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AFRICAN AMERICAN WOMEN'S CAREER DEVELOPMENT: THE ROLE OF

SELF-EFFICACY AS A MEDIATOR OF LEADERSHIP ASPIRATIONS

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ABSTRACT

The objective of this study was to identify the role of self-efficacy as a mediator of African American women's leadership aspirations. Correlation and hierarchical regression analysis of the data were completed based upon participant's age, participant's education level, mother's education level, presence of a mentor, connectedness needs, socially desirable responding, and general self-efficacy level to African American women's leadership aspirations.   Similarity in race and gender between the mentor and the protégé to leadership aspirations was not statistically significant. Participant's education level, presence of a mentor, and connectedness needs were positively and significantly related to African American women's leadership aspirations. Presence of a mentor did not remain a significant predictor of their leadership aspirations. More importantly, general self-efficacy level was identified as a mediator of African American women's leadership aspirations above all other variables. Implications for counseling and leadership development are offered. Limitations of the study are also discussed.

TABLE OF CONTENTS

LIST OF TABLES

Dedication

This dissertation is dedicated to my grandmother, Adele Russell Brown and my mother, Elestine Brown Harvey. It was your model of perseverance and persistence that guided me through the obstacles to the finish line. It was your model of strength and courage that I called upon when I doubted who I am and who I could be. It was your love and support that reminded me the only real challenge to my dreams was myself. Thank you for being my first role models and mentors.

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I can do all things through Christ who strengthens me. - Phillipians 4:13

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Chapter One

Introduction

The objective of this study was to investigate the role of self-efficacy as a mediator of the leadership aspirations of professional African American women. This study had two purposes: (1) to identify the relationship between the mentor's race and gender and the formation of professional African American women's leadership aspirations; and (2) to investigate the relationship among professional African American women's age, mother's education level, participant's education level, connectedness needs, and general self-efficacy to leadership aspirations. Four areas of focus are discussed in this chapter in order to place the purpose of the study and research variables in context: women's career development, African American women's career development, self-efficacy, and women's leadership aspirations.

Chapter one contains a brief description of each focus area in order to develop the relationship among these variables and identify factors that influence the leadership aspirations of professional African American women. This information is presented in the following sections: background to the study, statement of the problem, purpose of the study, research questions, limitations of the study and definition of terms.

Background to the Study

According to Hackett and Byars (1996), "no comprehensive model of the career development of racial and ethnic minorities has yet been developed; even less attention has been devoted to models of the career development of racial and ethnic minority women" (p. 322). The Bureau of Labor Statistics report states that more than 61% of African American women 16 years of age and above participate in the U.S. workforce

(www.bls.gov/cps/wlf-table3-2005.pdf). However, only 5% of all people employed in management, professional, and related occupations are African American women. It is unknown whether professional African American women aspire to leadership roles. If so, what does it take to get them there?

In addition to seeking answers to these questions, there are knowledge gaps in the career development literature related to professional African American women's career development and aspirations. First, the research is not specific enough to professional African American women. Second, too few minorities participate in the study for meaningful data analysis based on race/ethnicity. Therefore, the career development needs of White women are often generalized to those of African American women. This information may not apply to African American women due to various contextual factors and learning experiences.

The lack of women of color in leadership roles has been cited by various publications (*Time* magazine, *HR Magazine*). Catalyst, a national organization that facilitates research about women in business organizations, has published studies on women of color in corporate management. Study participants report having an influential mentor or sponsor as one of the top four success strategies affecting their career advancement. According to the report, 69% of participants with a mentor in 1998 attained at least one upward move by 2001. Thirty-one percent of those participants reported the presence of a white male mentor as an influence on their career advancement.

Women's Career Development

Research has addressed differences in the career development patterns of men and

women. There is a concern about the underrepresentation of women in many professions, particularly in leadership and administrative positions (Boatwright & Egidio, 2003; Hackett & Betz, 1981). Researchers (Betz & Hackett, 1981; Gibson, 2004; Pearson & Bieschke, 2001; Richie, Fassinger, Linn-Geschmay, Johnson, Prosser, & Robinson, 1997) have identified the relationships among familial influence, connectedness needs, self-efficacy, gender role orientation, and mentoring, and the effect of each on the career development of women.

