and found that tests such as the SAT and GRE are inaccurate measures of predicting the first year academic performance of African American students and some studies have found that tests scores either overpredicted or underpredicted their performance in college (Bowen & Bok, 1998; Bridgeman, McCamley-Jenkins, & Ervin, 2000; Carlton & Harris, 1992; Cole, 1991; Crouse & Trusheim, 1988; Culpepper & Davenport, 2009; Kobrin et al., 2002; Hiss, 1990; Houston, 1983; Kobrin, Patterson, Shaw, Mattern, & Barbuti 2008; Noble, 2003; Tracey & Sedlacek,1986; Vars & Bowen, 1998; Walter, Smith, Miller, Hoey, & Wilhelm, 1987; Young, 2001).

Young (2001) discussed nine studies that found African American students grades were overpredicted when compared to their ACT or SAT scores. Noble (2003) found that for African Americans their ACT composite scores overestimated their first year performance (GPA) relative to that of Caucasian students. However, their ACT scores, when combined with their high school averages, were fairly more accurate in predicting their first year success. Korbin et al., (2008) found that both differential validity and

differential prediction of the SAT was least predictive of first year grade point average (FYGPA) for African American students and most predictive for Caucasian students. Additionally, the SAT overpredicted the FYGPA for African American students. The study concluded that the revised SAT results in less differential validity and differential prediction by racial/ethnic group.

Saul Geiser and his colleagues (2002) at the University of California (UC) found that the SAT had an adverse impact on poor and racial minority applicants. One major finding of their study was that SAT scores for racial minorities were correlated with the students' socioeconomic characteristics and as a result lowered the chances of underrepresented racial minority applicants. Additionally, the SAT was found to not be useful in identifying promising students from disadvantaged backgrounds as well as traditional measures of academic achievement (high school GPA and subject tests). Due to these findings, UC decided to rely more on students' high school GPA and subject tests scores over their SAT scores in their admissions process.

These studies have demonstrated that African Americans students' scores on the SAT may not be predictive of their academic performance due to possible cultural bias and technical reasons. Additionally, many researchers believe that African American students' scores on the Graduate Record Exam (GRE) are also influenced by test bias and inaccurate predictive validity (Fair Testing Services, 2001). However, most studies have only looked at the revised SAT and ACT and there is a paucity of research on the revised GRE.

Because of the potential for cultural bias and inaccurate predictive validity of these tests, critics of standardized testing argue that standardized tests help to promote

social inequalities, specifically with regard to women, racial minorities, and the poor (Au, 2009; Micceri, 2007; Orfield & Kornhaber, 2001; Sacks, 1999). In addition, some researchers assert that the lower numbers of racial minorities in higher education and graduate schools are related to standardized testing as past studies have shown that racial minorities who continue to do poorly on standardized tests struggle with test anxiety, low self-esteem, discouragement, feelings of helplessness, and often drop out of school (Franklin, 2007; Gunn & Singh, 2004). These critics argue that high stakes standardized tests continue to create barriers for racial minorities and that detrimental effects may be seen in their economic growth and educational attainment (Gunn & Singh, 2004; Madaus & Clarke, 2001). In conclusion, those opposed to standardized testing believe that the tests are unequal by design and still show signs of racism, the eugenics movement, and elitism which, if not revised or eliminated, will continue to oppress marginalized groups because of their inherent cultural and racial biases (Au, 2009; Sacks, 1999).

Au (2009) points out that the most significant factor that demonstrates cultural bias in standardized testing is found in the conclusions expressed by one of its creators Carl Brigham, a past professor of Princeton University. During his research with the Army in the 1920s, Brigham concluded that native-born Americans were highly intelligent (Nordic Race) while other minority races (Alpine Race) were inferior (Micceri, 2007). Following the conclusions from his research, Brigham went on to work at the admissions office at Princeton University where he developed the Scholastic Aptitude Test (SAT). Despite the background and research to the contrary, many supporters of standardized testing continue to argue that these tests are fair and bias free, predictive of academic performance, and conlcude that poor test scores are due to the

individual (Kuncel, Hezlett, & Ones, 2001; Kuncel & Hezlett, 2007; Powers, 2004; Sackett et al., 2008; Schneider & Briel, 1990).

Kuncel et al. (2001) performed a meta-analysis which included 1,753 independent samples, 80,000 students, and looked at three predictors: the GRE General test (verbal, quantitative reasoning, and analytical reasoning), the GRE Subject test scores, and the undergraduate grade point average (GPA). In their study, Kuncel et al., concluded that the GRE General test is a generalizably valid predictor of first year graduate GPA, overall GPA, comprehensive exam scores, publication citation counts, and faculty ratings. The GRE General test is also correlated positively with degree attainment and research productivity; it is a better predictor than undergraduate grades or letters of recommendation. Additionally, the GRE Subject tests are better predictors of success than either the GRE General test or the undergraduate GPA. Kuncel et al. (2010) found that across nearly 100 studies and 10,000 students, the GRE did predict first year grade point average (GPA), graduate GPA, and faculty ratings for both master's and doctoral students.

Sackett et al. (2008) responded to common criticisms about high-stakes standardized testing and took the position that these criticisms were based on incomplete evidence. Three main criticisms that they addressed in their study were: (1) lower minority group mean scores show that test are bias is a result of researchers jumping to conclusion and there is not enough evidence that argues against this belief. (2) The differences that exist among groups maybe due to different experiences, opportunities, and domain interest and that one should not conclude that this is a bias since it is not determined where the potential difference exist. (3) Lastly, socioeconomic (SES)

influences test scores and motivational factors explain group differences that there is no

support for SES influencing tests scores but that a significant relationship does exist.

Among the positions of those scholars opposed to or in favor of standardized tests

such as the GRE, a new position has emerged. This new position asserts that the issue is

not testing but how reliable and valid the tests are and if they are properly used. Koretz

(2008) believes that "careful testing can in fact give us tremendously valuable

information about student achievement that we would otherwise lack" (p. 8). Ravitch

(2010) suggests that information produced from valid and reliable tests can be

significantly valuable in that it can provide empirical based evidence for change in the

educational pedagogy, administration, and politics.

For many, the issues are how test results are being used and if they are valid,

reliable, and hold little bias (Koretz, 2008; Ravitch, 2010). Kohn (200) asserts that high

stakes testing is often misused due to the power it holds over students' educational

attainment, and how teachers and adminstration are held unjustly responsible for the

results of these tests. Ravitch (2010) proposes that there are many factors to consider

when judging an individual by a test score: the person's mental, emotional state, physical

capacity the day of the test; the context or setting in which the test is taken; and how the

test is administered. Ravitch also suggests that it is inappropriate to use the test score as

the sole basis for an important decision, such as moving a student to the next grade or

admitting a student into a higher education institution. He argues that doing so allows an

opportunity for unfair and biased decision making. Testing experts and companies agree

with this, but many educational institutions continue to use high stakes standardized

testing alone in making critical decisions (Kohn, 2000; Ravitch, 2010).

Despite all of these positions on standardized tests, researchers continue to argue about the cultural bias and validity of standardized test scores among racial minorities and how these contribute to barriers for educational attainment and increased socioeconomic capital (Gunn & Singh, 2004; Madaus & Clarke, 2001). According to Nettles and Nettles (1997) "despite decades of steady attacks upon the discriminating content and inappropriate uses if educational tests, we continue to find the assessment industry having to respond to some of the challenges today that were raised throughout the past three decades" (p. 198).

Standardized Testing and African American College Students' Academic Performance

Standardized test bias has been a concern of advocates for the promotion of diversity in higher education and for many racial minorities who continue to perform poorly on standardized tests such as the SAT and GRE. This issue significantly affects many African Americans students more than any other racial minority (Au, 2009; Jairrels, 2009; Nettles & Nettles, 1999; Sacks, 1999). As a group, they continue to score one standard deviation or more below the rest of the American population (ETS, 2002; Nettles & Nettles, 1999). In 1996, the combined verbal and quantitative score gap between African Americans and other races on the GRE was 199 points, and for 1999 and 2000 the discrepancy was 240 points, an increase of 40 points (ETS, 2001-2002). Five years later, the combined verbal and quantitative score gap between African Americans and every other race on the GRE was 232 points, a decrease of 8 points and the gap was larger when compared to their Caucasian counterparts with a difference of 246 points (Nettles, 2008). Researchers argue that, if this trend continues, many African

American students may not have the opportunity to further their educational attainment (Walpole et al., 2005).

Due to the research and other criticisms of the poor predictive validity at measuring students success in college, ETS revised the SAT in 2005 and the GRE in 2011. Some argue that these changes were made in order to keep their biggest consumers and to take the pressure off the cultural bias debate ("Fairtest Examiner", 2007; 2011; Lewin, 2002). However, according to ETS, the revisions on both the SAT and GRE were made to make the test more applicable to everyday college classroom experiences and to help admissions make a more meaningful decision when choosing applicants for their higher education institutions (ETS, 2011). Despite these recent revisions, African Americans students continue to perform poorly on these tests (College Examination Entrance Board, 2011). As researchers continue to examine possible factors that may influence the poor performance of these students on standardized tests, others researchers have discovered a negative relationship between the predictive validity on the GRE and academic performance among African American students (Harnett & Payton, 1977; Scott & Shaw, 1985). Some researchers claim that because of the cultural bias of high stake standardized tests, the scores of African Americans students may not truly represent their academic abilities (Bieker, 1996; Lindle & Reinhart, 1998; Hoover, 2007; Mumpower et al., 2002; Nasim et al., 2005; Rosner, 2001).

Harnett and Payton (1977) discovered that 208 racial minorities fellows of the Ford Foundation and Danforth Foundation may have not been admitted and attained their doctorate if their graduate programs used only their GRE scores and GPA as the sole criteria for admittance. Harnett and Payton suggest in their analysis "that such criteria

are not sufficient in themselves, and if used by themselves will result in numerous errors of prediction" (p.13). In a second analysis, they found that 33 racial minority doctoral fellows GRE scores were modestly correlated (high .30's and low.40's) with their graduate school grades. However, they assert that there are numerous exceptions that apply for racial minorities with low GRE scores: one main exception they found in their study was that fellows with low GRE scores were just as likely to receive their doctorate as compared to the students with high GRE scores. Additionally, out of the 208 fellows that earned a doctorate, more than half of them may have not been admitted to graduate school if the admission decision was based on a GRE verbal score of 500 or more.

Scott and Shaw (1985) examined the predictive validity of the GRE for 75 Caucasian and 75 African American graduate students at the University of Florida. The results revealed that the relationship between GRE scores and grade point average (GPA) was negative, an inverse relationship, for African American students, and positive for Caucasian graduate students. The results of the study showed that African American graduate students who scored a 1460 on the GRE had a GPA of 3.05 or lower and those who scored a 500 on the GRE had a GPA of 3.45 or higher. In 1996, Beiker examined factors that affect academic achievement among graduate students in management education. The study used 71 students who graduated from a MBA program from 1988 through 1994. The findings showed that despite equal test scores on the GMAT, African Americans graduate students were found to have lower GPA than their Caucasian counterparts. Beiker concluded that the GMAT scores might not be indicative for the African Americans students' graduate performance. Other studies have examined the predictive validity of standardized test for African Americans academic achievement and

report mixed results (Burton & Wang, 2005; Ji, 1998; Sampson & Boyer, 2001; Wilson, 1979). However, there are no recent studies that have looked at the revised GRE predictive validity for African American students.

Recent studies have examined and discussed the theory that African Americans may see standardized testing as a stereotype threat, which may lead to poor test performance and lower academic self-efficacy (Aronson & Inzlicht, 2004; Steele & Aronson, 1995). However, the results are mixed (Aronson & Inzlicht, 2004; Steele & Aronson, 1995; Steele, 1997; Stricker & Ward, 2004). Claude Steele (1997) coined the term, stereotype threat, which is a psychosocial process that may function to undermine specific abilities related to a stereotype thereby affecting African Americans' performance on these high stake assessments. It is hypothesized that African American students may feel threaten by standardized tests since these tests have traditionally underestimated their cognitive performance (Kellow & Jones, 2008; Nasim et al., 2005; Steele & Aronson, 1995; Steele, 1997).

A study conducted by Steele and Aronson (1995) showed that African American undergraduate students underperformed while taking the verbal section of the GRE compared to Caucasians, and that they experienced stereotype vulnerability. The study's findings also indicated that African Americans were negatively affected in their test performance even when the test did not measure their ability. Another study by Aronson and Inzlicht (2004) examined the stereotype threat and the academic self-knowledge of African Americans. Their findings showed that African Americans who experienced stereotype vulnerability had unstable academic self-efficacy that often undermined their intellectual performance on test and other academic tasks.

Academic Self-Efficacy

Self-Efficacy

Self-efficacy is defined as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). Self-efficacy beliefs influence individual's feelings, thoughts, level of motivation, and behaviors (Bandura, 1994, 1997). Additionally, self-efficacy can often determine whether or not a given task is attempted and the amount of effort exerted (Bandura & Adams, 1977).

Bandura (1994) also discussed differences among those with high self-efficacy and with low self-efficacy. An individual with high self-efficacy views challenges as things that should be mastered rather than avoided, and he or she tends to set goals for him- or her-self and remain committed to them (Bandura, 1994). In addition, those with high self-efficacy also continue their efforts when faced with possible failure and quickly recover if failure occurs (Bandura, 1994, 1997). When failure does happen, individuals with high self-efficacy do not internalize or contribute the failure to a personal deficiency (Bandura, 1997). These individuals are less susceptible to stress and depression because of their outlooks about situations or tasks (Bandura, 1994). In contrast, those with low self-efficacy tend to avoid difficult tasks and may view them as personal threats (Bandura, 1994). These individuals rarely create and commit to goals and, when faced with failure, they tend to internalize or contribute it to a personal deficiency (Bandura, 1997). In addition, these individuals are more susceptible to stress and depression (Bandura, 1994, 1997). Since self-efficacy mainly focuses on academic achievement, research has often focused on the educational domain, on various populations in the

educational setting, and on its influence on academic performance (Bandura,

Barbaranelli, Caprara & Pastorelli, 1996; Chemers, Hu, & Garcia, 2001; Deci & Ryan,

2000; Gecas & Burke, 1995; Oates, 2004; Porter & Washington, 1979; Thomas et al.,

2009; Zimmerman, 2000).

Many research studies examined self-efficacy among various populations and

consistently replicated Bandura's initial findings (Choi, 2005; Hackett & Betz, 1989;

Matsui, 1994; Pajares & Miller, 1994; Salomon, 1984; Shell, Murphy, & Burning, 1989).

Salomon (1984) examined the differential investment of mental effort in learning and

found that students with higher self-efficacy had higher mental effort and achievement

when learning difficult text material. Shell et al. (1989) examined the grade level and

achievement level differences in self-efficacy, causal attribution, and outcome

expectancy beliefs for reading, writing, and the relations between these beliefs and

achievement in reading and writing. Their findings indicated that perceived efficacy

significantly increased as grade level increased, and students with higher self-efficacy

exhibited better academic performance than those with lower self-efficacy. Parajes and

Miller (1994) examined the role of self-efficacy and self-concept beliefs in mathematical

problem solving and found that math self-efficacy beliefs were a better predictor for

academic performance than math self-concept beliefs.

In academia, self-efficacy is defined as one's confidence to persist and succeed at

a "challenging task" (Thomas et al., 2009). Chemers et al. (2001) were able to replicate

past studies findings that showed individuals who report higher self-efficacy are more

likely to interpret stressful situations as challenges versus threats, and they were

motivated to persist and to achieve despite the perception of challenges or barriers

(Hackett & Betz, 1989; Matsui, 1994; Pajares & Miller, 1994; Salomon, 1984; Shell et al., 1989). Schunk (1989) looked at how self-efficacy functions during specific academic learning and found that when students believed that they were doing well on a given task, they were motivated to complete their assignments.

Other studies have discovered that having higher self-efficacy acts as a buffer in relation to life stressors (Bandura et al., 2003; Chung & Elias, 1996; Thomas et al., 2009). These studies indicate that individuals with higher self-efficacy have effective coping skills in their psychosocial functions (Bandura et al., 2003). Zimmerman (2000) found that individuals with higher self-efficacy are less likely to engage in risky behaviors that would negatively influence their academic performance. Chung and Elias' (1996) study found that lower academic self-efficacy is associated with incompetence and increased negative life events. In summary, it appears that self-efficacy is influential across various domains including influencing academic performance.

Academic Self-Efficacy

Academic self-efficacy is a term that stems from Bandura's original concept of self-efficacy and refers to the belief that an individual can effectively meet the demands of his/her academic environment (Bandura et al., 2003; Fife et al., 2011). Numerous research studies found a positive correlation between school motivation and performance and academic self-efficacy (Bandura et al., 2001; Bong, 1999; Zimmerman, 2000; Zimmerman et al., 1992). As found with self-efficacy, individuals who have higher academic self-efficacy work harder, are more committed to tasks, have better learning strategies, and effectively cope with stress (Parajes, 2002; Zimmerman, 2002). Additional studies looked at academic self-efficacy and African Americans and found a

positive relationship between academic performance and academic self-efficacy (Davis et al., 2002; Johnson-Reid et al., 2005; Thomas et. al, 2009; Witherspoon et al., 1997).

Witherspoon et al. (1997) examined if racial identity, self-esteem, and academic self-concept (i.e. attitudes, beliefs, and perceptions held by an individual about their academic performance; Lent et al., 1997) were related to academic performance among 86 African American high school students. Their findings showed that a positive relationship existed between academic self-concept and self-esteem: as self-esteem increased, so did academic self-concept; as self-esteem decreased, so did academic self-concept. In addition, they found that those with high academic self-concept had higher grade point averages, which indicated higher academic performance (Witherspoon et al., 1997). Johnson-Reid et al. (2005) conducted a longitudinal study to examine cross-sectional relationships of various factors related to academic self-efficacy among African American youth. Their findings showed that self-esteem, intrinsic and extrinsic motivation, and past success in academics were positively correlated with higher academic self-efficacy. In addition, they found that having relatives or role models that completed high school helped to increase academic self-efficacy (Johnson-Reid et al., 2005).

Uwah, McMahon, and Furlow (2008) examined the relationship between perceptions of school belonging, educational aspirations, and academic self-efficacy among 40 African American male high school students. They found that feeling encouraged to participate and having educational aspirations were significant positive predictors of academic self-efficacy. Additionally, all of the studies found that academic self-efficacy was positively correlated with better academic performance and motivation.

However, other studies have reported that many African Americans tend to have lower self-efficacy (Davis et al., 2002; Gecas & Burke, 1995; Porter & Washington, 1979; Witherspoon et al., 1997).

Thomas et al. (2009) examined the influence of self-efficacy and motivational attributes on the academic adjustment of African American female students attending institutions of higher education. Their findings indicated that participants who had higher levels of self-efficacy were more academically adjusted than participants with lower self-efficacy. Additionally, Thomas et al. suggested that other factors contributed to the relationship between self-efficacy and academic adjustment and proposed that these factors may include internal processes and the context in which these processes take place.

Instruments Measuring Self-Efficacy

Studies examining the relationship of academic self-efficacy and academic performance among college students (Chemers et al., 2001; Juang & Vondracek, 2001; Leach, Queirolo, DeVoe, & Chemers, 2003; Solberg, O'Brien, Villareal, Kennel, & Davis, 1993; Wood & Locke, 1987) used different scales. One popular scale used to measure academic self-efficacy is the College Academic Self-Efficacy Scale (CASES; Owen & Froman, 1988). Three-university faculty were interested in the academic behavior of college students developed CASES. CASES consists of 33 items on a 5-point Likert scale with responses ranging from 1 = very little to 5 = quite a lot. The reliability is of .90 to .92 and the validity of .62 to .81 when correlated with GPA.

Stereotype Threat

Steele and Aronson (1995) introduced a term called *stereotype threat*, which refers to apprehensions individuals feel when performing in an area in which their group is stereotyped as being deficient or as lacking competence. For example, it has been stereotyped that African Americans are intellectually inferior to Caucasians; therefore, they will not perform well in academics. In their study, Steele and Aronson examined stereotype threat on the intellectual testing abilities of African American undergraduate students. The authors argued:

> Existence of a negative stereotype about a group to which one belongs means that in situations where the stereotype is applicable, one is at risk of confirming it as a self-characterization, both to one's self and to others who know the stereotype....and when the stereotype involved demeans something as important as intellectual ability, this threat can be disruptive enough to impair intellectual performance (p. 808).