Hackett and Betz (1981) proposed a self-efficacy approach to increase understanding of women's career development. The authors argued that self-efficacy expectations (Bandura, 1977) may have explanatory power and research potential for women's career development. Several authors (Bandura, 1982; Bandura & Adams, 1977; Betz & Hackett, 1981; Sherer, Maddux, Mercadante, Prentice-Dunn, Jacobs, & Rogers, 1982) agree that perceived self-efficacy affects people's choices of activities and behavioral setting, the level of effort they expend, and how they will persist in the face of obstacles and aversive experiences. An examination of efficacy expectations in relation to women's rejection or pursuit of career areas such as leadership may be informative (Hackett & Betz, 1981).

Betz and Hackett (1981) hypothesized that traditional female socialization often led to deficits in the sources of efficacy information (Bandura, 1982) important to the development of strong expectations of efficacy with respect to traditionally male-dominated areas such as mathematics, the sciences and engineering/technology careers. Betz and Hackett found a significant relationship between self-efficacy and gender role socialization in career development. One implication of this finding is that interventions

designed to increase women's career-related self-efficacy expectations could enhance the degree to which women effectively utilize their abilities and develop their talents and interests.

Mentoring and/or a connection to others were found to play a significant role in women's career development as well (Gibson, 2004: Richie et al., 1997). Richie et al. (1997) utilized grounded theory methodology to examine the career development experience of high-achieving women. Study participants consistently cited a need for connections with others in either their personal or professional lives or both as important to their career development. Further, the fact that personal and professional lives are interconnected makes career decisions become life decisions for high-achieving women. A specific definition of mentoring was not provided in the study. Catalyst (2001) defines a mentor as "someone who usually holds a senior position and takes an active interest in developing the protégés career" (p. 12). In a review of the literature on mentoring, Gibson (2004) could not identify a consistent definition of mentoring or a common description of mentoring roles.

African American Women's Career Development

Research related specifically to the career development of professional African American women is limited. The career development needs of White women are often generalized to African American women. Studies (Evans & Herr, 1991, 1994; Hackett & Byars, 1996; Murrell, Frieze, & Frost, 1991; Pearson & Bieschke, 2001; Richie et al., 1997) have cited the need for the exploration of the career development of ethnic minority females due to their dual status in race and gender membership groups. The dual status in race and gender membership groups for African American women may

include experiences with racism and sexism that White women may not share. The experience of racism and sexism can have a negative effect on the career aspirations of black women, which may result in the loss of self-esteem and self-confidence (Evans & Herr, 1991). In addition, few studies have considered the nature of career aspirations of African American women, either separately or in comparison to their White counterparts (Murrell, Frieze, & Frost, 1991).

The *Women of Color in Corporate Management: Three Years Later* (Catalyst, 2001) report contains a description of the career advancement of women of color to leadership roles between 1998 and 2001. The lack of a mentor or sponsor was the most frequently cited barrier affecting the career advancement of women of color. Study participants report having an influential mentor or sponsor as one of the top four success strategies affecting their career advancement. According to the report, 69% of participants with a mentor in 1998 attained at least one upward move. Boatwright and Egidio (2003) stated that stimulation of women's leadership aspirations may be critical in the career advancement of women to leadership roles. Although the Catalyst report highlights various factors that influence professional African American women's success in attaining leader status, the factors that stimulate their leadership aspirations are not identified.

Hackett and Byars (1996) proposed exploring the career development of African American women using Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994). Specifically, Hackett and Byars applied self-efficacy theory within the broader context of SCCT to the career development of African American women by expanding upon Hackett and Betz's (1981) self-efficacy approach to women's career

development. Since many behaviors or behavior domains are important in educational

and career development, efficacy expectations are postulated to influence choice,

performance and persistence in career-related domains (Betz, 1994; Hackett & Betz,

1995).

Statement of the Problem

Researchers have consistently noted the lack of research on the career

development of African American women (Evans & Herr, 1991; Hackett & Byars, 1996;

Murrell, Frieze, & Frost, 1991; Pearson & Bieschke, 2001; Richie et al., 1997). Research

on women at the highest ranks of their professions is needed. There is an even greater

need for research related to women of color and other women who have been

marginalized in existing theory and empirical research (Richie et al., 1997). When

research is conducted on African American women's career development, two problems

arise: the research is not specific enough to African American women and too few

minorities participate in the study for meaningful data analysis based on race/ethnicity.

For example, Richie et al. (1997) examined the career development of high-achieving

African American and White women. The authors generated a model of career

development based on factors such as personal background and sociocultural conditions

for all participants. Influences such as connection to others, ability to persist in the face

of obstacles and familial influence were frequently occurring themes. The role of these

factors and influences on the career development of African American women

specifically was minimal. More research on the factors that influence African American

women's career development was needed.

Purposes of the Study

This study had two purposes: (1) to identify the relationship between the mentor's race and gender and the formation of professional African American women's leadership aspirations; and (2) to investigate the relationship among professional African American women's age, mother's education level, participant's education level, presence of a mentor, connectedness needs, and general self-efficacy on leadership aspirations.

This study contributes to the leadership development of professional African American women by identifying the factors that influence their leadership aspirations. First, this research examined how the results may be used to design leadership development programs for the career advancement of professional African American women. Second, this research may serve to increase understanding of contextual factors on the career development and aspirations of professional African American women. Third, this research provided information regarding whether similarity in race and gender between the mentor and the protégé influences leadership aspirations. Finally, this research may provide important information to professionals involved in developing leadership programs for African American women of all ages.

Research Questions

This study sought answers to the following questions:

1. To what extent do the mentor's race and gender influence the leadership aspirations of professional African American women?

2. What are the direct and indirect effects of participant's age, mother's education level, participant's education level, presence of a mentor, connectedness needs, and general self-efficacy level on the leadership aspirations of professional

African American women?

Limitations of the Study

The objective of this study was to investigate the role of self-efficacy as a mediator of the leadership aspirations of professional African American women. Correlation and hierarchical regression methods were used as the research methods to identify these relationships. However, it is difficult to make causal inferences using a correlation research design (Gall, Gall, & Borg, 2005). Such a design also limits generalizability of the findings as random sampling is not being utilized.

Researchers have identified the influence of the variables specified for this study on African American women's career development. However, these variables have not been identified as the cause of African American women's career development or career decision-making. Second, the possibility of a chance finding is present. A total of eight variables were measured in this study. According to Gall, Gall, and Borg (2005), when a large number of variables are correlated with each other, the findings may not be replicated when the study is repeated.

This study identified the significance of connectedness needs, mentor's race and gender, and mother's education level on professional African American women's leadership aspirations. Demographic information such as age, occupation, years of work experience, and participants' education level were collected. Other contextual, socialization, and learning experiences that influence self-efficacy development were not accounted for in this study. Specifically, data related to previous leadership development training, racial identity development, father's education level and presence of father in the home that may interact on self-efficacy level and leadership aspirations were not

measured here.

The relationship of gender role orientation to leadership aspiration was not identified in this study. Hackett and Betz (1981) identified a positive relationship between gender role orientation and self-efficacy on women's career development. However, data were not reported for African American women. Hackett and Byars (1996) suggested that African American women do not experience traditional gender role socialization due to the parent's childrearing methods. Researchers (Harris, 1994; Pearson & Bieschke, 2001) have identified an androgynous or flexible gender role orientation for African American women. Therefore, it was assumed here that African American women have an androgynous gender role orientation.

The racial identity level of professional African American women were not measured in this study. The influence of racism and sexism on African American women's career development has been noted, particularly in regard to the racial identity of the participants. However, researchers have found that for African American women, (a) racism and sexism are inextricably linked (Richie et al., 1997); (b) experiences with racism and other forms of discrimination heightened their level of determination (Pearson & Bieschke, 2001); and (c) racial discrimination is a "way of life" that cannot change their career development or aspirations (Evans & Herr, 1994). Therefore, it was assumed in this study that racial identity will not affect the factors that influence African American women's leadership aspirations.

Social Cognitive Career Theory (Lent et al., 1994), derived from the triadic reciprocal model of Self-efficacy Theory (Bandura, 1986), focuses on the influence of self-efficacy beliefs, outcome expectations and personal goals combined on career

behavior. Although African American women may have strong self-efficacy for leadership aspirations, the influence of self-efficacy on outcome expectations and personal goals was not measured. Self-efficacy expectations was the only factor measured because efficacy expectations are the more powerful predictors of behavior (Betz, 2000) and cognitive determinants may or may not predict individuals' behavior in relation to the pursuit of leadership roles (Singer, 1990). Social Cognitive Career Theory also asserts that self-efficacy beliefs have both direct and indirect action on career behaviors. The direct effect of self-efficacy beliefs on African American women's leadership aspirations was not the focus of the study. It was assumed that the indirect effect of self-efficacy beliefs will have a stronger influence on professional African American women's leadership aspirations.