Steele and Aronson also examined if the threat of a stereotype threat would negatively influence the scores of African American undergraduate college students when taking the verbal section of the GRE. The participants in this study attended Stanford University as undergraduate students. Steele and Aronson set-up four different studies: study 1 included both a stereotype threat condition and two non-stereotype threat conditions. The total number of participants was 114 male and female African American and Caucasian undergraduate students. Study 2 was similar to study 1; it included the stereotype threat and non-stereotype threat conditions, and measured for general anxiety. The total number of participants was 20 African American and Caucasian female participants.

Study 3 included three conditions: stereotype threat, non-stereotype threat, and a control group. The total number of participants was 35 male and female and included both African American and Caucasian undergraduate students. Lastly, study 4 included a non-diagnostic test and race-prime (stereotype threat) or non-race prime (non-stereotype threat) conditions. The total number of participants was 24 male and female and included both African American and Caucasian undergraduate students. In all four studies, participants were randomly assigned to each different condition.

At the conclusion of their study, Steele and Aronson found that in studies 1 and 2, African American participants, who were exposed to the stereotype threat condition, had lower scores on the GRE verbal section test in comparison to the Caucasian participants in both conditions and African American students in the non-stereotype condition. Conversely, for African Americans who were exposed to the non-stereotype threat or challenge conditions improved their standardized test performance when compared to their Caucasian counterparts. In study 3, African American participants in the stereotype threat condition generated the most self-doubt, avoided conforming to stereotypic images, showed greater tendency to making excuses for their performance and reluctance to indicate their racial identity on the preliminary questionnaire than Caucasian and African American participants in the non-stereotype threat conditions. In study 4, priming racial identity negatively influenced African American participants' performance in both the stereotype threat and non-stereotype threat conditions. Steele and Aronson concluded that for many African Americans students, stereotype threat leads to poor performance on standardized tests, lower confidence, and low athletic performance.

In a later study by Aronson and Inzlicht (2004), they examined stereotype vulnerability on African American students' academic self-knowledge. They defined this concept as, "Stereotype vulnerability is the tendency to expect, perceive, and be influenced by negative stereotypes about one's social category" (p. 829). Their study found that stereotype vulnerable African American students were prone to not having a clear or accurate perception of their academic performance and had "fragile" academic self-confidence as measured by the Self-Efficacy for Regulated Learning Scale.

Additionally, Aronson and Inzlicht (2004) state that having a "fragile" and unclear perception of one's own academic ability leads to an unstable self-efficacy. They further argued that unstable self-efficacy leads to poor performance on standardized tests, to defining one's self-worth by grades and academic performance, and a lack of overall academic confidence. This research is consistent with Steele and Aronson's (1995) earlier research that suggest that African Americans are more susceptible to stereotype vulnerability and stereotype threat, and they argue that this occurs because of constant racism and prejudice, particularly targeting their intellectual ability. It is possible that many African Americans students are prone to an unstable academic self-efficacy that can lead to overall poorer academic performance.

These studies provide support for the concept of stereotype threat, the inaccuracy of predictive validity of standardized tests, and having unstable academic self-efficacy may continue to contribute to the poor performance of many African Americans students on high stake standardized tests. Since these tests and academic performance play a large role in the educational attainment for African Americans, it is important that studies continue to explore solutions that can resolve the crisis of the achievement gap.

Gaps in the Literature

Despite the numerous studies that discussed standardized tests, academic self-efficacy, and academic performance among African American students, there are no current studies that look at their perceptions of standardized tests and its relationship with academic self-efficacy and academic performance. In addition, many studies have either focused on standardized testing outcomes for African American high school or undergraduate students by focusing on the SAT. Little attention has been given to the GRE and African American graduate students. By examining African American graduate students, one can collect data from those participants that have had more experience with standardized testing. Therefore, this study examined the perceptions of standardized among African American graduate students and how their perceptions may influence their academic self-efficacy and academic performance.

CHAPTER III

METHODOLOGY

The academic performance of African American students in the United States has been an area of concern for the past five past decades (ETS, 1999; U.S. Census Bureau, 2010). One of the main areas of concern has been standardized test scores. Many African American students' test scores are disproportionately lower than the national average and statistics show that there has been little improvement in their test scores since the 1970's (ETS, 2010; JBHE, 2006). In addition, African American students, on average, score one-standard deviation or more below every other race (Diaz, 1990). Researchers have studied this disturbing trend by examining the relationship between academic performance and standardized test scores of African American students, and studies show mixed results (Bieker, 1996; Burton & Wang, 2005; Hoover, 2007; Ji, 1998; Lindle & Reinhart, 1998; Mumpower et al. 2002; Nasim et al., 2005; Rosner, 2001; Sampson & Boyer, 2001; Scott & Shaw, 1985; Sternberg & Williams, 1997; Wilson, 1979).

Additionally, researchers have examined the relationship between academic self-efficacy and academic performance of high school and undergraduate African American students and found a positive relationship. Numerous studies have discussed the importance of the relationship between academic self-efficacy and academic performance of African American students (Davis et al., 2002; Johnson-Reid et al., 2005; Thomas et. al, 2009; Witherspoon et al., 1997), but no studies have examined how standardized test scores may influence this relationship among African American graduate students. This chapter discusses the research questions and hypotheses, research design, statistical

analysis, instrumentation, research participants, variables, proposed procedures, data

plan, and analysis. The chapter will conclude with the delimitations and limitations of

the proposed study.

Research Questions and Hypotheses

1) What is the relationship among academic self-efficacy, perceptions of
   standardized tests, and academic performance for African American graduate
   students?

   H_1: *There is no significant relationship among academic self-efficacy,*
   perceptions of standardized tests, and academic performance for African
   American graduate students.

2) Do standardized test scores predict academic performance and scores on an
   academic self-efficacy scale for African American graduate students?

   H_2: *Standardized test scores do not predict the academic performance and , or*
   scores on an academic self-efficacy scale for African American graduate
   students.

3) Is there a significant difference in academic performance between African
   American graduate students with lower academic self-efficacy and higher self-
   efficacy?

   H_3: *There is no significant difference in academic performance between African*
   American graduate students with measured low self-efficacy and high self-
   efficacy.

4) Is there a significant difference in the academic self-efficacy of African
   American graduate students with negative perceptions of standardized tests and

those with positive perceptions of standardized tests?

H₄: There is no statistically significance difference in the academic self-efficacy of African American graduate students with negative perceptions of standardized tests and positive perceptions of standardized tests.

Research Design

The current study used a correlational and comparative research design. The research was focused specifically on identifying if relationships exist between perception of standardized tests, standardized test scores, academic self-efficacy, and academic performance and African American graduate students. Also, this study will determine if there was a difference in the academic self-efficacy of African American graduate students who score either high or low on the GRE.

Instrumentation

For the purpose of this study, perceptions of the effects of standardized test scores, academic self-efficacy, and academic performance was measured using two different instruments: the College Academic Self-Efficacy Scale (CASES) and the Perceptions of Standardized Tests (PSTQ) questionnaire which was developed specifically for this study.

College Academic Self-Efficacy Scale (CASES)

The College Academic Self-Efficacy Scale (CASES; Appendix A) created by Owen and Froman (1988) will be used to measure academic self-efficacy of African American graduate students. Three faculty researchers developed CASES to understand what routine academic behaviors were used among college students. The assessment was reviewed, tested, and edited by seven graduate teaching students and 93 undergraduate

educational psychology students then tested the revised version of CASES. The current CASES now consist of 33 items on a 5-point Likert scale (1 = very little, 5 quite a lot). CASES is scored by calculating the mean score for the items answered, which helps to accounts for questions participants may have omitted.

The reliability for the CASES was established by using the test-retest method. The scale was given twice to 88 psychology students over an 8-week period with an internal consistency from .90 to .92 and, at the 8-week stability point; the Cronbach's alpha was estimated at .85. The validity for CASES is from .62 to .81 (as correlated with GPA).

Perceptions of Standardized Tests Questionnaire (PSTQ)

The PSTQ (Appendix B) questionnaire was specifically developed for the current study to assess perceptions of standardized tests among a sample of African American graduate students. Gehlbach and Brinkworth's (2011) six steps were taken to construct the PSTQ. These six steps are as follows: (1) review of the literature, (2) interviews and focus groups with five to seven African American graduate students, (3) synthesize literature review with interview and focus groups data, (4) develop scale items, (5) expert validation with three faculty members at Old Dominion University, and (6) cognitive testing. All of these steps were done to help establish a reliable and valid questionnaire scale.

Participants

Participants for this study were a sample of African American degree seeking graduate students in Master's, Ed.S, and Ph.D. programs across all disciplines. Assuming a moderate effect size at P = .80 and α = .01, a minimum of 97 participants for the

multiple regression analysis and a minimum 190 participants for the ANOVA analysis (95 per group; Cohen, 1992) were needed to for this study. Participants were recruited using a convenience sampling method. Participants were recruited through email, Facebook, African American graduate students' networks, associations, listservs, and graduate departments in the eastern and southern regions of the United States.

Statistical Analyses

Two statistical tests were utilized for this study: a multiple regression and analysis of variance (ANOVA). "A multiple regression is a powerful statistical technique for identifying underlying complex correlations among data in social and behavioral sciences" (Nimon & Reio, 2011, p. 330). This statistical test examines the correlation between a criterion variable (dependent variable) and multiple predictors (independent variables; Cohen, 1968; Cohen et al., 2003). Additionally, researchers have pointed out the benefits of using a multiple regression as a statistical analysis since having more than one predictor variable is useful when predicting complex human behaviors that are more than likely to be influenced by a combination of several factors (Brace, Kemp, & Snelgar, 2006). Multiple regressions are used in many studies assessing academic self-efficacy, academic performance, and standardized testing among African American students (Award, 2007; Choi, 2005; Fife et al., 2011; Kuncel et al., 2001; Lampert, 2007; Okeke et al., 2009).

A multiple regression analysis was used in this study to examine the relationship between perception of standardized tests, academic self-efficacy, and academic performance and African American graduate students. In addition, an ANOVA was used in the current study, which assisted in comparing the differences between multiple groups

(Sprinthall, 2007). An ANOVA was used to assess the differences in the academic self-efficacy (high or low) and perceptions (positive or negative) of standardized test scores among the sample of African American graduate students.

Likert Scale

In this study, two Likert scale surveys that measured academic self-efficacy and perceptions of standardized tests were utilized. Likert scales are commonly used to measure attitudes, perceptions, and preferences (Gob, McCollin, & Ramalhoto, 2007). Educational research literature points out the Likert scale items are to be mainly treated as ordinal data because "one cannot assume that respondents perceive the difference between adjacent levels as equidistant and data is analyzed using non-parametric tests such as Mann-Whitney, the Wilcoxon signed ranked test, and the Kruskal-Wallis test" (San Diego State University-College of Education, n.d., para 6). However, Geoff Norman (2010) pointed out that when Likert scale items are summed, that data are transformed to interval data. In addition, Norman further argued that there is no way to confirm or deny if there are equal distances between the numbers on a Likert scale. Additionally, if data do not meet normal distribution, the robustness of parametric statistics like the ANOVA can still produce valid results (Norman, 2010). Therefore, this study applied these suggestions. Variables that were not normally distributed were noted and discussed in chapters 4 and 5.

Procedure

After approval was received from the University's IRB (Appendix C), efforts to recruit participants were initiated. An email was sent to potential participants that included the following information: purpose of the study, a description of what

participation in the study entailed, a consent form, IRB approval documentation, and a link to the assessments (Appendix D). This same information was sent to emails, Facebook, African American graduate students' networks, associations, listservs, and graduate departments in the eastern and southern regions of the United States. Survey Gizmo was used to electronically send out the surveys. A $50 Visa Gift card was raffled off as a benefit for participants who choose to submit their names for a raffle upon completing the survey. The name submission was not connected to their survey responses. No identifying information was obtained and participants could drop out of the study at any time without any penalty. All data collected were seen only by the research team (Ph.D. student and dissertation committee) and kept in a secure and password protected electronic file. In addition, all data collected will be destroyed five years after the completion of the study. The results of the study may be used in aggregate form for reports, presentations, and publications.

Variables

The predictor variables in this study are perceptions of standardized tests and measured academic self-efficacy and the criterion variable is academic performance. Demographic data (see Appendix E) were collected from participants that included level and year of graduate study, Graduate Record Exam scores on the verbal and mathematics tests (GRE), ethnicity, socioeconomic background, age, and current grade point average. The demographic data that were collected provided descriptive statistics about the participants.

About two weeks after the initial invitation to participate in the study was sent out, a reminder email was sent out thanking those who have already participated in the

study and asking those who did not respond to please consider participating in the study.
This helped to increase the number of participants needed for the calculated power
sample. After a month, the number of participants was confirmed; over 100 participants
completed the assessments, thus, allowing for the data analyses to commence.

Plan for Analyzing Data

Data were analyzed using the Statistical Package for the Social Sciences (SPSS
20) software. Data collected from the demographic survey and assessments for the
criterion variable and predictor variables were entered into SPSS 20 by the researcher. A
multiple regression analysis was performed in SPSS to examine the relationships between
the criterion variable and predictor variables. The multiple regression analysis examined
the relationships between academic performance, academic self-efficacy, and perceptions
of standardized tests and the African American graduate students. An ANOVA was used
to compare the means of African American graduate students with high and low
academic self-efficacy and positive and negative perceptions of standardized tests. The
results are reported in Chapter 4 and findings are discussed in Chapter 5.

Analysis 1: A multiple regression analysis was utilized to examine the relationships
between perception of standardized tests, academic self-efficacy, and academic
performance (research questions 1-2). In addition, the multiple regression analysis
assisted the researcher in understanding potential multidimensional relationships that
existed among the criterion (e.g., GPA) and predictor (e.g., perception of standardized
tests and academic self-efficacy) variables.

Analysis 2: An ANOVA analysis was utilized to examine the differences between
African American graduate students' academic self-efficacy (higher vs. lower) and

perceptions (positive vs. negative) of standardized tests (research questions 3-4). In addition, the ANOVA provided information about the variance between each group.

Limitations

Potential limitations related to this research study include various internal and external validity issues. Internal validity is the degree to which the researcher can state with accuracy that any changes seen in the dependent variable is influenced by the independent variables rather than outside bias or extraneous variables (Leedy, 1993). Participants that are recruited for this study are African American graduate students in a degree-seeking graduate program; the assumption is that all the graduate students have taken the GRE and have an understanding of academic self-efficacy.

Another potential internal validity threat is participation fatigue. Participants will have to complete two assessments, with more than 20 questions each, and provide demographic data. Because of the time involved in completing all of the items, some of the participants may drop out or opt out of the study without completing all items. This can lessen the number of participants completing all assessments that are needed for the power sample size of the study. A final threat to internal validity is the reliability and validity of the PSTQ that was purposely developed for this study and has not been used with different populations.

External validity is the extent to which the results of the study can be generalized from the sample to the population or other cases (Leedy, 1993). A threat to external validity is the time, setting, and place. Participants may take the survey at different times, settings, and places that influence their responses on the assessments. This may make the results less generalizable due to these various factors.

The final threat to external validity is the process in which the study will solicit participation. Not all African American graduate students are involved in social networking websites, organizations, and listservs. Therefore, our sample may not be a representation of the population.

CHAPTER IV

RESULTS

The purpose of this study was to examine the relationship between perceptions of standardized tests, academic self-efficacy, standardized test scores, and academic performance among African American graduate students. Further analyses examined if differences existed in the academic performance among participants with lower and higher academic self-efficacy scores and if differences existed in the academic self-efficacy among participants with negative and positive perceptions of standardized tests. This chapter will present the statistical analyses and other findings.

Procedures

Recruitment of Participants

Participants recruited for this study were African American graduate students who took the GRE for admission into their graduate programs. Participants were excluded if they did not self-identify as African American, were not current graduate students, and did not take the GRE for admission into their graduate program. On May 19, 2012, solicitations for participants began and contact was made via email, CESNET (counselor education listserv), Facebook, African American graduate student organizations (National Black Graduate Student Association and Black PhDs), and graduate programs (program chair, graduate program director, and faculty) located in the eastern and southern regions of the United States. All 28 Historically Black Colleges and Universities (HBCUs) with graduate programs located in the eastern and southern regions in the United States were contacted. Several HBCUs contacted included: Albany State University, Bowie State University, Clark Atlanta University, Delaware State University, Florida A&M

University, Hampton University, Howard University, and Morehouse University.

In order to recruit a large sample of participants for the study, three formats of emails were sent out requesting participation for the study. The first email invitation was posted to CESNET (counselor educator listserv) on May 19, 2012, which was sent out to 2,265 recipients. A second request for participants was sent to CESNET on June 1, 2012, and a final request was sent on June 25, 2012. The second email invitation was posted as an event on Facebook that was open from May 21, 2012 to June 30, 2012 and over 500 graduate students were invited to participate in the study. A Facebook event allows for invited participants to accept or ignore a request to participate in an event or in this case the study. The last email invitation was sent to graduate programs and specifically targeted were graduate program directors, graduate program coordinators, and professors requesting them to send the survey out to their current graduate students. Approximately 10 emails were sent between the dates May 30, 2012 to June 25, 2012 and included over 100 colleges and universities located in the eastern and southern region of the United States.

Since social networks, such as CESNET, Facebook and African American graduate student associations were used to collect data, it was impossible to obtain an overall response rate in reference to the 256 completed surveys. The exact number of recipients that opened the survey request link and/or the e-mail solicitations was unknown. This specific limitation prevented an actual response rate for the online survey. Additionally, all recipients of the email invitations were asked to pass along the survey to anyone they believe would be interested in participating in the study.

Instruments

The scale used to measure academic self-efficacy in this study was the College Academic Self-Efficacy Scale (CASES; Owen & Froman 1988). CASES consists of 33 items on a 5-point Likert scale with responses ranging from 1 = very little to 5 = quite a lot. An example item is "Asking a professor in class to review a concept you don't understand." This scale was selected for this study because it was constructed to specifically measure academic self-efficacy rather than general self-efficacy. The reliability for the CASES was established by using the test-retest method. Scores are calculated by the mean and range from 1 to 5 and there are no cut-off scores or categories. A mean score of 5 on the CASES indicates higher academic self-efficacy. For example, if males' average score is 3.3, and females' average is 3.8, then you would conclude that females show higher academic self-efficacy (Owen & Froman, 1988). The scale was given twice to 88 psychology students over an 8-week period with an internal consistency from .90 to .92 and, at the 8-week stability point; the Cronbach's alpha was estimated at .85. The validity for CASES is from .62 to .81 (as correlated with GPA). The Cronbach alpha was a .90 for this study.

The PSTQ survey was specifically developed for the current study to assess perceptions of standardized tests. Gehlbach and Brinkworth's (2011) six steps were taken to construct the PSTQ. These six steps are as follows: (1) review of the literature, (2) a focus groups with five to seven African American graduate students, (3) synthesize literature review with focus group data, (4) develop scale items, (5) expert validation with three faculty members at Old Dominion University, and (6) cognitive testing. The PSTQ consist of 10-items on a 5-point Likert scale. An example item is "I was anxious when I took the GRE (or other standardized tests)". The Cronbach alpha was a strong to moderate .75 for this study.

The link to the CASES and PSTQ surveys were located on the Survey Gizmo website which collected all of the participants' responses. The study survey link was open for seven weeks, beginning May 19, 2012 and ending June 30, 2012. There were a total of 256 responses at the end of the seven weeks. A total of eight surveys were removed from the data set for not meeting criteria for the study. Their responses on the demographic form made them ineligible because they did not self-identify as African American graduate students, or they did not complete a sufficient number of questions to allow for use in the analyses. After cleaning the data, a total of 242 useable surveys remained and were used for the statistical analyses.

Participants

The demographic information was compiled from the eight-question demographics survey which asked for age, race, gender, geographic location, completed education, current educational status, grade point average (GPA), standardized test scores (GRE), and if he/she was a first generation college student.