Definition of Terms

Connectedness Needs: Defined as the importance of relationships with others, whether personal or professional (Welch, 1997). Connectedness needs were measured by the Connectedness Scale (Welch, 1997), a self-report instrument that consists of 28 items which assess the degree to which participants value and need meaningful relational ties with others.

Generalized Self-efficacy: Defined as generalized self-efficacy expectations dependent on past experiences and on tendencies to attribute success to skill as opposed to chance (Sherer et al., 1982, p. 671). General Self-efficacy was measured by participant's responses to the General Self-efficacy subscale of the Self-efficacy Scale (Sherer et al., 1982). The General Self-efficacy subscale consists of 17 self-report items that measure self-efficacy without reference to any specific behavior domain.

Leadership Aspirations: Defined as intentions to obtain promotions, manage and train others, and be recognized as a leader in one's field (O'Brien, 1996). Leadership aspirations were measured by participants' responses to the Leadership and Achievement Aspirations subscale of the Career Aspirations Scale (O'Brien, 1996). The Leadership and Achievement Aspirations subscale consists of 6 items that assess intentions to obtain promotions, manage and train others, and be recognized as a leader in one's field.

Mentor: Defined as someone who usually holds a senior position and takes an active interest in developing the protégés career (Catalyst, 2001, p. 12). Participants responded to a question in the demographic questionnaire that asks whether they currently have a mentor. If a mentor is present, participants were asked to indicate the mentor's race and gender.

Mother's education level: Defined as the highest level of education completed (i.e., high school, associates degree, bachelor's degree, master's degree, etc.). Participants responded to a question in the demographic questionnaire that asked her to indicate her mother's highest education level completed.

Participants' education level: Defined as the highest level of education completed (i.e., high school, associates degree, bachelor's degree, master's degree, etc.). Participants was asked to respond to a question in the demographic questionnaire that asked her to indicate her highest education level completed.

Chapter Summary

Knowledge gaps exist in the literature related to African American women's career development and aspirations. The dual status in race and gender membership groups for African American women includes experiences with racism and sexism that

White women may not share. When research has been conducted on African American women's career development, two problems arise: the research is not specific enough to African American women and too few minorities participate in the study for meaningful data analysis based on race/ethnicity. More research on the factors that influence African American women's career development is needed. The need to investigate African American women's leadership aspirations was introduced in this chapter. This was done through descriptions of the study background, problem statement, study purpose, research questions, limitations of the study, and definition of terms.

Chapter two provides a review of the literature related to women's career development, African American women's career development, the role of self-efficacy in career development and women's leadership aspirations. The review of the literature also provides detail on the concept of Self-efficacy Theory, on which this study is based.

Chapter Two

Review of Related Literature

The objective of this study was to investigate the leadership aspirations of African American professional women. This study had two purposes: (1) to identify the relationship between the mentor's race and gender and the formation of African American women's leadership aspirations; and (2) to investigate the relationship among African American women's self-efficacy, presence of a mentor, mother's education, and connectedness needs to leadership aspirations. Four areas of focus are discussed in this chapter in order to place the purpose of the study and research variables in context: women's career development, African American women's career development, self-efficacy, and women's leadership aspirations.

Chapter two describes the influence of self-efficacy on the career development of women as well as the use of a cognitive approach to identify factors that influence the leadership aspirations of professional African American women. This information is presented in the following sections: self-efficacy, women's career development, African American women's career development and women's leadership aspirations.

Self-efficacy

Self-efficacy may be defined as the belief that one can perform successfully the behavior required to produce designated types of performance (Bandura, 1986); it is task-specific and arises primarily from the influences of mastery, modeling and persuasion (Gist, 1987). Efficacy involves a generative capability in which component cognitive, social, and behavioral skills must be organized into integrated courses of action to serve innumerable purposes (Bandura, 1982) and are presumed to influence level of

performance by enhancing intensity and persistence of effort (Bandura, 1977; Bandura & Adams, 1977).

Bandura (1977) developed a model to define and outline the difference between efficacy expectations and outcome expectations. The model provides a visual representation of the relationship between person and behavior and the role of efficacy expectations and outcome expectations on performance outcome. An efficacy expectation is the conviction that one can successfully execute the behavior required to produce the outcome. An outcome expectation is defined as a person's estimate that a given behavior will lead to certain outcomes. The differentiation is made between efficacy expectations and outcome expectations to highlight the influence of an individual's belief on their behavior. In most cases, efficacy expectations are the more powerful predictors of behavior (Betz, 2000) and the primary cognitive determinant of whether or not an individual will attempt a given behavior (Hackett & Betz, 1981).