Participants ages ranged from 18 to 61 with the majority of the participants in the 25 to 29 and 30 to 34 age ranges: 18-24 (20.2 %), 25-29 (29%), 30-34 (22%), 35-39 (10.3%), 40-44 (7.3%), 45-49 (5.8%), and 50-59 (5.3%). All of the participants identified as Black/African American (n = 242, 100%). The breakdown of the participants' gender is as follows: female (n = 194, 80.2%) and male (n = 48, 19.8%). The participants were from were from 23 states, with the majority coming from Florida (n = 36%), Virginia (n =18.6%), and Georgia (n =12%). Additionally, there were participants from outside of the United States that included Switzerland, Macedonia, or other non-disclosed locations.

Completed education showed that the majority of the participants completed a Master's degree. The highest degree completed varied: Bachelor's degree (n = 99, 41%), Master's degree (n = 141, 58.3%), and Law degree (n = 2, .8 %). Current education level showed that the majority of the participants were doctoral students. Current educational statuses were as follows: Doctoral student (n = 124, 51.2%), Master's student (n = 111, 46%), Educational Specialist (n = 3, 1.2%) and other (n = 4, 1.7%) totaling 242 responses.

CASES Results

Mean scores were calculated for CASES and the results were: Mean = 3.96, SD= .449; with the scores ranging from 2.61 to 5.00 and there was little variance between participants' scores which also supports that the group was homogenous. Participant scores on the CASES were divided into two groups for the ANOVA: above the normative mean (Mean=4.30, SD=.27, N=127) and below the normative mean (Mean=3.59, SD=.284, N=115).

PSTQ Results

Total scores were calculated on the PSTQ for each participant, and the mean and standard deviation computed. Scores ranged from 17 – 50 and the higher the score, the more negative the perception. The results were as follows: Mean = 37.24, SD = 6.064. This indicates that overall, many of the participants reported negative perceptions of standardized tests. However, there was considerable variance indicating that some of the sample did not have negative perceptions. Participants PSTQ scores were divided into two groups for the ANOVA: below the normative mean (Mean = 31.59, SD = 4.04, N = 104; positive perceptions) and above the normative mean (Mean = 41.51, SD = 3.165, N

= 138; negative perceptions).

Table 1 presents the cumulative grade point averages (Mean=3.70, SD=. 258, range 2.85 to 4.00, N=240). Original GPAs had to be re-calculated since two GPAs were over 4.0 and were omitted for the final statistical analysis.

Table 1

Grade-Point Average of Participants

GPA Range	Frequency (*n*)	Percentage
2.5 to 2.99	5	2.1
3.0 to 3.24	8	3.3
3.25 to 3.49	31	12.8
3.5 to 3.74	25	10.3
3.75 to 4.00	171	71.5
Total	240	100

The verbal and quantitative GRE scores range from 400 to 1600. The scores from this study were 520 to 1550 (Mean = 1024.81; SD = 200.51). These scores indicate a moderate variance between the groups and that the group was heterogeneous. There were 62 GRE scores missing making the final number in the analysis 180. The GRE scores used in the analysis were normally distributed.

First Generation Attendees

Table 2 presents the frequencies and percentages for first generation college attendees. The majority of the participants were not first generation college students

(71%).

Table 2

First Generation College Attendees

First Generation College Attendees	Frequency	Percentage
Yes	63	26.0
No	171	71.0
No answer	8	3.0
Total	242	100

Tests of Normality

Descriptive statistics were conducted to see if the sample was normally distributed before the analyses were conducted. Kurtosis and skewness were checked for all variables to determine if any of them violated the assumption of normality. The results were: GPA kurtosis = .987 and skewness = -1.145, CASES kurtosis = -.173 and skewness -.129, PSTQ kurtosis = -.293 and skewness = -.421, and GRE scores kurtosis = -.015 and skewness = .186. The CASES scores, GRE scores and, PSTQ scores kurtosis and skewness values fall within the ± 1 which are acceptable; however, the GPA skewness value fall outside of the normal range and does not meet normal assumptions. An assumption of normality is not satisfied for GPA and this will be noted in the interpretation of the statistical analyses.

The residuals were first examined to see if they met normality and homoscedasticity prior to obtaining regression equations. The normal probability plot for

CASES scores lined up close to the straight diagonal, which indicated a normal distribution of the residual. Scores for the PSTQ and GPA probability plots did not line up with the straight diagonal; however, PSTQ scores still met assumptions of normality as previously noted; however, the GPA does not. Therefore, caution should be used when generalizing any results related to the GPA. The Levene's test (GPA and CASES, $p = .567$ and CASES and PSTQ, $p = .537$) reflected no violation of homogeneity assumption.

Data Analysis

Results for Research Question One

What is the relationship between academic self-efficacy (CASES), perceptions of standardized tests (PSTQ), and academic performance (GPA) and African American graduate students?

Results from the correlation (Pearson r) demonstrate a significant positive relationship between academic self-efficacy (CASES) and academic performance (GPA); $r = .189$, n = 240, p = .002. Although the relationship is statistically significant, the calculated relationship between academic self-efficacy and academic performance is weak. There was no significant relationship between perceptions of standardized tests (PSTQ) and academic performance (GPA); $r = -.009$, n = 240, p = .447. Additional results found a significant negative relationship between perceptions of standardized tests and academic self-efficacy $r = -.207$, n = 240, p = .001. The relationship between perceptions of standardized tests and academic self-efficacy is very weak.

Table 3 presents the results of the multiple regression analysis using the GPA as the criterion variable and scores on the CASES and PSTQ as the predictor variables. The

multiple regression model with both predictors produced R^2= .037, $F(2,237)$ = 4.528, p <

.05. Academic self-efficacy and perception of standardized tests account for 3.7 % of the

variance in academic performance for this sample. Although the variance was

significant, this was a small portion of the variance for academic performance. Academic

self-efficacy as an individual predictor was significantly predictive of academic

performance when the variable PSTQ was statistically controlled: β =.196, $t(237)$ =

3.006, p =.003. However, the perceptions of standardized tests (PSTQ) were not

significantly predictive of academic performance when academic self-efficacy was

statistically controlled: β =.032, $t(237)$ = .491, p=.624.

Table 3

Multiple Regression Analysis for Variables Predicting Academic performance (N=242)

	B	SE B	β
Step 1			
Constant	3.207	.198	
CASES	.112	.037	.196*
PSTQ	.001	.003	.032

Note: R^2 = .037 for Step 1 $(p < .05)$. *$p < .05$.

Results for Research Question Two

Can standardized test scores predict academic performance and scores on an

academic self-efficacy scale African American graduate students?

Table 4 presents the results for these analyses. Two multiple regression analyses were

computed; both used GRE scores as the predictor variable and academic performance and

measured academic self-efficacy were the criterion variables. The multiple regression analysis model 1 (GRE scores as the predictor and academic performance [GPA] as the criterion) produced an $R^2 = .001$, $F(1,178) = .207$, $p > .05$, indicating that the GRE scores were not significantly predictive of academic performance among the sample: $\beta = .034$, $t(178) = .454$, $p = .650$. Multiple regression model 2 (GRE scores as the predictor and academic self-efficacy; CASES as the criterion) produced an $R^2 = .023$, $F(1,178) = 4.194$, $p < .05$ and indicate that GRE scores accounted for 2.3% of the variance in academic self-efficacy scores. GRE scores were significantly predictive of academic self-efficacy $\beta = .152$, $t(178) = 2.048$ $p = .042$. A note of caution should be used when generalizing any statistical analysis results with GPA, as it did not meet the assumption of normality.

Table 4

Multiple Regression Analysis for Variable Predicting Academic performance and Academic Self-Efficacy (N=180)

	B	SE B	β
Step 1			
Constant	3.675	.099	
GRE scores	.000	.000	.065
Step 2			
Constant	3.627	.170	
GRE scores	.000	.000	.152*

Note: $R^2 = .001$ for Step 1 ($p > .05$); $R^2 = .023$ for Step 2 ($p < .05$). *$p < .05$.

Results for Research Question Three

Is there a significant difference in academic performance between African

Americans graduate students with mean scores below and above the normative mean on the CASES?

The College of Academic Self-Efficacy Scale (CASES) had a Cronbach alpha of .90 for this study, which is consistent with past literature (Choi, 2005; Owen & Froman, 1988). Mean scores are preferred over the total scores because it compensates for missing data and it puts the overall score in the same metric as the original response scale; however, the total score is equivalent if there are no scores missing (Owens & Froman, 1988). The mean score was calculated for each participant, and the mean for the group was: Mean=3.96, SD= .449; range 2.61 to 5.00, N=242. A one-way ANOVA was computed. The normative mean was used as the cut-off to define higher and lower academic self-efficacy mean scores. Participants were placed into two groups by their mean scores on the CASES: Group 1 consisted of participants with CASES scores of 3.95 or lower and was termed as having lower academic self-efficacy (Mean=3.59, SD=.284, score range: 2.70 to 3.94, N=115); Group 2 consisted of participants with CASES scores of 3.96 or higher and was termed as having higher academic self-efficacy (Mean=4.30, SD=.270; score range: 3.97 to 5.00, N=127). This is the method that was used to classify higher or lower academic self-efficacy.

Table 5 presents the results for this analysis. A one-way ANOVA was computed to determine if there was a difference in academic performance between participants who had higher and lower academic self-efficacy (CASES) scores. The original data we22re analyzed prior to computing the ANOVA to ensure assumptions were met. CASES scores and GPAs were transformed to z-scores in which three outliers that were above 3 standard deviations were removed. The GPA distribution did not meet normality, and the

Central Limit Theorem was applied since there were more than 10 samples in each group

on the independent variable (CASES), which assisted in satisfying the normality

assumption for the ANOVA analysis. In addition, a Levene's test to measure the

assumption of homogeneity of variance was not significant ($p = .567$) meaning that the

assumption was not violated. The results of the ANOVA showed that there is a

significant difference in academic performance between participants with higher

academic self-efficacy and lower academic self-efficacy, at the $p < .05$ level, $F(1,238)=$

$7.273, p= .007, \eta^2=.030$. Despite reaching statistical significance, the actual difference in

mean scores between the groups was quite small with an effect size of .030. Therefore,

only 3.0 % of the variance between the groups was due to academic self-efficacy

(CASES scores).

Table 5

Summary of One-Way ANOVA

	Sum of Squares	df	Mean Square	F
Between Groups	.471	1	.471	7.273
Within Groups	15.409	238	.065	
Total	15.880	239		

$**p < 0.05$

Results for Research Question Four

Is there a significant difference in the academic self-efficacy among African

American graduate students with total scores on the perceptions of standardized tests

below and above the normative mean?

The Perceptions of Standardized Tests Questionnaire (PSTQ) had a Cronbach alpha .75 for this study, which is considered strong to moderate. Total scores were used to calculate participant's responses on the PSTQ (Mean=37.24, SD= 6.064; Range 17.00 to 50.00, N=242). A one-way analysis of variance (ANOVA) was computed. The normative mean was used as the cut-off score to define negative and positive perceptions of standardized tests. Participants were placed into two groups by their total scores on the PSTQ: Group 1 consisted of participants with total scores of 37 or lower and was termed as having positive perceptions of standardized test (Mean=31.59, SD=4.004, score range: 21 to 36, N=104); Group 2 consisted of participants with total scores of 38 or higher and was termed as having negative perceptions of standardized tests (Mean= 41.50, SD=3.165, score range: 37 to 50, N=138). This is the method that was used to classify negative or positive perceptions of standardized tests.

Table 6 presents the ANOVA results. A one-way analysis of variance (ANOVA) was computed to determine if there was a difference in academic self-efficacy (CASES) between participants who had negative and positive perceptions of standardized tests. The original data were analyzed to ensure assumptions were met prior to computing the statistical analysis. CASES scores and PSTQ scores were transformed to z-scores in which three outliers that were above 3 standard deviations were removed. Additionally, the PSTQ scores distribution did not meet normality of assumptions and the Central Limit Theorem applied since there were more than 10 samples in each group on the independent variable (academic self-efficacy [CASES]), which assisted in satisfying the normality assumption for the ANOVA analysis. In addition, a Levene's test to measure the assumption of homogeneity of variance was not significant (p =.537) meaning that

the assumption was not violated. The results from the ANOVA indicated no statistical

significant difference in academic self-efficacy (CASES) between participants with

positive and negative perceptions of standardized tests, at the $p < .05$ level, $F(1,240)=$

$.3.601, p= .059$.

Table 6

Summary of One-way ANOVA

	Sum of Squares	df	Mean Square	F
Between Groups	.718	1	.718	.059
Within Groups	47.856	240	.199	
Total	48.574	241		

Summary

Chapter IV provided results and major findings related to the statisical analyses

that were conducted to understand the relationship between standardized tests scores

(GRE), perceptions of standardized test scores (PSTQ),academic performance (GPA),

and academic self-efficacy (CASES). A significant finding was that academic

performance was positively related to academic self-efficacy; however, perceptions of

standardized tests was found to not be significantly related to academic performance

(Question 1). A multiple regression analysis found that standardized test scores (GRE)

did not significantly relate to academic performance; however, it did significantly relate

to academic self-efficacy. The ANOVA was used to determine if there were differences

in the academic performance for participants who had either higher or lower scores on

measure of academic self-efficacy, the results indicated a significant difference between

the groups (Question 3). The last ANOVA examined if differences existed in academic

self-efficacy for participants who had either negative or positive perceptions of

standardized test, the results indicated no significant differences between the two groups

(Question 4). The findings of the study and potential implications of this research will be

discussed in Chapter V.

CHAPTER V

DISCUSSION

The purpose of this study was to examine if the perceptions of standardized tests, academic self-efficacy, and standardized test scores predicted the academic performance for African American graduate students. The study also explored if differences existed in academic performance when participants had either high or low academic self-efficacy scores and if differences existed in the academic self-efficacy scores of participants with either positive or negative perceptions of standardized tests. The instruments used in this study were the College Academic Self-Efficacy Scale (CASES) that measures academic self-efficacy and the Perception of Standardized Tests Questionnaire (PSTQ) that measures perceptions of standardized tests.

Three formats of invitational emails were sent out: The first invitational email was sent to CESNET (online listservs for counselor educators), which included 2,265 recipients. The second invitational email was sent out as an event on Facebook where over 500 African American graduate students were invited to participate in the study; and the last invitational email was sent to graduate programs in the eastern and southern region of the United States. Over a 30-day time period, messages were sent to CESNET requesting participation and to forward the survey link to other interested individuals. Another invitation was posted on Facebook and was opened as an event from May 22, 2012 to June 30, 2012 and potential participants were reminded every two weeks to take the survey. Ten invitational emails sent out to graduate programs between the dates May 30, 2012 to June 25, 2012 and included over 100 colleges and universities located on the eastern and southern region of the United States.

There were a total of 256 responses at the end of the seven weeks. Once all of the data were inspected and cleaned for accuracy, a total of 242 useable surveys remained for analysis. Eight surveys did not meet the criteria for the study and were removed from the final data set.

Description of the Sample

The majority of the participants reported as female ($n = 194$, 80.2%), completed a Master's degree ($n=141$, 58.3), and were current doctoral students ($n = 124$, 51.2%). The average age of participants was 30 years old. The majority of the sample was not first generation college students (71%). The findings on gender are consistent with past studies (Gasman et al., 2008; Green, 2008; Kador & Lewis, 2007; King & Chepyator-Thomas, 1996).

<div align="center">

Findings

</div>

Research Question One

What is the relationship between academic self-efficacy (CASES), perceptions of standardized tests (PSTQ), academic performance (GPA) for African American graduate students?

Hypothesis: There is no significant relationship between academic self-efficacy (CASES), perceptions of standardized tests (PSTQ), and academic performance (GPA) for African American graduate students.

Findings: The results from the correlation suggest that there is a significant positive relationship between measured academic self-efficacy and academic performance ($r= .189$, n=240, p=.002). There was no significant relationship between perceptions of standardized tests and academic performance ($r= -.009$, n=240, p=.447). In

addition, there was a significant negative relationship between perceptions of standardized tests and academic self-efficacy; however, the correlation was very weak (r = -.207, n = 240, p = .001).

The multiple regression results were significant and produced an R^2= .037, $F(2,237)$ = 4.528, p < .05, indicating that measured academic self-efficacy and perceptions of standardized tests are correlated with the academic performance. When each predictor variable was statistically isolated, academic self-efficacy was statistically significant in predicting academic performance β =.196, $t(237)$ = 3.006 p =.003. Perceptions of standardized tests were not significantly predictive of academic performance β =.032, $t(237)$ = .491, p=.624. The result of the multiple regression analysis suggested a statistically significant correlation between perceptions of standardized tests, academic self-efficacy, and academic performance. The null hypothesis was rejected.

Conclusion: There is a significant relationship between academic self-efficacy, perceptions of standardized tests and academic performance among a sample of African American graduate students.

Research Question Two

Can standardized test scores (GRE) predict academic performance and scores on an academic self-efficacy scale (CASES) for a sample of African American graduate students?

Hypothesis: Standardized test scores will not predict the academic performance, or scores on an academic self-efficacy scale for a sample of African American graduate students.

Findings: The first multiple regression analysis finding was that no statistically significant relationship existed between GRE scores and academic performance (GPA) (R^2 = .001, $F(1,178)$ =.207, p >.05). GRE scores were not statistically significant in predicting academic performance β = .034, $t(178)$ = .454, p = .650. It should be noted that GPA violated assumptions of normality and was negatively skewed. However, since the participants are graduate students, having a high GPA (3.0 or higher) could be reflective of the academic requirements of graduate programs. Therefore, the results should only be applied to the graduate student population. The second multiple regression analysis suggested that a statistically significant relationship existed between standardized test scores (GRE) and academic self-efficacy (CASES) (R^2 = .023, $F(1,178)$ = 4.194, p < .05). GRE scores were statistically significant in predicting academic self-efficacy β = .152, $t(178)$ = 2.048 p = .042. The null hypothesis was accepted.

Conclusion: Graduate Record Exam (GRE) scores were not significantly correlated with academic performance; however, GRE scores are significantly related to academic self-efficacy.

Research Question Three

Is there a significant difference in academic performance between a sample of African Americans graduate students with lower academic self-efficacy and higher self-efficacy?

Hypothesis: There is no significance difference in the academic performance between a sample of African American graduate students with lower academic self-efficacy and higher academic self-efficacy.

Findings: Results from the one-way analysis of variance (ANOVA) suggested a significant difference in academic performance between the group means, at the $p < .05$ level, $F(1,238) = 7.273$, $p = .007$, $\eta^2 = .030$. Despite reaching statistical significance, the actual difference in the mean scores between the groups was quite small with an effect size of .030. Indicating that 3.0 % of the variance between the group means was due to academic self-efficacy. Means and standard deviations for academic self-efficacy scores by groups were, higher academic self-efficacy (Mean=4.30, SD=.270) and lower academic self-efficacy (Mean=3.59, SD=. 284). The null hypothesis was rejected.

Conclusions: There is a significant difference in academic performance and African American graduate students with lower academic self-efficacy and higher academic self-efficacy. Participants with higher academic self-efficacy had higher GPAs.

Research Question Four

Is there a significant difference in the academic self-efficacy scores of a sample of African American graduate students with negative perceptions of standardized tests and those with positive perceptions of standardized tests?

Hypothesis: There is no statistically significance difference in the academic self-efficacy scores among a sample of African American graduate students with negative perceptions of standardized test scores and positive perceptions of standardized tests.

Findings: The results from the one-way ANOVA showed that there was no statistically significant difference in academic self-efficacy scores between the groups at the $p < .05$ level, $F(1,240) = .3.601$, $p = .059$. Means and standard deviation for perceptions of standardized tests by groups were, positive perceptions of standardized tests (Mean= 31.59, SD= 4.004) and negative perceptions of standardized tests (Mean=

41.50, SD=3.165). An examination of the CASES scores for both groups showed that the negative perceptions group mean was 10 points higher on the academic self-efficacy scale (CASES) than participants with positive perceptions of standardized tests. The null hypothesis was accepted.

Conclusion: There is no statistically significant difference regarding academic self-efficacy for African American graduate students with positive perceptions of standardized tests and negative perceptions of standardized tests.

Discussion

Research question one examined the relationships among perceptions of standardized tests, academic self-efficacy, and academic performance. Findings from the correlational analysis found a significant positive relationship between academic self-efficacy and academic performance of the African American graduate students. These findings are supported by the literature (Davis et al., 2002; Johnson-Reid et al., 2005; Thomas et. al, 2009; Witherspoon et al., 1997). In addition, frequency analysis found that the majority of the participants (*n*=171, 71%) were not first generation college students and past studies have pointed out that having a role model that completed high school and college have been found to increased academic self-efficacy (Johnson-Reid et al., 2005). Perceptions of standardized tests were not significantly correlated with academic performance and these results will add to the literature as very few studies have examined the relationship between these two variables. However, perception of standardized tests and academic self-efficacy had a significant negative correlation, indicating that if one variable increases the other variable decreases. These results will also add to the literature as no studies have looked at the relationship between these two

variables.

Results of the multiple regression analysis revealed that academic self-efficacy and perceptions of standardized tests are predictive of academic performance. However, when both predictor variables were statistically controlled, only academic self-efficacy was found to predict academic performance. These results are consistent with past studies, which have found that academic self-efficacy predicted academic performance (Eccles, Wigfield, Schiefele, 1998; Ferla, Valcke, & Gai, 2009; Gore, 2005; Lampert, 2007; Lent et al., 1984; Meece, Wigfield, & Eccles, 1990; Multon, Brown, & Lent, 1991).

Research question two examined if standardized test scores (GRE scores) could predict academic performance and academic self-efficacy of African American graduates students. Findings from the analysis revealed that GRE scores were not significantly correlated to GPA and did not predict academic performance. These results are similar to previous studies in which standardized test (GRE and GMAT) scores were found to not be predictive of African American graduate students' academic performance (Bieker, 1997; Harnett & Payton, 1977; Scott & Shaw, 1985). It should be noted that the GPA violated assumptions of normality and was negatively skewed which indicates that participants in the study had a higher GPA mean (3.70) when compared to the population. However, since the participants are graduate students, which are a fundamentally different group from the population, having a high GPA (3.0 or higher) could be reflective of the academic requirements of graduate programs. Therefore, the results should only be applied to the graduate student population.

The results from this research question will add to the controversy, as many researchers are split on whether or not standardized tests such as the GRE have a positive relationship and predict African American students academic performance in graduate schools (Astin, Korn, Green, 1987; Fleming & Garcia, 1998; Fleming, 2002; Freedle & Kostin, 1988; Holt, Bleckmann, & Zitzmann, 2006; Franklin, 2007; Kim, 2003; Kuncel & Hezlett, 2007; Kuncel, Wee, Serafin, & Hezlett, 2009; Micceri, & Takalkar, 1994; Micceri, 2007; Mumpower et al., 2002; Nettles & Nettle, 1999; Zheng et al., 2002). As discussed in the literature, standardized test scores might be inconclusive at accurately predicting African American student's academic success and oftentimes overpredicted or underpredicted their academic achievement in college (Bridgeman et al., 2000; Crouse & Trusheim, 1988; Culpepper & Davenport, 2009; Houston, 1983; Kobrin et al.,; Noble, 2003; Young, 2001).

Findings also showed that GRE scores did correlate and predict academic self-efficacy for African American graduates students. These results are surprising since GRE scores did not have a significant relationship with academic performance, which has been found to positively correlate with academic self-efficacy for African American students (Johnson-Reid et al., 2005; Uwah et al., 2008; Witherspoon et al., 1997).

Research question three examined if there were differences in the academic performance between Group 1 (low academic self-efficacy) and Group 2 (high academic self-efficacy). Results from the one-way ANOVA showed a significant difference between the group means. However, an ANOVA can only tell us if the means between the groups are statistically different, but it cannot tell where the actual difference exists. These results are consistent with past literature that has shown that students with higher

academic self-efficacy do differ academically (higher GPA, motivation, higher self-esteem, etc.) from students with lower academic self-efficacy (Davis et al., 2002; Johnson-Reid et al., 2005; Thomas et al., 2009; Uwah et al., 2008; Witherspoon et al., 1997). Additional studies have found that students with higher academic self-efficacy work harder, are more committed to task, have better learning strategies, and effectively cope with stress (Bandura et al., 2003; Chung & Elias, 1996; Parajes, 2002; Zimmerman, 2002).

Research question four examined if differences in the academic self-efficacy between Group 1 (positive perceptions of standardized tests) and Group 2 (negative perceptions of standardized tests). Results from the one-way ANOVA revealed no significant difference between the groups indicating that the means for both groups are statistically equal. These results are new to the literature since there are no studies that have looked at African American graduate students' perceptions of standardized tests and its possible influence on academic self-efficacy.

Perceptions of Standardized Tests

Perceptions of standardized tests (PSTQ) did not correlate with or predict academic performance; however, descriptive and frequency analyses for the PSTQ revealed that the majority of the participants held negative perceptions of standardized tests (Mean= 41.50, SD=3.165, score range: 37 to 50, N=138). Further analysis examined some of the PSTQ items and interesting results were found. For item 2 on the PSTQ (I was anxious when I took the GRE [or other standardized tests]), the majority of the participants answered agree (n= 80, 33%) or strongly agree (n= 112, 46%) indicating that they experienced anxiety while taking the GRE. These results are supported by

previous studies that have shown that many African American students are more susceptible to experience a form of anxiety than leads to suppressed performance on standardized tests such as the GRE (Steele & Aronson, 1996). This form of anxiety may be caused by stereotype threat that has been found to lead to poor performance on standardized tests (Aronson & Inzlicht, 2004; Kellow & Jones, 2008; Steele & Aronson, 1996).

Item 3 (My academic performance in graduate school is not reflective of my GRE scores) and item 6 (I do not believe that standardized tests used for admissions adequately measure my academic knowledge) had the highest means of 4.24 and 4.29 respectively, indicating that African American graduate students believe that their GRE scores were not predictive of their academic performance and that standardized tests used in admissions do not measure their academic knowledge. This information gives more evidence as to why over 50% of the participants in the study held negative perceptions of standardized tests. Finally, item 7 (My performance on the GRE negatively affected my self-confidence in my ability to do well on graduate school) had the lowest mean of 2.15 indicating that participants did not feel that their GRE scores had any affect on their academic self-efficacy.

However, results from item 7 on the PSTQ contrast findings from past studies that found that African American students who perform poorly on standardized tests often have lower academic self-efficacy (Aronson & Inzlicht, 2004). As previously discussed in the findings of research question one, majority of the participants answered agree to strongly agree (n=80, 33% and n=112, 46%, respectively) to item 1 (I was anxious when I took the GRE [or other standardized tests]) which can may indicate that they

experienced stereotype threat. Additionally, majority of the participants had higher academic self-efficacy (Mean= 4.26, SD= .28). Therefore, these findings may indicate two outcomes: (1) African American students overestimated their academic performance and academic self-efficacy (Aronson & Inzlicht, 2004) or (2) African Americans experienced stereotype threat while taking the GRE. However, as time past, their academic performance increased which led to higher academic self-efficacy (Zimmerman, 2000). The latter outcome is supported by findings in this study in which the majority of the participants had higher measured academic self-efficacy on the CASES and high GPAs.

Limitations of the Study

There were many limitations to this study. The first limitation of the study is that the participant's responses on the survey were self-reported and cannot be verified. Another limitation to the study was the use of the Perceptions of Standardized Test Questionnaire (PSTQ) that was created for the study and has not been used with other populations. The Cronbach alpha for the PSTQ was a strong to moderate .75. Additionally, the PSTQ had a 5-point Likert scale and for many of the items, participant responses had little variance and means between 3.0 to 3.6 ranges indicated more neutral beliefs. If the PSTQ had a 7-point Likert scale, it is possible that there could have been more variance in the participant's responses. However, further pilot tests and item analysis should be conducted to evaluate the reliability and validity of the PSTQ.

Another limitation to the study is that GPA did not meet normal distribution and cannot be generalized to beyond African American graduate students. Other limitations included the length of the survey (51 items total; 8 demographic, 33 CASES, and 10

PSTQ), which may have caused participation fatigue, as many participants' started the survey but never completed it. Lastly, undergraduate African American students were not included in the study, which could have provided more variance in GPA and responses on the PSTQ.

Implications

With the concerns of the academic performance for many African American students on standardized tests and their potential success in higher education, this study highlighted possible reasons why African American students tend to score lower on standardized tests such as the GRE, if standardized tests accurately predict their academic performance in graduate school, and if a relationship exist between their perceptions of standardized tests, academic self-efficacy, and academic performance.

The results from this study have revealed that African American students may be experiencing stereotype threat while taking standardized test, as the majority of the participants indicated that they were anxious while taking the GRE which has been found to led to poor performance on standardized tests. These results are similar to the findings that Steele and Aronson found 17 years ago in their study, which demonstrated that African American students were more susceptible to experiencing stereotype threat while taking standardized tests. However, this study also found that participants who were anxious and performed poorly on the GRE went on to do well in graduate school as the mean GPA for the study was 3.70.

Findings from this study have major implications for graduate school admission. When reviewing African American applicants for graduate school, admissions offices and graduate departments should note that lower standardized tests scores are less likely

to reflect their potential academic performance in a graduate program as evidence by this study. Additionally, to make the search for graduate students equitable for all applicants, new admissions criteria could be establish in order to measure applicants on their own merit and potential success in a graduate program. As discovered in this study, the best predictor for academic performance among the sample was academic self-efficacy. Therefore, a new admissions criterion can include an academic self-efficacy measure that can be used in combination with an applicant's GRE scores (these variables correlate as discovered in this study), undergraduate GPA, letters of recommendation, and personal statement.

This study also discovered that many African American graduate students hold negative perceptions of standardized tests. These results were not surprising since the majority of the participants had lower scores on the GRE and believed that a) standardized test were not valid predictors of graduate school performance, b) their academic performance in graduate school is not reflective of their GRE scores and, c) standardized tests have the potential to be biased against women and racial minorities. This information again highlights the perspective that African American students may hold about standardized tests and how these perceptions can create anxiety when preparing and taking the GRE or other standardized tests.

Future Research

Possible future research would be to expand the study to include undergraduate African American students as well as African Americans who already hold an advanced degree and are working in higher education. During the data collection period for the study, many African American undergraduate students, and professors, were interested in

completing my study and held strong beliefs about standardized tests. Additionally, a qualitative analysis that specifically focuses on African American experiences with standardized tests that goes into depth about their perceptions and beliefs via focus group and interviews would be important to the literature. Other possible future research on this topic would be to include women, as previous studies have also pointed out that women are susceptible to experiencing stereotype threat and tend to score lower on standardized tests such as the GRE (Aronson, Quinn, Spencer, Swim, & Charles, 1998).

Lastly, the PSTQ, which was created for the study, had a Cronbach alpha of .75 which is strong to moderate but still needs to be further validated with other populations (e.g., undergraduate students, Caucasian, Asian, Hispanic, Indian, and Native American) as there is no other instrument that exist which measures perceptions of standardized tests. Additionally, a new or updated academic self-efficacy scale that measures academic self-efficacy with college students and graduate students populations would be an asset to research in higher education since the academic self-efficacy scale used in the study (CASES) was created in 1988.

Summary

Chapter V presented a synopsis of the data that were collected and the potential implications for the data. The results showed that there is a positive relationship between academic self-efficacy and academic performance. The majority of sample held negative perceptions of standardized tests; however, there is no relationship between these beliefs and academic performance. Further analysis found that GRE scores did not significantly correlate to academic performance but was correlated to academic self-efficacy. Additionally, a significant difference was found in the academic performance between

participants with higher and lower academic self-efficacy, but no significance difference was found in the academic self-efficacy between participants with negative or positive perceptions of standardized tests. These results highlighted the importance of re-evaluating the relationship between GRE scores and academic performance for African American students and if academic self-efficacy is a better predictor of future academic performance in graduate school.

Chapter VI

Manuscript

The perceptions of standardized tests, academic self-efficacy, and academic performance of African American graduate students: A correlational and comparative analysis.

Arleezah Marrah and Dr. Nina Brown

Old Dominion University

Abstract

The academic performance of African American students continues to be a

concern for educators, researchers, and most importantly their community. This issue is

particularly prevalent in the standardized test scores of African American students where

they score on average one or more standard deviations below their Caucasian and Asian

American counterparts, which may hinder their college enrollment, academic

achievement, and educational attainment (Diaz, 1999; Walpole et. al., 2005). This issue

has been examined by numerous studies and many researchers have attributed their

underachievement to factors such as lower academic self-efficacy, stereotype threat,

cultural test bias, and institutionalized racism (Kellow & Jones, 2008; Rosner, 2001;

Steele, 1997). Despite the numerous studies that examined this issue, the academic

performance of many African American students on standardized tests (i.e. SAT and

GRE) remains poor (College Examination Board, 2012; ETS, 2001). This study

examined the perceptions of standardized tests, standardized tests scores, academic self-

efficacy, and academic performance of 247 African American graduate students, utilizing

a correlational and comparative non-experimental research design. Findings from the

study revealed that academic self-efficacy is a predictor of academic performance for

African American graduate students. However, perceptions of standardized tests were

found to not predict academic performance. In addition, standardized test scores (GRE)

were not significantly related to academic performance; however, GRE scores were

related and predicted academic self-efficacy. Further statistical analysis found that there

was a statistically significant difference in the academic performance between African

American graduate students who had either higher or lower academic self-efficacy.

However, there was no statistically significant difference in the academic self-efficacy between African American graduate students with negative and positive perceptions of standardized test.

The perceptions of standardized tests, academic self-efficacy, and academic performance

of African American graduate students: A correlational and comparative analysis.

Graduate education has been critical for many African Americans in the

improvement of their socioeconomic status in the United States (Gasman, Hirschfeld, &

Vultaggio, 2008). Those who obtain an advance degree, such as a master's, doctorate, or

professional degree, earn higher pay and gain increased social and economic capital (U.S.

Census Bureau, 2012). Despite recent gains in the educational attainment for African

Americans, statistics and research studies continue to show large discrepancies in their

college enrollment, academic achievement, and degree attainment when compared to

their Caucasian and Asian American counterparts (Carter & Wilson, 1996; Freeman,

1997; 1999; Journal of Blacks in Higher Education [JBHE], 2006; Nettles, 1991; U.S.

Census Bureau, 2010; Walpole et al., McDonough, Bauer, Gibson, Kanyi, Toliver, 2005).

This study examined the relationship between the perceptions of standardized test

scores, academic performance, and academic self-efficacy for African American graduate

students. The goal of this study was to promote awareness about how African American

graduate students perceive standardized test scores and how it may influence their

academic self-efficacy in order to provide insight and clarity on how the relationship

between these variables influences their academic performance.

Literature Review

Numerous studies have focused on the achievement gap between African American

students and their peers at various education levels (Aronson & Inzlicht, 2004; Awad,

2007; Bowman & Howard, 1985; Cabrera, Nora, Terenzini, Pascarella, & Hagedorn,

1999; Cokley & Moore, 2007; Davis, 1994; Diaz, 1990; Dornbusch, Ritter, & Steinberg, 1991; Fordham & Ogbu, 1986; Kellow & Jones, 2008; Lee, 1984; Porter, 1990; Sellers, Chavous, & Cooke, 1998; Steele & Aronson, 1995; Williams & Leonard, 1988). Many of these studies have identified factors such as lower academic self-efficacy, stereotype threat, institutionalized racism, and cultural test bias as contributors to the low academic performance of African American students. Researchers have discussed ways to address these barriers; however, statistics continue to show that there has been little improvement in African American students' academic performance when compared to their Caucasian counterpart (National Center for Educational Statistics [NCES], 2011; Sellers et al., 1998).

Some of the literature discussing the academic performance of African American students focused on Albert Bandura's concept of academic self-efficacy. Academic self-efficacy refers to the belief that an individual can effectively meet the demands of their academic environment (Bandura, Caprara, Barbaranelli, Gerbino, & Pastorelli 2003; Fife, Bond, & Byars-Winston, 2011). Many research studies have found a positive relationship between academic self-efficacy and academic performance among African American students (Choi, 2005; Davis, Johnson, Miller-Cribbs, & Saunders, 2002; Einarson & Santiago, 1996; Johnson-Reid, Davis, Saunders, Williams, & Williams, 2005; Witherspoon, Speight, & Thomas, 1997). However, some studies have discovered that African American students may be more susceptible to experiencing lower academic self-efficacy than their Caucasian counterpart, which can negatively affect their academic performance (Aronson & Inzlicht, 2004; Cokley, 2000; Hughes & Demo, 1989; Oates, 2004; Oyserman, Gant, & Ager, 1995; Van Laar, 2000).

Researchers who found lower academic self-efficacy in African American

students propose that self-efficacy may not be fostered in African American communities

as it is in Caucasian communities (Gecas & Burke, 1995; Oates, 2004). Additionally,

other factors that may contribute to lower self-efficacy in many African American

students include stereotypes about their intellectual abilities, lower expectations from

schools and teachers, and restricted opportunities to develop their self-efficacy (Davis et

al., 2002; Gecas & Burke, 1995; Kellow & Jones, 2008; Oates, 2004; Porter &

Washington, 1979; Walpole et al., 2005; Witherspoon et al., 1997).

Other studies have looked at the academic performance of African American

students on standardized tests and point out how disproportionately lower their test scores

are when compared to their Caucasian counterparts (College Board, 2012; ETS, 2010).

In 2011, the College Board reported that the average score on the verbal section on the

SAT was 428 for African Americans compared to 528 for Caucasian, a gap of 100 points.

On the math section, the average score was 427 for African Americans and 535 for

Caucasian, a gap of 108 points. Thus, African Americans scored on average 104 points

below their Caucasian counterparts on the SAT in 2011. Additionally, this trend has also

been seen on the Graduate Record Exam (GRE) where in 2006-2007 the average

combined score (verbal and quantitative) for African Americans was 814 compared to

1055 for Caucasian and 1028 overall, which is an average difference of 214 points

between African Americans and their peers (ETS, 2008).

Despite the disproportionate test scores among African American students, past

studies have provided evidence that African Americans who scored low on the GRE and

other standardized tests have graduated at high rates (Bieker, 1996; Harnett & Payton,

1977; Scott & Shaw, 1985). However, no current studies have replicated these findings with the revised SAT and GRE tests. Other studies have argued that standardized test scores might be inconclusive at accurately predicting African American students' academic success, and oftentimes, overpredicted or underpredicted their academic achievement in college (Bridgeman, McCamley-Jenkins, & Ervin, 2000; Crouse & Trusheim, 1988; Culpepper & Davenport, 2009; Kobrin, Camara, & Milewski, 2002; Houston, 1983; Noble, 2003; Young, 2001).

Other studies have concluded that African American students perform poor on standardized tests due to cultural and statistical test bias (Franklin, 2007; Freedle & Kostin, 1988; Micceri, 2007; Mumpower, Nath, & Stewart, 2002; Nettles & Nettle, 1999; Rosner, 2001; Sacks, 1999; Scott & Shaw, 1985; Strenio, 1981). Nevertheless, researchers have countered these findings and assert that standardized test scores are predictive of African American students academic performance, especially those students who attend a Historically Black College or University (HBCU; Astin, Korn, & Green, 1987; Fleming, 2002; Fleming & Garcia, 1998; Holt, Bleckmann, & Zitzmann, 2006; Kim, 2003; Kuncel & Hezlett, 2007; Kuncel, Wee, Serafin, & Hezlett, 2009; Zheng et al., 2002). Fleming (2002) found that African Americans who attend HBCUs instead of Predominately White Institutions adjust better socially and academically to college, which accounts for higher predictive validity between their standardized test scores and their 1st year in college.

Additionally, other researchers in support of standardized testing believe that claims of testing bias, racial, gender, and socioeconomic (SES) differences in test scores are criticisms based on "myths" and "hearsay" and that it is important that the American

public have knowledge about testing (Sackett, Borneman, & Connelly, 2008; Sackett, Schmitt, Ellingson, & Kabin, 2001; Sackett & Wilk, 1994; Stricker, Rock, & Burton, 1993). Sackett et al., (2008) respond to common criticisms about high-stakes standardized testing and take the position that these criticisms are based on incomplete evidence. Three main criticisms that they address in their study are: (1) lower minority group mean scores show that test are bias; (2) the differences that exist among groups maybe due to different experiences, opportunities, and domain interest; and (3) socioeconomic status (SES) influences test scores and motivational factors explain group differences.