<div align="center">Efficacy Expectations</div>

People's beliefs about their personal efficacy constitute a major aspect of their self-knowledge (Bandura, 1997). While the application of efficacy expectations is varied, numerous authors (Bandura, 1977, 1982; Stajkovic & Luthans, 1998) agree that individual judgments of self-efficacy are based on four experiential sources of information: performance accomplishments, vicarious experience, verbal persuasion, and physiological arousal.

Performance accomplishments. Performance accomplishments provide the most influential source of efficacy information because it is based on experiences of personal mastery. Consistent with self-efficacy theory, enactive mastery or successful past

performance produces the highest, strongest, and most generalized increases in coping efficacy (Bandura, 1982). However, the impact of experience on perceived self-efficacy will depend on cognitive appraisal of a number of formative factors, including the magnitude of the task, generality of performance and strength of self-efficacy.

    Vicarious experience. Vicarious experience involves seeing others cope with challenging activities without negative consequences, thereby confirming that they too will improve if they intensify and persist in their efforts. According to Stajkovic and Luthans (1998), the greater the perceived similarity between the model and the observer in terms of personal characteristics that are assumed to be relevant to performance accomplishment, the greater the model's influence on observers' learning.

    Verbal persuasion. Verbal persuasion leads one to believe that he/she possesses the capabilities to cope successfully with what has overwhelmed them in the past. The purpose of verbal persuasion is not necessarily to increase the level of skill and ability, but rather to focus on the individual's appraisal of self-efficacy so as to enhance the person's beliefs that he or she "has what it takes" (Stajkovic & Luthans, 1998) to complete a task successfully.

    Physiological and affective states. Physiological state specifically relies on physiological arousal in judging anxiety and vulnerability to stress. This source relies upon an awareness of the body/mind connection within an individual in determining a response to a stressful event. This source of efficacy information is important because people tend to perceive psychological and/or emotional activations as signs of vulnerability and dysfunction (Stajkovic & Luthans, 1998).

Dimensions of Self-efficacy

As stated earlier, an efficacy expectation is the conviction that one can successfully execute the behavior required to produce the outcome. Efficacy expectations are likely to determine how much effort people will expend and how long they will persist in the face of obstacles and aversive experiences (Bandura & Adams, 1977; Stajkovic & Luthans, 1998) as measured by the magnitude, generality, and strength of efficacy.

Magnitude. Magnitude of efficacy expectations can be ordered in level of difficulty. The efficacy expectations of different individuals may be limited to the simpler tasks, extend to moderately difficult ones, or include even the most taxing performance such as what level of task difficulty and complexity (low, moderate, high) an employee believes he or she can accomplish (Stajkovic & Luthans, 1998).

Generality. Generality may be applicable to circumscribed mastery expectations or extend beyond the specific treatment situation. For example, personal efficaciousness is generalized across similar activity domains. Personal efficacy can vary by the modalities in which the ability is expressed (behavioral, cognitive), the characteristics of the situations, or the people receiving the behaviors (Stajkovic & Luthans, 1998).

Strength. Strength of efficacy expectations can be easily extinguished by or persevere through disconfirming experiences. The strength of efficacy expectations refers to whether the judgment about magnitude is strong (producing perseverance in efforts) or weak (easily questioned in the face of difficulty) (Stajkovic & Luthans, 1998).

General Self-efficacy

The generality of self-efficacy expectations has been examined in the literature.

Sherer et al. (1982) asserted that as individuals experience success and failure in one area, the experience may generalize to new situations, resulting in the development of generalized self-efficacy expectations within vocational and social areas. The authors developed the Self-efficacy Scale to measure generalized self-efficacy expectations dependent on past experiences and on tendencies to attribute success to skill as opposed to chance. The scale is divided into two subscales that measure general and social self-efficacy. Sherer and Adams (1983) conducted a construct validation study using the Bem Sex-role Inventory (BSRI; Bem, 1974). General and Social self-efficacy were associated with the masculinity scores on the BSRI. However, the small correlation with the femininity scale was not interpreted. Further construct validation of the scale has been conducted (Choi, 2003; Woodruff & Cashman, 1993). In each study, the results supported the validity of the scale.

Woodruff and Cashman (1993) investigated the relationship of general self-efficacy to task-specific self-efficacy. The authors discussed the evolution of self-efficacy as task-specific (Bandura, 1986) and general (Sherer et al., 1982). Bandura (1986) defined perceived self-efficacy as task-specific, while Sherer et al. (1982) conceptualized the generality of self-efficacy within vocational and social areas apart from a specific task. Woodruff and Cashman examined the relationship using personality measures that had strong theoretical relationships to self-efficacy i.e. self-esteem and sense of mastery. An analysis of the data was conducted similar to the method used by Sherer and Adams (1983). The authors identified a strong relationship between the Self-efficacy Scale (Sherer et al., 1982) and task-specific self-efficacy scale.

Choi (2003) noted a lack of recent research on the stability of the factor structure

for the Self-efficacy Scale (Sherer et al., 1982). The author identified two previous

studies that examined the factor structure (Sherer et al., 1982; Woodruff & Cashman,

1993) as well as the construct validity (Sherer & Adams, 1983), which was correlated

with constructs such as masculinity and femininity. The purpose of Choi's (2003) study

was to examine the replicability of the factor structures reported by Sherer et al. (1982)

and Woodruff and Cashman (1993). The author sampled a different population and

assessed correlations with masculinity and femininity using the Bem Sex-role Inventory

(Bem, 1974). The study results reflected that both General and Social Self-efficacy were

more strongly associated with masculine traits than with feminine traits on the Bem Sex-

role Inventory (Bem, 1974). This finding was not surprising, "considering the goal-

oriented and achievement oriented nature of general self-efficacy" (Choi, 2003, p. 479).

Further, the results of the study replicated the findings reported by Sherer and Adams

(1983) and Woodruff and Cashman (1993) that the Self-efficacy Scale (Sherer et al.,

1982) has construct validity.

<div align="center">Self-efficacy and Career Development</div>

Researchers (Betz, 2000; Betz & Hackett, 1981; Hackett & Betz, 1981; Lent et

al., 1994; Luzzo & McWhirter, 2001) have studied self-efficacy in relation to career-

related behaviors. While the level of perceptions varied for areas such as math and career

decision-making, self-efficacy judgments were positively related to the prediction of

occupational choices. Since many behaviors or behavior domains are important in

educational and career development, efficacy expectations are postulated to influence

choice, performance, and persistence in career-related domains (Betz, 1994).

Women. Hackett and Betz (1981) proposed a self-efficacy approach to increase

understanding of women's career development. In a follow-up study, Betz and Hackett (1981) hypothesized that traditional female socialization often led to deficits in the sources of efficacy information important to the development of strong expectations of efficacy with respect to traditionally male-dominated areas as mathematics, the sciences and engineering/technology careers. The results of the study indicated a significant relationship between self-efficacy and gender role socialization in women's career development. The authors found that sex differences were due primarily to females' divergent perceptions of capability with regard to traditional versus nontraditional occupations for women. The implication was that interventions designed to increase women's career related self-efficacy expectations could enhance the degree to which women effectively utilize their abilities and develop their talents and interests (Betz & Hackett, 1981). It is questionable whether these results are generalizable to African American women because African American women may not experience traditional gender role socialization.

Minorities. Luzzo and McWhirter (2001) proposed the evaluation of sex and ethnic differences in the perception of educational and career-related barriers and levels of coping efficacy of college students. One hypothesis identified sex and ethnic differences as these affect the overcoming of barriers (i.e., coping efficacy) among college students, with women and ethnic minorities possessing lower coping efficacy than men and European Americans, respectively. No interaction between sex and ethnicity was identified when a MANOVA analysis was used. There was also an absence of a main effect for the gender variable. Univariate data analysis revealed that ethnic minority participants had lower coping efficacy than their European American

counterparts only for career-related barriers. No differences were identified in coping efficacy for educational barriers. The implication of this study was that minority participants have lower coping efficacy for career-related barriers associated with their ethnicity, which may influence career choice. However, enactive mastery, or successful past performance, produces the highest, strongest, and most generalized increases in coping efficacy (Bandura, 1982). Therefore, as college students, the ethnic minority participants may not have enough mastery experience with career-related barriers to accurately judge their coping efficacy.

Betz (2000) outlined the behavioral consequences of perceived self-efficacy as (a) approach versus avoidance behavior; (b) quality of performance of behaviors in the target domain; and (c) persistence in the face of obstacles or disconfirming experiences. In the context of career development, approach behavior describes what we will try, while avoidance behavior refers to things we will not try. It thus encompasses the context of career choice, the types of educational majors and careers we will attempt, and the process of career choice—the career exploratory and decision-making behaviors essential to making good choices. The effects of self-efficacy expectations on performance may refer to effects such as performance on tests necessary to complete college coursework, or requirements for a job training program. Finally, the effects of self-efficacy on persistence are essential to the long-term pursuit of goals in the face of obstacles, occasional failures, and dissuading messages from the environment. In essence, efficacy beliefs influence behavior (Betz, 2000).