However, despite the controversy surrounding the issue of test bias on standardized tests, African American students are continuing to receive low scores on standardized tests such as the SAT and GRE, which may create barriers for many to gain entry into higher education institutions. In addition to poor standardized test scores, researchers have looked at how stereotype threat may influence the academic performance of African American students (Aronson & Inzlicht, 2004; Kellow & Jones, 2008; Steele & Aronson, 1996). Steele and Aronson (1995) introduced the term *stereotype threat*, which refers to apprehensions individuals feel when performing in an area in which their group is stereotyped to show deficient competence. In their 1995 study, Steele and Aronson examined stereotype threat on the intellectual testing abilities of African American undergraduate students and found that the students who were exposed to negative stereotypes about their race had lower standardized test scores than their White counterparts. Steele and Aronson concluded that stereotype threat leads to

poor performance on standardized test and lower confidence for African American and other minority students.

Since Steele and Aronson's (1995) groundbreaking study, other studies have continued to replicate their earlier findings and have demonstrated how stereotype threat continues to negatively influence the academic performance of African American students (Aronson & Inzlicht, 2004; Kellow & Jones, 2008; Okeke, Howard, Kurtz-Costes, & Rowley, 2009; Taylor & Walton, 2011; Walpole et al., 2005). Additionally, Aronson and Inzlicht (2004) examined stereotype threat among African American students and concluded that these students may not have a clear perception of their academic performance and may suffer from a fragile academic self-confidence, which may lead to unstable academic self-efficacy.

Despite the attention that these studies bring to the issue of African American students' academic performance, many studies have continued to focus on high school and undergraduate college students and not graduate students, who have more experience with standardized testing. In addition, no studies have looked at the relationship between standardized test scores, academic self-efficacy, stereotype threat, perceptions of standardized test scores, and the academic performance of African American graduate students.

Statement of the Problem

The academic performance of African American students has been examined by numerous studies and many researchers have partially attributed their underachievement to factors such as low academic self-efficacy, stereotype threat, test bias, and institutionalized racism (Kellow & Jones, 2008; Rosner, 2001; Steele, 1997). Despite the

numerous studies that examined this issue, the academic performance of African

American students in the United States remains poor in most educational domains

(JBHE, 2006; NCES, 2011). This phenomenon is particularly evident in standardized

test scores for the SAT and GRE where African American students, on average, score one

or more standard deviations below their Caucasian and Asian American counterparts,

which may hinder their access to college and graduate school (Diaz, 1999; Walpole et.

al., 2005).

Additionally, studies that examined the academic performance of African

American students and their academic self-efficacy show mixed results. However, for

those studies that found lower academic self-efficacy for African American students also

found that it was correlated with poor academic performance. Aronson and Inzlicht

(2004) found that African American students in their study who were susceptible to

stereotype threat also had an unstable academic self-efficacy, which interfered with their

academic achievement (i.e. poor performance on standardized tests). Therefore, it is

essential to understand the relationship between academic self-efficacy and the academic

performance of African American students.

Understanding the complex relationship between standardized test scores,

academic self-efficacy, and academic performance is important in helping to develop

concrete solutions to help increase the educational attainment of African American

students at all academic levels, especially for graduate students. Therefore, the current

study focused primarily on African American graduate students. It sought to understand

the effects of their perceptions of standardized test scores and the relationship with

academic self-efficacy and academic performance.

Methods

Participants

Prior to collecting data, permission to conduct the research was granted from the Old Dominion University Institutional Review Board (IRB). Identified participants were African American degree seeking graduate students in Master's, Ed.S, and Ph.D. graduate programs across all disciplines and were located in the eastern and southern regions in the United States. The total sample identified as Black/African American (n=242, 100%). The sample was approximately 80.2% female (n= 194) and 19.8% male (n=48). The majority of the sample was in the 25 to 29 ad 30 to 34 age ranges. Fifty-eight percent of the sample had already completed a Master's degree and 51.2% were currently doctoral students (n=124). The sample's average grade-point average was a 3.70 and average Graduate Record Exam total score was a 1024. Additional demographic data showed the majority of the sample were not first generation college students.

Instrumentation

Academic self-efficacy was measured by the College Academic Self-Efficacy Scale (CASES); Owen and Froman, 1988). The CASES is a self-report measure of academic self-efficacy that is designed to measure the degree of confidence one has when performing a certain academic tasks or behavior. CASES consist of 33 items on a 5-point Likert scale with responses ranging from 1 = very little to 5 = quite a lot. An example item is "Asking a professor in class to review a concept you don't understand". This scale was selected for this study because it was constructed to specifically measure academic self-efficacy rather than general self-efficacy. The reliability for the CASES was established by using the test-retest

method. Scores are calculated by the mean and range from 1 to 5 and there are no cut-off

scores or categories. A mean score of 5 on the CASES indicates higher academic self-

efficacy. For example, if males' average score is 3.3, and females' average is 3.8, then you

would conclude that females show higher academic self-efficacy (Owen & Froman, 1988).

The scale was given twice to 88 psychology students over an 8-week period with an internal

consistency from .90 to .92 and, at the 8-week stability point; the Cronbach's alpha was

estimated at .85. The validity for CASES is from .62 to .81 (as correlated with GPA). The

Cronbach alpha was a .90 for this study.

The Perceptions of Standardized Tests Questionnaire (PSTQ) measured

perceptions of standardized tests. The PSTQ survey was specifically developed for the

current study to assess perceptions of standardized tests. Gehlbach and Brinkworth's

(2011) six steps were taken to construct the PSTQ. These six steps are as follows: (1)

review of the literature, (2) a focus groups with five to seven African American graduate

students, (3) synthesize literature review with focus group data, (4) develop scale items,

(5) expert validation with three faculty members at Old Dominion University, and (6)

cognitive testing. The PSTQ consist of 10-items on a 5-point Likert scale. An example

item is " I was anxious when I took the GRE (or other standardized tests)". The Cronbach

alpha was a moderate .75 for this study. Academic performance was measured by self-

reported grade-point averages and standardized tests scores were measured by Graduate

Record Exam scores that were self-reported by the sample.

Procedure

Data was collected during the Summer 2012 semester as to recruit participants for

the study. The consent form, demographics questionnaire, and surveys were

administered over a seven-week time period. The survey was administered via Survey Gizmo. All surveys were completed online. Because of the use of social networks such CESNET, Facebook and African American graduate student associations, it was impossible to obtain an overall response rate in reference to the 256 completed surveys. The exact number of recipients that opened the survey request link and/or the e-mail solicitations was unknown. This specific limitation prevented an actual response rate for the online survey. Additionally, all recipients of the email invitations were asked to pass along the survey to anyone they believe would be interested in participating in the study.

Results

Data was entered into SPSS version 20.0 for Macintosh for analytical purposes. Descriptive statistics were conducted to describe the characteristics of the sample. To examine research question one, a correlation, and multiple regression was conducted to assess the relationship between perceptions of standardized tests, academic self-efficacy, and academic performance.

Research Question One:

What is the relationship between academic self-efficacy (CASES), perceptions of standardized test scores (PSTQ), and academic performance (GPA) among a sample of African American graduate students?

Hypothesis: There is no significant relationship between academic self-efficacy (CASES), perceptions of standardized tests (PSTQ), and academic performance (GPA) among a sample of African American graduate students.

Findings: The results from the correlation suggest that there is a significant positive relationship between measured academic self-efficacy and academic

performance (r= .189, n=240, p=.002). There was no significant relationship between perceptions of standardized tests and academic performance (r= -.009, n=240, p=.447). In addition, there was a significant negative relationship between perceptions of standardized tests and academic self-efficacy; however, the correlation was very weak (r = -.207, n = 240, p = .001).

The multiple regression results were significant and produced an R^2= .037, $F(2,237)$ = 4.528, p < .05, indicating that measured academic self-efficacy and perceptions of standardized tests are correlated with the academic performance. When each predictor variable was statistically isolated, academic self-efficacy was statistically significant in predicting academic performance β =.196, $t(237)$ = 3.006 p =.003. Perceptions of standardized tests were not significantly predictive of academic performance β =.032, $t(237)$ = .491, p=.624. The result of the multiple regression analysis suggested a statistically significant correlation between perceptions of standardized tests, academic self-efficacy, and academic performance. The null hypothesis was rejected.

Conclusion: There is a significant relationship between academic self-efficacy, perceptions of standardized tests and academic performance among a sample of African American graduate students.

Research Question Two

Can standardized test scores (GRE) predict academic performance and scores on an academic self-efficacy scale (CASES) for a sample of African American graduate students?

Hypothesis: Standardized test scores will not predict the academic performance, or scores on an academic self-efficacy scale for a sample of African American graduate

students.

Findings: The first multiple regression analysis finding was that no statistically significant relationship existed between GRE scores and academic performance (GPA) ($R^2 = .001$, $F(1,178) = .207$, $p > .05$). GRE scores were not statistically significant in predicting academic performance $\beta = .034$, $t(178) = .454$, $p = .650$. It should be noted that GPA violated assumptions of normality and was negatively skewed. However, since the participants are graduate students, having a high GPA (3.0 or higher) could be reflective of the academic requirements of graduate programs. Therefore, the results should only be applied to the graduate student population. The second multiple regression analysis suggested that a statistically significant relationship existed between standardized test scores (GRE) and academic self-efficacy (CASES) ($R^2 = .023$, $F(1,178) = 4.194$, $p < .05$). GRE scores were statistically significant in predicting academic self-efficacy $\beta = .152$, $t(178) = 2.048$ $p = .042$. The null hypothesis was accepted.

Conclusion: Graduate Record Exam (GRE) scores were not significantly correlated with academic performance; however, GRE scores are significantly related to academic self-efficacy.

Research Question Three

Is there a significant difference in academic performance between a sample of African Americans graduate students with lower academic self-efficacy and higher self-efficacy?

Hypothesis: There is no significance difference in the academic performance between a sample of African American graduate students with lower academic self-efficacy and higher academic self-efficacy.

Findings: Results from the one-way analysis of variance (ANOVA) suggested a significant difference in academic performance between the group means, at the $p < .05$ level, $F(1,238)= 7.273, p= .007, \eta^2=.030$. Despite reaching statistical significance, the actual difference in the mean scores between the groups was quite small with an effect size of .030. Indicating that 3.0 % of the variance between the group means was due to academic self-efficacy. Means and standard deviations for academic self-efficacy scores by groups were, higher academic self-efficacy (Mean=4.30, SD=.270) and lower academic self-efficacy (Mean=3.59, SD=. 284). The null hypothesis was rejected.

Conclusions: There is a significant difference in academic performance and African American graduate students with lower academic self-efficacy and higher academic self-efficacy. Participants with higher academic self-efficacy had higher GPAs.

Research Question Four

Is there a significant difference in the academic self-efficacy scores of a sample of African American graduate students with negative perceptions of standardized tests and those with positive perceptions of standardized tests?

Hypothesis: There is no statistically significance difference in the academic self-efficacy scores among a sample of African American graduate students with negative perceptions of standardized test scores and positive perceptions of standardized test scores.

Findings: The results from the one-way ANOVA showed that there was no statistically significant difference in academic self-efficacy scores between the groups at the $p < .05$ level, $F(1,240)= .3.601, p= .059$. Means and standard deviation for perceptions of standardized tests by groups were, positive perceptions of standardized

tests (Mean= 31.59, SD= 4.004) and negative perceptions of standardized tests (Mean= 41.50, SD=3.165). An examination of the CASES scores for both groups showed that the negative perceptions group mean was 10 points higher on the academic self-efficacy scale (CASES) than participants with positive perceptions of standardized tests. The null hypothesis was accepted.

Conclusion: There is no statistically significant difference regarding academic self-efficacy for African American graduate students with positive perceptions of standardized tests and negative perceptions of standardized tests.

Discussion

Research question one examined the relationships among perceptions of standardized tests, academic self-efficacy, and academic performance. Findings from the correlational analysis found a significant positive relationship between academic self-efficacy and academic performance of the African American graduate students. These findings are supported by the literature (Davis et al., 2002; Johnson-Reid et al., 2005; Thomas et. al, 2009; Witherspoon et al., 1997). In addition, frequency analysis found that the majority of the participants (*n*=171, 71%) were not first generation college students and past studies have pointed out that having a role model that completed high school and college have been found to increased academic self-efficacy (Johnson-Reid et al., 2005). Perceptions of standardized tests were not significantly correlated with academic performance and these results will add to the literature as very few studies have examined the relationship between these two variables. However, perception of standardized tests and academic self-efficacy had a significant negative correlation, indicating that if one variable increases the other variable decreases. These results will

also add to the literature as no studies have looked at the relationship between these two variables.

Results of the multiple regression analysis revealed that academic self-efficacy and perceptions of standardized tests are predictive of academic performance. However, when both predictor variables were statistically controlled, only academic self-efficacy was found to predict academic performance. These results are consistent with past studies, which have found that academic self-efficacy predicted academic performance (Eccles, Wigfield, Schiefele, 1998; Ferla, Valcke, & Gai, 2009; Gore, 2005; Lampert, 2007; Lent et al., 1984; Meece, Wigfield, & Eccles, 1990; Multon, Brown, & Lent, 1991).

Research question two examined if standardized test scores (GRE scores) could predict academic performance and academic self-efficacy of African American graduates students. Findings from the analysis revealed that GRE scores were not significantly correlated to GPA and did not predict academic performance. These results are similar to previous studies in which standardized test (GRE and GMAT) scores were found to not be predictive of African American graduate students' academic performance (Bieker, 1997; Harnett & Payton, 1977; Scott & Shaw, 1985). It should be noted that the GPA violated assumptions of normality and was negatively skewed which indicates that participants in the study had a higher GPA mean (3.70) when compared to the population. However, since the participants are graduate students, which are a fundamentally different group from the population, having a high GPA (3.0 or higher) could be reflective of the academic requirements of graduate programs. Therefore, the results should only be applied to the graduate student population.

The results from this research question will add to the controversy, as many researchers are split on whether or not standardized tests such as the GRE have a positive relationship and predict African American students academic performance in graduate schools (Astin, Korn, Green, 1987; Fleming & Garcia, 1998; Fleming, 2002; Freedle & Kostin, 1988; Holt, Bleckmann, & Zitzmann, 2006; Franklin, 2007; Kim, 2003; Kuncel & Hezlett, 2007; Kuncel, Wee, Serafin, & Hezlett, 2009; Micceri, & Takalkar, 1994; Micceri, 2007; Mumpower et al., 2002; Nettles & Nettle, 1999; Zheng et al., 2002). As discussed in the literature, standardized test scores might be inconclusive at accurately predicting African American student's academic success and oftentimes overpredicted or underpredicted their academic achievement in college (Bridgeman et al., 2000; Crouse & Trusheim, 1988; Culpepper & Davenport, 2009; Houston, 1983; Kobrin et al.,; Noble, 2003; Young, 2001).

Findings also showed that GRE scores did correlate and predict academic self-efficacy for African American graduates students. These results are surprising since GRE scores did not have a significant relationship with academic performance, which has been found to positively correlate with academic self-efficacy for African American students (Johnson-Reid et al., 2005; Uwah et al., 2008; Witherspoon et al., 1997).

Research question three examined if there were differences in the academic performance between Group 1 (low academic self-efficacy) and Group 2 (high academic self-efficacy). Results from the one-way ANOVA showed a significant difference between the group means. However, an ANOVA can only tell us if the means between the groups are statistically different, but it cannot tell where the actual difference exists. These results are consistent with past literature that has shown that students with higher

academic self-efficacy do differ academically (higher GPA, motivation, higher self-esteem, etc.) from students with lower academic self-efficacy (Davis et al., 2002; Johnson-Reid et al., 2005; Thomas et al., 2009; Uwah et al., 2008; Witherspoon et al., 1997). Additional studies have found that students with higher academic self-efficacy work harder, are more committed to task, have better learning strategies, and effectively cope with stress (Bandura et al., 2003; Chung & Elias, 1996; Parajes, 2002; Zimmerman, 2002).

Research question four examined if differences in the academic self-efficacy between Group 1 (positive perceptions of standardized tests) and Group 2 (negative perceptions of standardized tests). Results from the one-way ANOVA revealed no significant difference between the groups indicating that the means for both groups are statistically equal. These results are new to the literature since there are no studies that have looked at African American graduate students' perceptions of standardized tests and its possible influence on academic self-efficacy.

Perceptions of Standardized Tests

Perceptions of standardized tests (PSTQ) did not correlate with or predict academic performance; however, descriptive and frequency analyses for the PSTQ revealed that the majority of the participants held negative perceptions of standardized tests (Mean= 41.50, SD=3.165, score range: 37 to 50, N=138). Further analysis examined some of the PSTQ items and interesting results were found. For item 2 on the PSTQ (I was anxious when I took the GRE [or other standardized tests]), the majority of the participants answered agree (n= 80, 33%) or strongly agree (n= 112, 46%) indicating that they experienced anxiety while taking the GRE. These results are supported by

previous studies that have shown that many African American students are more susceptible to experience a form of anxiety than leads to suppressed performance on standardized tests such as the GRE (Steele & Aronson, 1996). This form of anxiety may be caused by stereotype threat that has been found to lead to poor performance on standardized tests (Aronson & Inzlicht, 2004; Kellow & Jones, 2008; Steele & Aronson, 1996).

Item 3 (My academic performance in graduate school is not reflective of my GRE scores) and item 6 (I do not believe that standardized tests used for admissions adequately measure my academic knowledge) had the highest means of 4.24 and 4.29 respectively, indicating that African American graduate students believe that their GRE scores were not predictive of their academic performance and that standardized tests used in admissions do not measure their academic knowledge. This information gives more evidence as to why over 50% of the participants in the study held negative perceptions of standardized tests. Finally, item 7 (My performance on the GRE negatively affected my self-confidence in my ability to do well on graduate school) had the lowest mean of 2.15 indicating that participants did not feel that their GRE scores had any affect on their academic self-efficacy.

However, results from item 7 on the PSTQ contrast findings from past studies that found that African American students who perform poorly on standardized tests often have lower academic self-efficacy (Aronson & Inzlicht, 2004). As previously discussed in the findings of research question one, majority of the participants answered agree to strongly agree (n=80, 33% and n=112, 46%, respectively) to item 1 (I was anxious when I took the GRE [or other standardized tests]) which can may indicate that they

experienced stereotype threat. Additionally, majority of the participants had higher

academic self-efficacy (Mean= 4.26, SD= .28). Therefore, these findings may indicate

two outcomes: (1) African American students overestimated their academic performance

and academic self-efficacy (Aronson & Inzlicht, 2004) or (2) African Americans

experienced stereotype threat while taking the GRE. However, as time past, their

academic performance increased which led to higher academic self-efficacy

(Zimmerman, 2000). The latter outcome is supported by findings in this study in which

the majority of the participants had higher measured academic self-efficacy on the

CASES and high GPAs.

Limitations of the Study

There were many limitations to this study. The first limitation of the study is that

the participant's responses on the survey were self-reported and cannot be verified.

Another limitation to the study was the use of the Perceptions of Standardized Test

Questionnaire (PSTQ) that was created for the study and has not been used with other

populations. The Cronbach alpha for the PSTQ was a strong to moderate .75.

Additionally, the PSTQ had a 5-point Likert scale and for many of the items, participant

responses had little variance and means between 3.0 to 3.6 ranges indicated more neutral

beliefs. If the PSTQ had a 7-point Likert scale, it is possible that there could have been

more variance in the participant's responses. However, further pilot tests and item

analysis should be conducted to evaluate the reliability and validity of the PSTQ.

Another limitation to the study is that GPA did not meet normal distribution and

cannot be generalized to beyond African American graduate students. Other limitations

included the length of the survey (51 items total; 8 demographic, 33 CASES, and 10

PSTQ), which may have caused participation fatigue, as many participants' started the survey but never completed it. Lastly, undergraduate African American students were not included in the study, which could have provided more variance in GPA and responses on the PSTQ.

Implications

With the concerns of the academic performance for many African American students on standardized tests and their potential success in higher education, this study highlighted possible reasons why African American students tend to score lower on standardized tests such as the GRE, if standardized tests accurately predict their academic performance in graduate school, and if a relationship exist between their perceptions of standardized tests, academic self-efficacy, and academic performance.

The results from this study have revealed that African American students may be experiencing stereotype threat while taking standardized test, as the majority of the participants indicated that they were anxious while taking the GRE which has been found to led to poor performance on standardized tests. These results are similar to the findings that Steele and Aronson found 17 years ago in their study, which demonstrated that African American students were more susceptible to experiencing stereotype threat while taking standardized tests. However, this study also found that participants who were anxious and performed poorly on the GRE went on to do well in graduate school as the mean GPA for the study was 3.70.

Findings from this study have major implications for graduate school admission. When reviewing African American applicants for graduate school, admissions offices and graduate departments should note that lower standardized tests scores are less likely

to reflect their potential academic performance in a graduate program as evidence by this study. Additionally, to make the search for graduate students equitable for all applicants, new admissions criteria could be establish in order to measure applicants on their own merit and potential success in a graduate program. As discovered in this study, the best predictor for academic performance among the sample was academic self-efficacy. Therefore, a new admissions criterion can include an academic self-efficacy measure that can be used in combination with an applicant's GRE scores (these variables correlate as discovered in this study), undergraduate GPA, letters of recommendation, and personal statement.

This study also discovered that many African American graduate students hold negative perceptions of standardized tests. These results were not surprising since the majority of the participants had lower scores on the GRE and believed that a) standardized test were not valid predictors of graduate school performance, b) their academic performance in graduate school is not reflective of their GRE scores and, c) standardized tests have the potential to be biased against women and racial minorities. This information again highlights the perspective that African American students may hold about standardized tests and how these perceptions can create anxiety when preparing and taking the GRE or other standardized tests.

Future Research

Possible future research would be to expand the study to include undergraduate African American students as well as African Americans who already hold an advanced degree and are working in higher education. During the data collection period for the study, many African American undergraduate students, and professors, were interested in

completing my study and held strong beliefs about standardized tests. Additionally, a qualitative analysis that specifically focuses on African American experiences with standardized tests that goes into depth about their perceptions and beliefs via focus group and interviews would be important to the literature. Other possible future research on this topic would be to include women, as previous studies have also pointed out that women are susceptible to experiencing stereotype threat and tend to score lower on standardized tests such as the GRE (Aronson, Quinn, Spencer, Swim, & Charles, 1998).

Lastly, the PSTQ, which was created for the study, had a Cronbach alpha of .75 which is strong to moderate but still needs to be further validated with other populations (e.g., undergraduate students, Caucasian, Asian, Hispanic, Indian, and Native American) as there is no other instrument that exist which measures perceptions of standardized tests. Additionally, a new or updated academic self-efficacy scale that measures academic self-efficacy with college students and graduate students populations would be an asset to research in higher education since the academic self-efficacy scale used in the study (CASES) was created in 1988.

REFERENCES

Aronson, J., & Inzlicht, M. (2004). The ups and downs of attributional ambiguity: Stereotype vulnerability and the academic self-knowledge of African American college students. *Psychological Science, 15,* 829-836.

Astin, A., Korn, W., & Green, K. (1987, Winter). Retaining and satisfying students. *Educational Record,* 36-42.

Au, W. (2009). *Unequal by design: High-stakes testing and the standardization of inequality.* New York: Routledge.

Awad, G. H. (January 01, 2007). The role of racial identity, academic self-concept, and self-esteem in the prediction of academic outcomes for African American students. *Journal of Black Psychology, 33*(2), 188-207.

Bandura, A., & Adams, N. E. (1977). Analysis of self-efficacy theory of behavioral change. *Cognitive Therapy and Research, 1,* 287-308.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). San Diego: Academic Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: W.H. Freeman.

Bandura, A. (1995). *Self-efficacy in changing societies.* Cambridge: Cambridge University Press.

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. *Child Development, 67,* 1206-1222.

Bandura, A. (2002). Social cognitive theory in cultural context. *Applied Psychology: An International Review, 151*, 269-290.

Bandura, A., Caprara, G. V., Barbaranelli, C., Gerbino, M., & Pastorelli, C. (2003). Role of affective self-regulatory efficacy in diverse spheres of psychosocial functioning. *Child Development, 74*, 769-782.

Berk, R. A. (Ed.). (1982). *Handbook of methods for detecting test bias.* Baltimore: Johns Hopkins University Press

Bieker, R. F. (1996). Factors affecting academic achievement in graduate management education. *Journal of Education for Business, 72*, 1, 42-46.

Bong, M. (1999). Personal factors affecting the generality of academic self-efficacy judgments: Gender, ethnicity, and relative expertise. *Journal of Experimental Education, 67*, 4, 315-31.

Bowen, W., & Bok, D. (1998). *The shape of the river: Long-term consequences of considering race in college and university admissions.* Princeton, NJ: Princeton University Press.

Bowman, P. J. & Howard, C. (1985). Race-related socialization, motivation, and academic achievement: A study of Black youths in three-generation families. *Journal of the American Academy of Child Psychiatry, 24* (2), 134-141.

Brace, N., Kemp, R., & Sneglar, R. (2006). *SPSS for psychologists: A guide to data analysis using SPSS for Windows.* Hillsdale, NJ: Rutledge

Bradley, C., & Holcomb-McCoy, C. (2004). African American counselor educators: Their experiences, challenges, and recommendations. *Counselor Education and*

Supervision, 43, 4, 258-273.

Bridgeman, B., McCamley-Jenkins, L., & Ervin, N. (2000). *Predictions of freshman gradepoint average from the revised and recentered SAT I: Reasoning Test* (Research Report No. 2000-1). New York: College Entrance Examination

Brown v. Board of Education, 347 U.S. 483 (1954)

Burton, N. W., & Wang, M. (2005). *Predicting long-term success in graduate school: A collaborative validity study*. Princeton, NJ: Educational Testing Service.

Bussey, K., & Bandura, A. (1999). Social cognitive theory of gender development and differentiation. *Psychology Review, 106*, 676-713.

Cabrera, A. F., Nora, A., Terenzini, P. T., Pascarella, E., & Hagedorn, L. S. (1999). Campus racial climate and the adjustment of students to college. *Journal of Higher Education, 70*, 134–160.

Carlton, S. T., & Harris, A. M. (1992). *Characteristics associated with differential item functioning on the scholastic aptitude test: Gender and majority/minority group comparisons*. Research Report 92-64, Princeton, NJ: Educational Testing Service.

Carter, D. J., & Wilson, R. (1996). *Minorities in higher education. 1995-96 fourteenth annual status report*. Washington, DC: American Council on Education. (ED 407 892)

Chemers, M. M., Hu, L. T., & Garcia, B. F. (2001). Academic self-efficacy and first-year college student performance and adjustment. *Journal of Educational Psychology, 93*(1), 55-64.

Choi, N. (2005). Self-efficacy and self-concept as predictors of college students' academic performance. *Psychology in the Schools, 42*, 2, 197-205.

Chung. H., & Elias, M. (1996), Patterns of adolescent involvement in problem behaviors:

Relationship to self-efficacy, social competence and life events. *American*

Journal of Community Psychology, 24, 771-786.

Cohen, J. (1968). Multiple regression as a general data-analytic system. *Psychological*

Bulletin, 70, 426-443.

Cohen, J. (1992). Statistical power analysis. *Current Directions in Psychological Science,*

1, 3, 98-101.

Cohen, J., & Cohen, J. (2003). *Applied multiple regression/correlation analysis for the*

behavioral sciences. Mahwah, N.J: L. Erlbaum Associates.

Cokley, K. (2000). An investigation of academic self-concept and its relationship to

Academic achievement in African American college students. *Journal of Black*

Psychology, 26, 148–164.

Cokley, K., & Moore, P. (2007). Moderating and mediating effects of gender and

psychological disengagement on the academic achievement of African American

college students. *Journal of Black Psychology, 33*(2) 169-187.

Cole, B. P. (1991) College Admissions & Coaching. In A. G. Hillard III (Ed.), *Testing*

AfricanAmerican students: Special re-issue of the Negro educational review

Morristown, NJ: Aaron Press.

College Entrance Examination Board. 1997 National Ethnic/Sex Data. (1997) New

York: Author. *Note that the CEEB no longer releases this publication to the*

public.

College Board and Educational Testing Service. (2012). *2011 College-bound seniors:*

Total group profile report, 2011. Retrieved January 1, 2012 from

http://professionals.collegeboard.com/data-reports-research/sat/cb-seniors 2011

Comparing the Educational Attainment of the Parents of Black and White Children in the

United States (2007). *The Journal of Blacks in Higher Education, 57*, 22.

Connor, K., & Vargyas, E. J. (1992). The legal implications of gender bias in

standardized testing. *Berkeley Women's Law Journal, 7*, 1-89.

Council for Accreditation of Counseling and Related Educational Programs. (2001).

CACREP accreditation manual: 2001 standards. Alexandria, VA: Author.

Council of Graduate Schools (2011). Graduate enrollment and degrees: 2000-2010.

Retrieved December 17, 2011 from http://www.cgsnet.org/.

Crouse, J., Trusheim, D.,. (1988). *The case against the SAT.* University of Chicago Press,

Chicago.

Culpepper, S. A., & Davenport, E. C. (2009). Assessing differential prediction of college

grades by race/ethnicity with a multilevel model. *Journal of Educational*

Measurement, 46, (2), 220-242.

Davis, J. E. (1994). College in black and white: Campus environment and academic

achievement of African American males. Journal of Negro Education, *63*(4),

620-633.

Davis, L., Johnson, S., Miller-Cribbs, J., & Saunders, J. (2002). A brief report: Factors

influencing African American youth decisions to stay in school. *Journal of*

Adolescent Research, 17, 223–234.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human

needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227-

268.

Diaz, E. (1990) Barriers to minorities in the field of psychology and strategies for change.

In G. Stricker, E. Davis-Russell, E. Bourg, E. Duran, W. R. Hammond, J.

McHolland, K. Polite, & B. E. Vaughn (Eds.). *Toward ethnic diversification in*

psychology education and training (pp. 77-88). Washington, DC: American

Psychological Association.

Dorn, S. (2003). High stakes testing and the history of graduation. *Education Policy*

Analysis Archives, 11, 1. Retrieved on December 12, 2011 from

http://epaa.asu.edu/ojs/article/view/229.

Dornbusch, S. M., Ritter, P. L., & Steinberg, L. (1991). Community influences on the

relation of family statuses to adolescent school performance: Differences

between African Americans and non-Hispanic Whites. *American Journal of*

Education, 99(4), 543-567.

Duran, R. (1994). Hispanic student achievement. In M. J. Justiz, R. Wilson, & L. G.

Bjork (Eds.), *Minorities in higher education: American Council on*

Education/Oryx Series on Higher Education (pp. 151-172). Phoenix, AZ: Oryx

Press.

Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual*

Review of Psychology, 53, 109-132.

Educational Testing Services (2001). Sex, race, ethnicity, and performance on the GRE

general test 2001-2002. Retrieved on March 2, 2011 from:

http://www.ets.org/research

Educational Testing Services (2008). Graduate record examination: Factors that can

influence performance on the GRE general test 2006-2007. Retrieved on March

2, 2011 from http://www.ets.org/research

Einarson, M. K., & Santiago, A. M. (1996). *Background characteristics as predictors of academic self-confidence and academic self-efficacy among graduate students and engineering students: An exploration of gender and ethnic differences* (Report No. HE029306). Paper presented at the Annual Forum of the Association for Institutional Research. (ERIC Document Reproduction Service No. ED397706).

Elford, G. (2002). *Beyond standardized testing.* Lanham, MD: The Scarecrow Press.

Elias, S. M., & Loomis, R. J. (2002). Utilizing the need for cognitive and perceived self efficacy to predict academic performance. *Journal of Applied Social Psychology, 32,* 1687-1702.

Fairtest Examiner (2007). *The "New" SAT: A better test or just a marketing ploy.* Retrieved from http://www.fairtest.org/new-sat-better-test-or-just-marketing-ploy.

Fairtest Examiner (2011). *Changes loom grad school exams.* Retrieved from http://www.fairtest.org/changes-loom-grad-school-exams.

Fife, J. E., Bond, S., & Byars-Winston, A. (2011). Correlates and predictors of academic self-efficacy among African American students. *Education Indianapolis Then Chula Vista, 132*(1), 141-148.

Fleming, J. & Garcia, N. (1998). Are standardized tests fair to African Americans? Predictive validity of the SAT in Black and White colleges. *Journal of Higher Education, 69,* 471-495.

Fleming, J. (2002). Who will succeed in college? When the SAT predicts black students' performance. *The Review of Higher Education. 25*(3), 281-296.

Fordham, S., & Ogbu, J. U. (1986). Black students' school success: Coping with the "burden of acting White." *Urban Review, 18,* 176–206.

Franklin, V. P. (September 06, 2007). The tests are written for the dogs: African American children, and the intelligence testing movement in historical perspective. *Journal of Negro Education, 76(3),* 216-229.

Freedle, R., & Kostin, I. (1988). *Relationship between item characteristics and an index of Differential Item Functioning (DIF) for the four GRE verbal item types* (Research Report No.RR-88-29). Princeton, NJ: Educational Testing Service

Freedle, R., & Kostin, I. (1991). Item difficulty of four verbal Item types and an index of differential functioning for Black and White examinees. *Journal of Educational Measurement, 27*(4), 329-43.

Freeman, K. (1997). Increasing African Americans' participation in higher education: African American high-school students' perspectives. *Journal of Higher Education, 68,* 523-550.

Gasman, M., Hirschfield, A., & Vultaggio, J. (2008). "Difficult yet rewarding": The experiences of African American graduate students in education at an Ivy League institution. *Journal of Diversity in Higher Education, 1*(2), 126-138.

Gecas, V. & Burke, P. J. (1995). Self and identity. In Cook, K. S., Fine, G. A. and House, J. S. (Eds.) *Sociological perspectives on social psychology,* (pp. 41-67) Boston: Allyn & Bacon.

Gehlbach, H., & Brinkworth, M. E. (December 01, 2011). Measure twice, cut down error: A process for enhancing the validity of survey scales. *Review of General Psychology, 15,* (4), 380-387.

Geiser, S. with R. Studley. (2002). UC and the SAT: Predictive validity and differential

impact of the SAT I and SAT II at the University of California. *Educational*

Assessment, 8(1), 1-26.

Göb, R., McCollin, C., & Ramalhoto, M. F. (2007). Ordinal methodology in the analysis

of Likert scales. *Quality & Quantity*, 41, 601-616.

Gifford, B. (1989). *Test policy and test performance: Education, language, and culture.*

London, U.K.: Kluwer Academic.

Green, A. (2008). A dream deferred: The experiences of an African American student

in a doctoral program in science. *Education, 128* (3), 339-348.

Gresham, F. K. (1988). Social competence and motivational characteristics of learning

disabled students. in M. Wang, M. Reynolds, & H. Walberg (Eds.), *Handbook of*

special education: Mildly handicapped conditions (pp. 283-302). New York:

Pergamon Press.

Gross, S. (1998). *Participation and performance of women and minorities in*

mathematics. Department of Educational Accountability, Montgomery County

(Maryland) Public Schools.

Gunn, H. E., & Singh, J. (2004). *Minority report: How African Americans and Hispanics*

can increase their test scores. Lanham, MD: Scarecrow Education.

Hacker, A. (1992). *Two nations: Black and White, separate, hostile, unequal.* New

York: Macmillan.

Hackett, G., & Betz, N. E. (1981). A self-efficacy approach to the career development of

women. *Journal of Vocational Psychology, 18*, 326-339.

Hackett, R. K., Holland, P., Pearlman, M., & Thayer, D. (1987). *Test construction*

manipulating score difference between Black and White examinees: Properties

of the resulting tests. Princeton, NJ: Educational Testing Service.

Harnett, R. & Payton, B.F. (1977). *Minority admissions and performance in graduate*

study: Preliminary study of fellowship programs of the Ford and Danforth

foundations. New York: Ford Foundation.

Henfield, M. S., Owens, D., & Witherspoon, S. (2011). African American students in

counselor education programs: Perceptions of their experiences. *Counselor*

Education and Supervision, 50, 4, 226-242.

Hiss, W. D. (1990). Optional SAT's: Six Years Later. *Bates: The Alumni Magazine.*

Holcomb-McCoy, C., & Addison-Bradley, C. (2005). African American counselor

educators' job satisfaction and perceptions of departmental racial climate.

Counselor Education and Supervision, 45, (1), 2-15.

Holt, D. T., Bleckmann, C. A., & Zitzmann, C. C. (2006). The graduate record

examination and success in an engineering management program: A case study.

Engineering Management Journal, 18(1), 10-16.

Hoover, E. (2007). Admissions plan goes beyond numbers. *Chronicle of Higher*

Education, 54, 3,3-4.

Hoover, M. R., Politzer, R. L., & Taylor, O. (1991). Bias in reading tests for Black

language speakers: A sociolinguistic perspective. In A. G. Hillard III (Ed.),

Testing African American students: Special re-issue of the Negro educational

review. Morristown, NJ: Aaron Press, 1991.

Houston, L. N. (1983). The comparative predictive validities of high school rank, the

Ammons Quick Test, and two Scholastic Aptitude Test measures

or a sample of Black female college students. *Educational and Psychological Measurement,* 43,1123-1126.

Hughes, M., & Demo, D. H. (1989). Self-perceptions of black Americans: Self esteem and personal efficacy. *American Journal of Sociology, 95,* (1) 132-159.

Jairrels, V. (2009). *African Americans and standardized tests: The real reason for low test scores.* Sauk Village, Ill: African American Images.

Jencks, C. (1998). *The Black White test score* gap. Washington, DC: Brookings Institution Press.

Jensen, A. R. (1980). *Bias in mental testing.* New York: Free Press.

Ji, C.H. C. (1998). Predictive validity of the Graduate Record Examination in education. *Psychological Reports, 82*(3), 899-904.

Johnson, P. D., Bradley, C. R., Knight, D. E., & Bradshaw, E. S. (2007). Preparing African American counselor education students for the professorate. *College Student Journal, 41,* 4, 886-890.

Johnson-Reid, M., Davis, L., Saunders, J., Williams, T., & Williams, J. (2005). Academic self-efficacy among African American youth: Implications for school social work practice. *Children and Schools,27,* 5-14.

Juang, L., & Vondracek, F. (2001). Developmental patterns of adolescent capability beliefs: A person approach. *Journal of Vocational Behavior, 59,* 34-52.

Kador, J., & Lewis, C. (2007). The role of mentors/advisors in the doctoral training of African American students at predominately Caucasian universities: Implication for doctoral training. *Essay in Education, 19,* 100-118.

Kellow, J. T., & Jones, B. D. (2008). The effects of stereotypes on the achievement gap: Reexamining the academic performance of African American high school students. *Journal of Black Psychology, 34*, 94-120.

Kidder, W. C., & Rosner, J. (2002). How the SAT creates "built-in headwinds": An educational and legal analysis of disparate impact. *Santa Clara Law Review, 43*(1), 131 211.

King, S., & Chepyator-Thompson, J. R. (1996). Factors affecting the enrollment and persistence of African American doctoral students. *The Physical Educator, 53*, 170-180.

Kobrin, J., Patterson, B., Shaw, E., Mattern, K., & S. Barbuti. (2008). "Validity of the SAT for predicting first-year college grade point average." College Board Research Report No. 2008-5. New York: College Board.

Kobrin, J. L., Camara, W. J., & Milewski, G. B. (2002). *The utility of the SAT* R _ *I and SAT II for admissions decisions in California and the nation* (Research Report No. 2002-6). New York: College Entrance Examination Board.

Kohn, A. (2000). High-stakes testing as educational ethnic cleansing - As the movement threatens to swallow schools whole. *The Education Digest, 66*, 4, 13.

Koretz, D. M. (2008). *Measuring up: What educational testing really tells us*. Cambridge, Mass: Harvard University Press.

Kornhaber, M. L. (Eds.). *Raising standards or raising barriers? Inequality and high stakes testing in public education*. New York: The Century Foundation Press.