Social Cognitive Career Theory. Social Cognitive Career Theory (see Lent et al., 1994 for further information) builds upon the assumption that cognitive factors play a

role in career development and decision-making (Niles & Harris-Bowlsbey, 2005) through a comprehensive framework through which self-efficacy, outcome expectations, and goals interact with demographic variables, contextual factors, and life experiences to influence interest development, career choice, and performance (Lindley, 2005). The social cognitive model of career decision-making, with particular emphasis on using both efficacy and career outcome expectations, contributes to understanding of exploration intentions and career indecision (Betz & Voyten, 1997).

Lent and Brown (1996) outlined how Social Cognitive Career Theory (SCCT; Lent et al., 1994) focuses on the processes through which (a) academic and career interests develop; (b) interests, in concert with other variables, promote career-relevant choices; and (c) people attain varying levels of performance and persistence in their educational and career pursuits. The authors specified self-efficacy beliefs, outcome expectations, and personal goals as the three variables through which individuals help to regulate their own career behaviors (Lent & Brown, 1996). It is the interaction of these three variables that regulate an individual's career behavior.

Three segments exist in the theoretical framework of Social Cognitive Career Theory (SCCT): vocational interests, occupations choice, and career-related performance. Vocational interest holds that self-efficacy and outcome expectations regarding particular activities have important effects on the formation of career interests, which may be influenced by aptitudes (i.e., abilities) and values and other person and contextual variables (i.e., race and gender). This may involve the extent to which people come to view themselves as efficacious (self-efficacy beliefs) and to view the activity as offering valued rewards (outcome expectations). Within SCCT, occupational choice highlights

the function of additional variables (e.g., contextual influences) that influence the choice process, either apart from or in concert with interests (Lent & Brown, 1996). The authors asserted that choice behavior may be influenced directly by self-efficacy and outcome expectations.

Social Cognitive Career Theory (Lent et al., 1994) focuses on the interaction of self-efficacy beliefs, outcome expectations, and personal goals on career behavior. However, efficacy expectations are the more powerful predictors of behavior (Betz, 2000). It is possible that an individual may have strong self-efficacy beliefs and negative outcome expectations resulting in the lack of personal goal development for a career area. For example, an African American woman with strong self-efficacy beliefs may have negative outcome expectations for leadership roles in an organization resulting in avoidance of leader roles as a personal goal. An examination of self-efficacy as a mediator of career behavior in isolation of outcome expectations is warranted.

Women's Career Development

Hackett and Betz (1981) proposed the utilization of a self-efficacy approach to the career development of women. Self-efficacy expectations developed by Bandura (1977) are cited as having particular relevance to the understanding and explanatory power of women's career development. According to the authors, "the lack of behaviors that would facilitate women's pursuit of and achievements in careers correspondent with their individual capabilities and talents is postulated to be due to the lack of strong expectations of personal efficacy in relation to career-related behaviors" (p. 329). This would indicate that self-efficacy level may have an indirect effect on women's career development. Further, Hackett and Betz (1981) cited a need to increase understanding of

the relationship between women's socialization experiences and subsequent choices and achievement behaviors that involve a focus on the cognitive processes mediating women's vocational behaviors.

Hackett and Betz (1981) developed a model to depict the postulated effect of traditional female socialization on women's career-related self-efficacy expectations. Their assumption was that gender role socialization influences women's career development at least in part due to its effect on the mediating variable of self-efficacy expectations. The four sources of efficacy expectations—performance accomplishments, vicarious learning, emotional arousal, and verbal persuasion—are represented individually, without overlap. Although individually the four sources of efficacy information influence efficacy perceptions, it is the individual's cognitive appraisal and integration of these experiences that ultimately determine self-efficacy (Bandura, 1982, as cited in Gist & Mitchell, 1992). Thus, self-efficacy may be thought of as a superordinate judgment of performance capability that is induced by the assimilation and interaction of multiple performance determinants (Gist & Mitchell, 1992).