Kuncel, N. R., Hezlett, S. A., & Ones, D. S. (2001). A comprehensive meta-analysis of the predictive validity of the Graduate Record Examinations: Implications for

graduate student selection and performance. *Psychological Bulletin, 127*, 162-181.

Kuncel, N. R., & Hezlett, S. A. (2007). *Assessment. Standardized tests predict graduate students' success.* Science (New York, N.Y.), 315, 5815, 1080-1.

Kuncel, N. R., Wee, S., Serafin, L., & Hezlett, S. A. (2010). The validity of the graduate record examination for master's and doctoral programs: A meta-analytic investigation. *Educational and Psychological Measurement, 70*, (2) 340-352.

Lampert, J. N. (2007). The relationship of self-efficacy and self-concept to academic performance in a college sample: Testing competing models and measures. *School of Professional Psychology.* Paper 86. Retrieved from http://commons.pacificu.edu/spp/86

Lavin, D. & Crook, D. (1990). Open admissions and its outcomes: Ethnic differences in long-term educational attainment. *American Journal of Education. 98*, 389-425.

Leach, C. W., Queirolo, S. S., DeVoe, S., & Chemers, M. (2003). Choosing letter grade evaluations: The interaction of students' achievement goals and self-efficacy. *Journal of Vocational Behavior, 28*, 495-509.

Lee, C. L. (1984). An investigation of the psychosocial variables in the occupational aspirations and expectations of rural black and white adolescents: Implication for vocational education. *Journal of Research and Development in Education, 17*(3), 28-440.

Leedy, P. D. (1993). *Practical research: Planning and design.* New York: Macmillan.

Lent, R. W., Brown, S. D., & Larkin, K. C. (1984). Relation of self-efficacy expectations

to academic achievement and persistence. *Journal of Counseling Psychology, 31*,

356-362.

Lent, R. W., Brown, S. D., & Larkin K. C. (1986). Self- efficacy in the prediction of

academic performance and perceived career options. J*ournal of Counseling

Psychology, 33*(3), 265-269.

Lent, R. W., Brown, S. D., & Gore Jr., P. A. (1997). Discriminant and predictive validity

of academic self-concept, academic self-efficacy, and mathematics-specific self-

efficacy. *Journal of Counseling Psychology, 44*, 307-315.

Lewin, T. (2002). College Board to revise SAT after criticism by university. Retrieved

from http://www.nytimes.com/2002/03/23/us/college-board-to-revise-sat-after-

criticism-by-university.html

Lindle, Jane Clark; Rinehart, James S. (1998). *Emerging Issues with the Predictive

Applications of the GRE in Educational Administration Programs: One Doctoral

Program's Experience*. ERIC_NO: ED424632.

Linnenbrink, E. A., & Pintrich, P. R. (2002). Achievement goal theory and affect: An

asymmetrical bidirectional model. *Educational Psychologist, 37*(2), 69-78.

Madaus, G., & Clarke, M. (2001). The adverse impact of high-stakes testing on minority

students: Evidence from one hundred years of test data. In G. Orfield & M. L.

Kornhaber (Eds.), *Raising standards or raising barriers? Inequality and high

stakes testing in public education* (pp. 85-106). New York: The Century

Foundation.

Magaletta, P. R., & Oliver, J. M. (1999). The hope construct, will, and ways: their

relations with self-efficacy, optimism, and general well being. *Journal of Clinical Psychology, 55*, 5, 539-51.

Matsui, T. (1994). Mechanisms underlying sex differences in career self-efficacy expectations of university students. *Journal of Vocational Behavior, 45*, 177–184.

McAuley, E., & Blissmer, B. (2000). Self-efficacy determinants and consequences of physical activity. *Exercise and Sport Sciences Reviews, 28*(2), 85-88.

McIntosh Commission.(1994). *Report of the McIntosh Commission on Fair Play in Student Athlete Admissions*. Cambridge, MA: National Center for Fair & Open Testing.

Micceri, T. (2007). *How we justify and maintain the Caucasian, male academic status quo through the use of biased college admission requirements*. Paper presented at the Annual Meeting of the Florida Association for Institutional Research (Eric Document Service No. ED497371) Retrieved from www.eric.ed.gov

Miller & Dollard. (1941). *Social learning and imitation*. Yale University. Press: New Haven.

Mumpower, J., Nath, R., & Stewart, T. (2002). Affirmative action, duality of error, and the consequences of mispredicting the academic performance of African American college applicants. *Journal of Policy Analysis and Management, 21*, 63-77.

Nasim, A., Roberts, A., Harrell, P., & Young, H. (2005). Non-cognitive predictors of academic achievement for African Americans across cultural contexts. *The Journal of Negro Education, 74*, 344-358.

National Center for Educational Statistics. (2011). *Achievement gaps: How Black and White students in public schools perform in mathematics and reading on the National Assessment of Education Progress.* Washington, DC: Vanneman, A., Hamilton, L., Baldwin-Anderson, J., Rahman, T. Retrieved on March 16, 2011 from http://nces.ed.gov/nationsreportcard/pdf/studies/2009455.pdf.

Nettles, A. L., & Nettles, M. T. (1999*). Measuring up: Challenges minorities face in educational assessment.* Boston: Kluwer Academic Publishers.

Nettles, M. T. (1991). *Assessing progress in minority access and achievement in American higher education* (ECSWorking Papers: State Policy and Assessment in Higher Education). Denver, CO: Education Commission of the States. (ERIC Document Reproduction Service No. ED340289)

Nimon, K., & Reio, T. G.Jr. (2011). Regression commonality analysis: A technique for quantitative theory building. *10 (3),* 329-340. DOI:10.1177/1534484311411077

Noble, J. (2003). *The effects of using ACT composite score and high school average on college admission decisions for racial/ethnic groups,* ACT Research Report Series 2003-1. http://www.act.org/research/reports/pdf/ACT_RR2003-1.pdf

Norman, G. (2010). Likert scales, levels of measurement, and the "laws" of statistics. *Advances in Health Science Education, 15,* 625-632.

Oates, G. (2004). The color of the undergraduate experience and the black self-concept: Evidence from longitudinal data. *Social Psychology Quarterly, 67,* 16-32.

Okeke, N. A., Howard, L. C., Kurtz-Costes, B., & Rowley, S. J. (2009). Academic race

stereotypes, academic self-concept, and racial centrality in African American

youth. *Journal of Black Psychology, 35(3)*, 366-387.

Orfield, G., & Kornhaber, M. L. (Eds.) (2001). *Raising standards or raising barriers?*

Inequality and high stakes testing in public education. New York: The

Century Foundation Press.

Owen, S. V., & Froman, R. D. (1988). *Development of a college academic self-efficacy*

scale. Paper presented at the 1998 annual meeting of the National Council on

Measurement in Education.

Oyserman, D., Gant, L. & Ager, J. (1995). A socially contextualized model of African

American identity: possible selves and school persistence. *Journal of Personal*

Social Psychology, 69, 1216-1232.

Pajares, F., & Miller, M. (1994). Role of self-efficacy and self-concept beliefs in

mathematical problem solving: A path analysis. *Journal of Educational*

Psychology, 86, 193-203.

Pajares, F., & Kranzler, J. (1995). Self-efficacy beliefs and general mental ability in

mathematical problem solving. *Contemporary Educational Psychology, 26,* 426

443.

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational*

Research, 66(4), 543-78.

Pajares, F. (2002). *Overview of social cognitive theory and of self-efficacy.*Retrieved

from http://www.emory.edu/EDUCATION/mfp/eff.html

Porter, J. R., & Washington, R. E. (1979). Black Identity and Self-Esteem: A Review of

 Studies of Black Self-Concept, 1968-1978. *Annual Review of Sociology, 5*, 53

 74

Porter, O. F. (1990). *Undergraduate Completion and Persistence at Four-year Colleges*

 and Universities: Detailed Findings. National Institute of Independent Colleges

 and Universities, Washington, DC.

Powers, D. E. (2004). Validity of Graduate Record Examinations (GRE) general test

 scores for admissions to colleges of veterinary medicine. *Journal of Applied*

 Psychology, 89, 209-219.

Ravitch, D. (2010). *The death and life of the great American school system: How testing*

 and choice are undermining education. New York: Basic Books.

Reynolds, C. R., & Brown, R. T. (1984). *Perspectives on bias in mental testing*. New

 York: Plenum Press.

Rogers, J., Dorans, N. J., & Schmitt, A. P. (1986). *Assessing Unexpected Differential*

 Item Performance of Black Candidates on SAT form 3GSA08 and TSWE form

 E43. Unpublished ETS statistical report SR-86-22.

Rooney, C., & Schaeffer, B. (1999). *Test scores do not equal merit*. Cambridge, MA:

 National Center for Fair & Open Testing.

Rosner, J. (2001). Disparate outcomes by design: University admission test.

 Berkeley La Raza Law Journal, 12, 377-386.

Sacks, P. (1999). *Standardized minds: The high price of America's testing culture and*

 what we can do to change it. Cambridge, MA: Perseus Books.

Sackett, P. R., Schmitt, N., Ellingson, J. E., & Kabin, M. B. (2001). High-stakes testing in

employment, credentialing, and higher education: Prospects in a post-affirmative

action world. *American Psychologist, 56,* 302–318.

Sackett, P. R., Borneman, M. J., & Connelly, B. S. (2009). Responses to issues raised

about validity, bias, and fairness in high-stakes testing. *American Psychologist,*

64, (4), 285-287.

Salomon, G. (1984). Television is "easy" and print is "tough": The differential

investment of mental effort in learning as a function of perceptions and

attributions. *Journal of Educational Psychology,* 76, 647–658.

Sampson, C. & Boyer, P. (2001). GRE scores as predictors of minority students' success

in graduate study: An argument for change. *College Student Journal, 35,* 271-279.

San Diego-College of Education (2012). How to design and report a likert scale.

Retrieved on March 3, 2012 from edweb.usds.edu.

Schmitt, A. P., & Dorans, N. J. (1990). Differential item functioning for minority

examinees on the SAT. *Journal of Educational Measurement, 27,* 67-81

Schmitt, A. P., & Crone, C. R. (1991). *Alternative mathematical aptitude item types: DIF*

issues. Research Report 91-42, Princeton, NJ: Educational Testing Service.

Schmitt, A. P., Dorans, N. J., Crone, C. R., & Maneckshana, B. T. (1991). Differential

speediness and item omit patterns on the SAT. Research Report 91-50,

Princeton, NJ: Educational Testing Service.

Schneider, L. M., & Briel, J. B. (1990). *Validity of the GRE: 1988-1989 summary report.*

Princeton, NJ: Educational Testing Service.

Schunk, D. H. (1989). Self-efficacy and cognitive achievement: implications for students

with learning problems. *Journal of Learning Disabilities, 22,* 1, 14-22.

Schunk, D.H. & Pajares, F. (2002). The development of academic self-efficacy. In A.

   Wigfield & J. Eccles (Eds.), *Development of achievement motivation* (pp. 16-32).

   San Diego: Academic Press.

Schwartz, R.A., Bower, B.L., Rice, D.C., & Washington, C.M. (2003). "Ain't I a woman,

   too?": Tracing the experiences of African American women in graduate school.

   Journal of Negro Education, 72, 252-268.

Scott, R.R. & Shaw, M.E. (1985). Black and Caucasian performance in graduate school

   and policy implications for using GRE scores in admission. *Journal of Negro

   Education, 54* (1), 14-23.

Sellers, R. M., Chavous, T. M., & Cooke, D. Y. (1998). Racial ideology and racial

   centrality as predictors of African American college students' academic

   performance. *Journal of Black Psychology, 24*, 1, 8-27. doi:

   10.1177/0042085905274536

Shell, D. F., Murphy, C. C, & Bruning, R. H. (1989). Self-efficacy and outcome

   expectancy mechanisms in reading and writing achievement. *Journal of

   Educational Psychology, 81,* 91-100.

Silverman, L. (1990). Unnatural selection: A legal analysis of the impact of standardized

   test: Use on higher education resource allocation. *Loyola of Los Angeles Law

   Review, 23*, 1433-1482.

Solberg, V. S., O'Brien, K., Villarreal, P., Kennel, R., & Davis, B. (1993). Self-efficacy

   and Hispanic college students: Validation of the College Self-Efficacy Instrument.

   Hispanic Journal of Behavioral Sciences, 15, 80-95.

Sprinthall, R. (2007) *Basic statistical analysis* 8th ed. Boston: Ally and Bacon

Steele, C. M. & Aronson, J. (1995). Stereotype threat and the intellectual test

performance of African Americans. *Journal of Personality and Social

Psychology, 69,* 797-812.

Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and

performance. *American Psychologist.* 52, 613-629.

Sternberg, R. & Williams, W. (1997). *Does the Graduate Record Examination Predict

Meaningful Success in the Graduate Training of Psychologists? American

Psychologist, 52,* 630-641.

Strenio, A. (1981). *The testing trap.* New York: Rawson Wade Publishers.

Stricker, L. J., Rock, D. A., & Burton, N. W. (1993). Sex differences in predictions of

college grades from Scholastic Aptitude Test scores. *Journal of Educational

Psychology, 85* (4), 710-718.

Stricker, L. J., & Ward, W. C. (1998). *Inquiring about examinees' ethnicity and sex:

Effects on Computerized Placement Test performance* (College Board Rep. 98-2,

ETS Res. Rep. 98-9). New York, NY: College Board.

Sue, S. (1999). Science, ethnicity, and bias: Where have we gone wrong? *American

Psychologist, 54,* 1070–1077.

Taylor, O., & Lee, D. L. (1991). Standardized tests and African Americans:

Communication and language Issues. In A. G. Hillard, III (Ed.), *Testing African

American students: Special re-issue of the Negro educational review.* Morristown,

NJ: Aaron Press.

Taylor, V. J., & Walton, G. M. (2011). Stereotype threat undermines academic learning. *Personality and Social Psychology Bulletin, 37*, 8, 1055-1067. DOI: 10.1177/0146167211406506

Thomas, D. M., Love, K. M., Roan-Belle, C., Tyler, K. M., Brown, C. L., & Garriott, P. O. (2009). Self-efficacy, motivation, and academic adjustment among African American women attending institutions of higher education. *Journal of Negro Education, 78*, 2, 159-171.

Thomas, M. R. (2005). *High stakes testing: Coping with collateral damage*. Mahwah, NJ: Lawrence Erlbaum Associates.

Tracey, T. J., & Sedlacek, W. E. (1986). *Prediction of college graduation using noncognitive variables by race*. Paper presented at the annual meeting of the American Educational Research Association.

United States Census Bureau (2004-2010). Educational attainment report. Retrieved from http://www.census.gov/hhes/socdemo/education/.

Uwah, C. J., McMahon, H. G., & Furlow, C. F. (2008). School belonging, educational aspirations, and academic self-efficacy among African American male high school students: Implications for school counselors. *Professional School Counseling, 11(* 5), 296-305.

Van Laar, C. (2000). The paradox of low academic achievement but high self-esteem in African American students: an attributional account. *Educational Psychology Review, 12*, 33-61.

Vars, F. & Bowen, W. (1998). Scholastic aptitude, test scores, race, and academic performance in selective colleges and universities. In C. Jencks & M. Phillips

(Eds.), *The Black White test score gap*. Washington, D.C.: The Brookings Institute.

Walpole, M., McDonough, P. M., Bauer, C. J., Gibson, C., Kanyi, K., & Toliver, R. (2005).This test is unfair: Urban African American and Latino high school students' perceptions of standardized college admission tests. *Urban Education, 40*(3), 321-349. DOI: 10.1177/00957984980241002

Walter, T. L., Smith, D. E. P., Miller, S. D., Hoey, G., & Wilhelm, R. (1987). Predicting the academic success of college athletes. *Research Quarterly for Exercise and Sport, 58,* 273-279.

The Widening Racial Scoring Gap on Standardized Tests for Admission to Graduate School Source (2006). *The Journal of Blacks in Higher Education, 51,* 8-11.

Williams, T. M. , & Leonard, M. M. (1988). Graduating Black undergraduates: The step beyond retention. *Journal of College Student Development, 29*(10), 69-75.

Wilson, K. (1979). *The validation of GRE scores as predictors of first-year performance in graduate study: Report of the GRE cooperative validity studies project.* GRE Board Research Report GREB No 75.08R.

Witherspoon, K, M., Speight, S., & Thomas, A, (1997), Racial identity attitudes, school achievement, and academic self-efficacy among African American high school students. *Journal of Black Psychology, 23,* 344-357.

Wood, R. E., & Locke, E. A. (1987). The relation of self-efficacy and grade goals to academic performance. *Educational and Psychological Measurement, 47,* 1013 1024.

Young, J.W., (2001). Differential validity, differential prediction, and college admissions

testing. *Presentation at Rethinking the SAT in University Admissions Conference,* University of California, Santa Barbara.

Zheng, J. L., Saunders, K. P., Shelley II, M. C., & Whalen, D. F. (2002). Predictors of academic success for freshmen residence hall students. *Journal of College Student Development, 43*(2), 267–283.

Zimmerman, B.J., Bandura, A., Martinez-Pons, M. (1992). Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *Educational Research Journal, 29,* 663-676.

Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology, 25,* 82-91.

APPENDIX A

College Academic Self-Efficacy Scale

DIRECTIONS. We are interested in learning more about African American graduate students' academic self-efficacy. Your responses are strictly confidential and will not be shown to others. Do not sign your name. We hope you will answer each item, but there are no penalties for omitting an item.

How much confidence do you have about doing each of the behaviors listed below? Select the letters that best represent your confidence.

	A	B	C	D	E	
Quite◄	A				► Very
A Lot			*CONFIDENCE*		Little
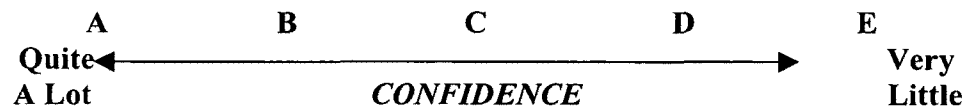
Lots   **Little**

A B C D E   1. Taking well-organized notes during a lecture.
A B C D E   2. Participating in a class discussion.
A B C D E   3. Answering a question in a large class.
A B C D E   4. Answering a question in a small class.
A B C D E   5. Taking "objective" tests (multiple-choice, T-F, matching)
A B C D E   6. Taking essay tests.
A B C D E   7. Writing a high quality term paper.
A B C D E   8. Listening carefully during a lecture on a difficult topic.
A B C D E   9. Tutoring another student.
A B C D E   10. Explaining a concept to another student.
A B C D E   11. Asking a professor in class to review a concept you don't understand.
A B C D E   12. Earning good marks in most courses.
A B C D E   13. Studying enough to understand content thoroughly.
A B C D E   14. Running for student government office.
A B C D E   15. Participating in extracurricular events (sports, clubs).
A B C D E   16. Making professors respect you.
A B C D E   17. Attending class regularly.
A B C D E   18. Attending class consistently in a dull course.
A B C D E   19. Making a professor think you're paying attention in class.
A B C D E   20. Understanding most ideas you read in your texts.
A B C D E   21. Understanding most ideas presented in class.
A B C D E   22. Performing simple math computations.
A B C D E   23. Using a computer.
A B C D E   24. Mastering most content in a math course.
A B C D E   25. Talking to a professor privately to get to know him or her.
A B C D E   26. Relating course content to material in other courses.
A B C D E   27. Challenging a professor's opinion in class.
A B C D E   28. Applying lecture content to a laboratory session.
A B C D E   29. Making good use of the library.
A B C D E   30. Getting good grades..

A B C D E   31. Spreading out studying instead of cramming.
A B C D E   32. Understanding difficult passages in textbooks.
A B C D E   33. Mastering content in a course you're not interested in.

Thanks for your help!

APPENDIX B

Perception of Standardized Test Questionnaire (PSTQ)

Please indicate your perception/agreement for each of the following items using the following scale.

5 – strongly agree; 4 – agree; 3 – neutral; 2 – disagree; 1 – strongly disagree

1. I was very anxious when I took the GRE (or other standardized test for graduate school admission)   5 4 3 2 1

2. Standardized test scores are valid predictors of graduate school performance.
                                                                                          5 4 3 2 1

3. My academic performance in graduate school is not reflective of my GRE scores.   5 4 3 2 1

4. Scores on standardized tests like the GRE reflect the test taker's true abilities.
                                                                                          5 4 3 2 1

5. I become frustrated with items on standardized tests like the GRE because they are difficult.   5 4 3 2 1

6. I did not feel that the GRE adequately measured my knowledge.   5 4 3 2 1

7. My performance on the GRE negatively affected my self-confidence in my ability to do well in graduate school.   5 4 3 2 1

8. I feel that tests like the GRE are unfair to students of color/diversity.   5 4 3 2 1

9. Grade point averages (GPA) should hold more weight than GRE scores 5 4 3 2 1
   in the graduate school admissions process.

10. I am always anxious when I have to take a test.   5 4 3 2 1

APPENDIX C

INFORMED CONSENT DOCUMENT

OLD DOMINION UNIVERSITY

PROJECT TITLE: The Perceptions of Standardized Tests and Academic Self-efficacy Influences on the Academic Performance of African American Graduate Students

INTRODUCTION

The purposes of this form are to give you information that may affect your decision whether to say YES or NO to participation in this research, and to record the consent of those who say YES. This study will measure the perceptions of standardized test scores and academic self-efficacy and their influence on the academic performance among African-American graduate students.

RESEARCHERS

RPI: Dr. Nina Brown, Professor, Ph.D., College of Education and Counseling and Human Services. Doctoral Student investigator: Arleezah Marrah, M.A. Ph.D. candidate in Counseling and Human Service, College of Education.

DESCRIPTION OF RESEARCH STUDY

Several studies have examined the academic performance of African Americans on standardized tests. Despite the numerous amount of studies that have examined this issue, the academic performance of many African American students on standardized tests remains poor with their scores ranging on average one or more standard deviations below their White and Asian counterparts. Receiving low scores on standardized tests like the SAT and GRE, may hinder access to college and graduate school.

The purpose of this study is to examine the effects of perceptions of standardized tests and academic self-efficacy on the academic performance among a sample of African American graduate students. The goal of this study is to promote awareness about African American graduate students' perceptions of standardized tests and its influence on their academic self-efficacy and academic performance.

If you decide to participate, then you will join a study involving research of studying perceptions of standardized tests and measured academic self-efficacy. If you say YES, then your participation will last for approximately 20 minutes (amount of time to take the assessment). The assessment will be conducted via paper copy (passed out individually) or via Survey Gizmo (online). Approximately 300 African American graduate students will be participating in this study.

EXCLUSIONARY CRITERIA

You may not participate in the study if you do not self-identify as African American, are not currently enrolled in a graduate degree program, and/or are less than 21 years old. In addition, if you did not take the GRE or another standardized test as part of admission to the graduate program, you are excluded.

RISKS AND BENEFITS

RISKS: There are no known risks involved in the participation of this study. The researcher tried to reduce any and all risk such as removing all linking identifiers. As with any research, there is some possibility that you may be subject to risks that have not yet been identified.

BENEFITS: The main benefit to you for participating in the study is that you will be participating in a study that gives voice to African American graduate students who voice has been frequently absent in research that examines high stakes testing and academic performance among racial minorities. The findings of the study have the potential to promote the development of concrete solutions to help increase the educational attainment of African-American students at the graduate level. In addition, for participating there will be a $50 gift card that will be raffled at the end of the data collection period for all who choose to enter the raffle.

COSTS AND PAYMENTS

The researchers want your decision about participating in this study to be absolutely voluntary. As thanks for participating in the study, one $50 gift card will be drawn at the end of the data collection period.

NEW INFORMATION

If the researchers find new information during this study that would reasonably change your decision about participating, then they will give it to you.

CONFIDENTIALITY

The researchers will take reasonable steps to keep private information, such as demographic data and questionnaires findings confidential. The researcher will remove identifiers from the information, store information on a password secure flash drive. After analyses, the data will be kept in a locked filing cabinet in the RPI's office. All data collected will be destroyed 5 years after the completion of the study. The results of this study may be used in reports, presentations, and publications; but the researcher only report the data in aggregate form and no identifying information will be used. Of course, your records may be subpoenaed by court order or inspected by government bodies with oversight authority.

WITHDRAWAL PRIVILEGE

It is OK for you to say NO. Even if you say YES now, you are free to say NO later, and walk away or withdraw from the study -- at any time. Your decision will not affect your relationship with Old Dominion University, or otherwise cause a loss of benefits to which you might otherwise be entitled. The researchers reserve the right to withdraw your participation in this study, at any time, if they observe potential problems with your continued participation.

COMPENSATION FOR ILLNESS AND INJURY

If you say YES, then your consent in this document does not waive any of your legal rights. However, in the event of harm, injury, or illness arising from this study, neither Old Dominion University nor the researchers are able to give you any money, insurance coverage, free medical care, or any other compensation for such injury. In the event that you suffer injury as a result of participation in any research project, you may contact Dr. Nina Brown the current IRB chair at 757-683-3245 at Old Dominion University, who will be glad to review the matter with you

VOLUNTARY CONSENT

By signing this form, you are saying several things. You are saying that you have read this form or have had it read to you, that you are satisfied that you understand this form, the research study, and its risks and benefits. The researchers should have answered any questions you may have had about the research. If you have any questions later on, then the researchers should be able to answer them:

If at any time you feel pressured to participate, or if you have any questions about your rights or this form, then you should call Dr. Nina Brown, the current IRB chair, at 757-683-4520, or the Old Dominion University Office of Research, at 757-683-3460.

And importantly, by checking yes below, you are telling the researcher YES that you agree to participate in this study.
The researcher should give you a copy of this form for your records.

Subject's Printed Name & Signature	**Date**
Parent / Legally Authorized Representative's Printed Name & Signature (If applicable)	**Date**
Witness' Printed Name & Signature (if Applicable)	**Date**

INVESTIGATOR'S STATEMENT

I certify that I have explained to this subject the nature and purpose of this research, including benefits, risks, costs, and any experimental procedures. I have described the rights and protections afforded to human subjects and have done nothing to pressure, coerce, or falsely entice this subject into participating. I am aware of my obligations under state and federal laws, and promise compliance. I have answered the subject's questions and have encouraged him/her to ask additional questions at any time during the course of this study. I have witnessed the above signature(s) on this consent form.

Investigator's Printed Name & Signature	**Date**

APPENDIX D

EMAIL INVITATION TO PARTICIPATE IN STUDY

Good afternoon,

My name is Arleezah Marrah, and I am a doctoral candidate in the Counselor Education & Human Services program at Old Dominion University. I am conducting an IRB approved research study for my dissertation, under the supervision of Dr. Nina Brown to fulfill the degree requirements for a doctorate. The purpose of the research study is to gather data about African American graduate students' perceptions of standardized tests (i.e. GRE) and measured academic self-efficacy to determine if these variables have any influence on their academic performance. The goal of this study is to promote awareness about African American graduate students' perceptions of standardized tests and its influence on their academic self-efficacy and academic performance.

I am inviting African American graduate students (master's, Ed.S, Ph.D., etc) across multiple disciplines to participate in this study. In addition, participants must have taken a standardized test such as the GRE to gain admission into a graduate program. Your participation in this study WILL NOT require the disclosure of identifiers such as name, date of birth, address, or citizenship status. The maximum time needed for your participation is **approximately 10 to 15 minutes**. This includes completing a few measures and a short demographic questionnaire. In addition, for participating there will be **a $50 Visa Gift card** that will be raffled at the end of the data collection period for all who choose to enter the raffle.

Please click on the link to access the survey: http://edu.surveygizmo.com/s3/927516/College-Academic-Self-Efficacy-Scale

*If you know of anyone who may want to participate in this study, please forward this information.

If you have any questions or concerns, please do not hesitate to email me at amarr014@odu.edu or Dr. Nina Brown at nbrown@odu.edu.

Thank you in advance for your participation.

APPENDIX E

Demographic Form

Age: _____

Gender: Female____   Male ____

Do you self- identify as Black/African American:

Yes____   No____

If no, please indicate race:

Highest Degree Completed:

Bachelors   Masters   Educational Specialist   Doctorate

Current Educational Status:

Masters   Educational Specialist   Doctorate   N/A

Are you the first in your family to go to college?

___Yes   ___No

Estimate your current grade point average (GPA): _____

Overall GRE score _____

Do you consider your GRE score: Above average _____ **Average** _____ **Below**

Average _____

APPENDIX F

PERMISSION TO USE CASES

Arleezah Marrah, M.A.
Doctoral student in counseling
Graduate Teaching Assistant
Old Dominion University
Norfolk, VA 23529

14 February 2011

Dear Arleezah,

Thank you for your inquiry about the College Academic Self-Efficacy Scale (CASES). You are welcome to use CASES. I've attached a copy of the scale. Here are a few summary points about the scale.
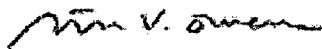
Items are scored as A ("quite a lot") = 5…E ("very little") = 1. On the other hand, because we read from right to left, data entry is faster letting A = 1, and E = 5. If you enter data with A = 1, then let the computer recode the values so that A becomes 5, B becomes 4, etc. In calculating an overall CASES score, we prefer calculating a mean rather than a sum.

You may wish to modify questionnaire instructions to best fit your application. For example, if you need informed consent, you might say something like "Filling out this questionnaire is completely voluntary and confidential. There are no penalties for not participating, and you may quit at any time."

The next page shows the CASES items. Following that is a conversation about scoring CASES, plus some normative data.

Best wishes in your research.

Sincerely,

Steven V. Owen, Professor (retired)
Department of Epidemiology & Biostatistics
University of Texas Health Science Center at San Antonio
7703 Floyd Curl Dr., MC 7802
San Antonio, TX 78229-3900

Internet: svo@vbbn.com

OR   steven.owen@uconn.edu

VITA

Arleezah Marrah
7625 Bondale Ave, Apt 88
Norfolk, VA 23505
305-801-0409
Email: arleezahmarrah@yahoo.com

EDUCATION

Ph.D. in Counseling, Old Dominion University, Norfolk, VA, anticipated December 2012 (CACREP Accredited)
Research interests include: Multicultural counseling competency, Social Justice, Cultural identity development, LGBT issues, Gender Studies, Racial minorities experiences in higher education, Mental Health among diverse populations, and Ethics.
G.P.A.: 3.86

Master's of Arts, University of South Florida, Tampa, FL, August 2009
Major: Counselor Education, Mental Health Track (CACREP Accredited)
G.P.A: 3.81

Bachelors of Arts, University of South Florida Tampa, FL, May 2005
Major: Psychology
Major G.P.A.: 3.92

PROFESSIONAL EXPERIENCE

University Teaching
- Instructor (HMSV 468) Internship in Human Services, Summer 2012
  Old Dominion University, Counselor Education and Human Services program, Norfolk, VA

- Co-taught (HMSV447) Addictions: Theory and Intervention (distance learning), Summer 2012
  Old Dominion University, Counselor Education and Human Services program, Norfolk, VA

- Co-taught (COUN 644) Counseling Group and Psychotherapy, Summer 2012
  Old Dominion University, Counselor Education program, Norfolk, VA

- Instructor (SPED 313) Human Growth and Development (distant learning), Spring 2012
  Old Dominion University, Counselor Education and Human Services program, Norfolk, VA

- Instructor (SPED 313) Human Growth and Development, Fall 2011

Old Dominion University, Counselor Education and Human Services program, Norfolk, VA

- Instructor (HMSV 444) Psychoeducational Groups, Summer 2011
  Old Dominion University, Counselor Education and Human Services program, Norfolk, VA

- Instructor (HMSV 339) Interpersonal Skills, Spring 2011
  Old Dominion University, Counselor Education and Human Services program Norfolk, VA

- Co-taught (COUN 343) Human Services Methods (distant learning), Spring 2011
  Old Dominion University, Counselor Education, Norfolk, VA

- Co-taught (COUN 650) Theories in Counseling, Fall 2010
  Old Dominion University, Counselor Education, Norfolk, VA

- Co-taught (COUN 601) Principles of Professional Counseling and Ethics, Summer 2010
  Old Dominion University, Counselor Education Program, Norfolk, VA

- Co-taught (COUN 655) Social and Cultural Issues in Counseling, Summer 2010
  Old Dominion University, Counselor Education Program, Norfolk, VA

Supervising

- University Supervisor for Group and Individual Supervision, Summer 2012
  - Counseling Master's students, Practicum and Internship
    Old Dominion University, Counselor Education Program, Norfolk, VA

- University Supervisor for Group and Individual Supervision, Spring 2012
  - Counseling Master's students, Internship
    Old Dominion University, Counselor Education Program, Norfolk, VA

- Group Facilitator for growth group, Fall 2011
  - Growth group for Master's students
    Old Dominion University, Counselor Education Program, Norfolk, VA

- University Supervisor for Group and Individual Supervision, Fall 2011
  - Counseling Master's students, Practicum and Internship
    Old Dominion University, Counselor Education Program, Norfolk, VA

- University Supervisor for Group Supervision, Summer 2011
  - Counseling Master's students, Practicum
    Old Dominion University, Counselor Education Program, Norfolk, VA

- University Supervisor for Individual Supervision, Spring 2011
  - o Counseling Master's students, Internship
    Old Dominion University, Counselor Education Program, Norfolk, VA

- University Supervisor for Triadic Supervision, Summer and Fall 2010
  - o Advanced Counseling and Psychotherapy Techniques, Master's students
    Old Dominion University, Counselor Education Program, Norfolk, VA

- Supervision Coach for Group Supervision, Spring 2010
  - o Counseling and Psychotherapy Techniques, Master's Students
    Old Dominion University, Counselor Education Program, Norfolk, VA

Counseling

- Practicum/Internship, Norfolk Community Service Board (NCSB), Fall 2010-Spring 2011
  - o Perform intakes and assessments
  - o Provide individual and group therapy
  - o Connect client with community resources

- Group Facilitator for Interpersonal Process Group, Fall 2008-Spring 2011
  - o Facilitated interpersonal process growth group with undergraduate and Master's students in Counseling and Human Services

- Internship, Metropolitan Ministries-Homeless recovery shelter, Spring 2009-Fall 2009
  - o Performed intakes and assessments
  - o Provided individual and group counseling
  - o Provided Play Therapy and Filial Therapy

- Practicum, Brookwood Home for Girls, Fall 2008
  - o Assisted with individual and group counseling sessions
  - o Created and established counseling objectives and goals for the residents
  - o Helped residents to become self-sufficient

Academic Advising

- Career and Academic Advisor at the Career and Academic Resource Center (CARC) College of Education, Spring 2011-Present
  - o Career and academic advising for undergraduates at Old Dominion University
  - o Create and present career and academic advising workshops

NON-PEER REVIEWED PUBLICATIONS

Marrah, A., & Mills, R. (2011). LUCY: A new path to diversity. *Library Media Connection*, vol.5.

PRESENTATIONS

Marrah, A., Bacon, L., Goldsmith, S., & Hamilton, T. (October 2011). *Help a sista out! Research mentorship for African American women doctoral students*. Research accepted for   presentation at the Association for Counseling Education and Supervision, Nashville, TN.

Marrah, A. (October 2011). *What is self-esteem and how do we develop our self-esteem*. Presentation at Kempsville High school, Virginia Beach, VA.

Marrah, A., & Hamilton, T. (March 2011). *Finding our voices: Effective solutions for recruiting and retaining African American graduate students*. Research accepted for presentation at the National Black Graduate Student Association conference, Columbia, SC.

Hancock, R., Marrah, A., & Smith, J. (March 2011). *Working collaboratively as a team*. Presentation for the Marine Tech Institute, Norfolk, VA

Hancock, R. & Marrah, A. (November 2010). *Man in the mirror: Gender identity issues among heterosexual and homosexual African American and Caucasian men*. Research accepted for presentation at the Illinois Counseling Association, Chicago, IL

Marrah, A. (October, 2010). *Finding our voices: Effective solutions for recruiting and retaining African American graduate students*. Research accepted for presentation at the Southern Association for Counselor Education and Supervision conference, Williamsburg, VA.

Marrah, A., & Davis, J. (October 2010). *Play therapy with homeless children: Giving voices to an invisible population*. Research accepted for poster presentation at the Southern Association for Counselor Education and Supervision conference. Williamsburg, VA.

Marrah, A. (October 2010). *Finding our voices: Effective solutions for recruiting and retaining African American graduate students*. Research accepted for presentation at Institute for the Study and Promotion of Race and Culture diversity conference, Boston, MA.

Marrah, A. (February 2010). *Testing and Assessment*. Review for the NCE/Comprehensive exams at Old Dominion University, Norfolk, VA

Doll, C., & Marrah, A. (November 2009). *LUCY: Multicultural librianship*. Research accepted for presentation at the Virginia Library Association conference, Roanoke, VA.

Smith, M., Marrah, A., & Jackson, A. (October 2008). *Multicultural what? : The ethical importance of adequately preparing counselor education students to work effectively with all clients.* Research accepted for presentation at the Southern Association for Counselor Education and Supervision conference, Houston, TX.

Smith, M., & Marrah, A. (November 2007). *High conflict divorce: Advocating for children through parenting coordination.* Research accepted for presentation at European Branch of the American Counseling Association, Bad Herranalb, Germany.

Smith, M., Jackson, A., & Marrah, A. (March 2007). *Advocating for social justice and equity: The critical role of multiculturally competent professional school counselors.* Paper presentation accepted for presentation at the American Counseling Association, Detroit, MI.

RESEARCH IN PROGRESS

Marrah, A., & Brown, N. *A correlational and comparative analysis examining the relationships between perceptions standardized test scores, academic self efficacy, and academic performance among African American graduate students.*

Goldsmith, S., Hamilton, T., & Marrah, A. (In progress). *Help a Sista Out: Research Mentorship for African-American doctoral students.* Manuscript in progress.

Hamilton, T., & Marrah, A. (In progress). *Sista Circle.* Manuscript in progress

RESEARCH EXPERIENCE

Graduate Research Assistant, LUCY (Librarianship Upgrades for Children and Youth Services), Fall 2009-Fall 2010
- o Developed LUCY website
- o Created needs assessments and surveys, collected and analyzed data
- o Co-authored papers, presentations, grant applications
- o Presented at both local and national conferences

Pro-social skills training with high risk African American children at Just Elementary, Counselor Education with Dr. Carlos Zalaquett, Spring 2009-Fall 2009
- o Facilitated an anger management psycho-educational group with African American males

Individual Directed study, Counselor Education with Dr. Jennifer Baggerly, Fall 2008
- o Studied the influence of Play Therapy on homeless children's mental health

Research Assistant, Director Joseph Vandello PhD, Social Psychologist/Andrew Biga Graduate Student, University of South Florida, Tampa, Fl, Spring 2004-Fall 2005
  o   Assessed and interviewed participants
  o   Collected and analyzed data

PROFESSIONAL SERVICE

- Student leader in the Diversity Institute at the Intercultural Relations Office at Old Dominion University, Spring 2012

- Committee member on Faculty and PhD search committee for Counselor Education and Supervision department, Old Dominion University, Fall 2009-Present

- Committee Chair of Diversity and Multicultural Committee of the Omega Delta chapter of Chi Sigma Iota, Old Dominion University, 2010-2011

- Committee member of the Association for Multicultural Counseling and Development (AMCD) Mentorship program, 2010-2011

- Vice President/President/Past President of the Delta Gamma chapter of Chi Sigma Iota, University of South Florida, 2007-2009

AWARDS/HONORS
Academic Awards

- Professional Development Award, September 2011
- SACES Emerging Leadership award, October 2010
- Chi Sigma Iota: Counseling Academic and Professional Honor Society International, Fall 2006- Present
- Diversity Student Success Fellow, Spring 2007-Summer 2009
- Honorary Deans List, August 2004 – May 2005

PROFESSIONAL AFFILIATIONS and CERTIFICATIONS

Members Association
- *Chi Sigma Iota, Omega Delta Chapter, 2009-Present*
- Association for Counselor Education and Supervision, 2009-Present
- Southern Association for Counselor Education and Supervision, 2009-Present
- Play Therapy certificate, 2008-Present
- *American Counseling Association, 2006- Present*
- Association of Multicultural Counseling and Development, 2006- Present

- *Chi Sigma Iota, Delta Gamma Chapter, 2006- 2009*
- Social Justice Society, 2006-Present