As cited previously, performance accomplishments are often the greatest source of self-efficacy information because they are based on experiences of personal mastery. Betz and Hackett (1981) hypothesized that traditional female socialization often leads to deficits in the sources of efficacy information important to the development of strong expectations of efficacy with respect to traditionally male-dominated areas such as mathematics, the sciences and engineering/technology careers. The authors identified a significant relationship between self-efficacy and gender role socialization in college women's career development. However, task performance affects self-efficacy more

strongly than task interest, suggesting that self-efficacy may be more sensitive to performance experiences than interest (Hackett & Betz, 1995, p. 267). Professional women have more experience with the success and failure of task performance than college women. If task performance affects self-efficacy more strongly, then it is questionable whether a significant relationship between self-efficacy and gender role socialization would be identified for professional women as well.

Vicarious learning, the experience of observing others as they cope with a challenging activity, is another source of increasing self-efficacy expectations. According to Stajkovic and Luthans (1998), the greater the perceived similarity between the model and the observer in terms of personal characteristics that are assumed to be relevant to performance accomplishment, the greater the model's influence on observers' learning. Mentors and role models have been cited as influencing the career development of high-achieving African American and White women (Richie et al., 1997). Richie et al. (1997) conducted a study on the career development of high-achieving women. The authors found that the support of and by other women seemed to be critically important to almost all of the female participants interviewed in counteracting the isolation of being pioneers in their fields. Hackett and Betz (1981) noted the possibility of having girls and women select boys and men as models of successful performance accomplishments. This would indicate that similarity to the model in physical characteristics such as race or gender may not be necessary to the development of women's efficacy expectations.

The impact of a personal support system or a connection to others to manage the difficulties encountered in the work environment is highlighted in the women's career development literature. A sense of connection to others may be critical in reducing

physiological arousal (the third source of efficacy expectations) brought on by stress and anxiety in the workplace. According to Richie et al. (1997), solid support from people currently involved in participants personal lives, such as families, spouses, and friends, was reported to be critically important in mediating how high-achieving women viewed and dealt with stressful situations. The authors reported that professional and personal lives are interconnected, making career decisions become life decisions for high-achieving women. This can cause stress for women as they try to balance the demands of work life and home life, being a mother, wife and caretaker simultaneously. A sense of connection to others, whether personal or professional, appears to have a significant influence on women's career development.

<center>African American Women's Career Development</center>

Research related specifically to the career development of African American women is limited. According to Hackett and Byars (1996), "no comprehensive model of the career development of racial and ethnic minorities has yet been developed; even less attention has been devoted to models of the career development of racial and ethnic minority women" (p. 322). Studies (Evans & Herr, 1991, 1994; Hackett & Byars, 1996; Murrell, Frieze, & Frost, 1991; Pearson & Bieschke, 2001; Richie et al, 1997) have cited the need for exploration of the career development of ethnic minority females due to their dual status in race and gender membership groups. The dual status in race and gender membership groups for African American women includes experiences with racism and sexism that White women may not share. The influence of racism and sexism on the career development of African American women is noted throughout the literature (Evans & Herr, 1991, 1994; Hackett & Byars, 1996; Murrell, Frieze, & Frost, 1991;

Pearson & Bieschke, 2001; Richie et al, 1997).

Evans and Herr (1991) conducted a review of research that cited how perceptions of racism and sexism relate to various career choices of African American women. The authors believed that African American women may disregard an occupation or redirect their ambitions and goals based on fear of a negative situation. Few studies have considered the nature of career aspirations for professional African American women, either separately or in comparison to their White counterparts (Murrell, Frieze, & Frost, 1991). According to Evans and Herr (1991), there is evidence that a person's perception of the opportunity structure in a career field may influence his or her related aspirations. The authors believed that the effects of racism and sexism can lead to lowered career aspirations for African American women.

Murrell, Frieze, and Frost (1991) hypothesized that African American college women are more likely to choose male-oriented jobs and demonstrate higher career and educational aspirations than White college women. The results of the study confirmed that African American college women were more likely to choose male occupations than their White counterparts. In addition, African American women planning careers in male-dominated professions scored significantly higher on the aspiration variable than their White counterparts. It should be noted that the authors performed an assessment of occupational gender without accounting for the participants' gender role orientation.

According to Evans and Herr (1991), it seems reasonable to assume that African American women may not list discrimination as a career barrier because they themselves have limited their primary areas of interest to those fields that are perceived as bias-free (e.g., education, social science, medicine and law) and/or will result in minimum

exposure to racism and sexism. Evans and Herr (1994) investigated the influence of

racial identity and perception of discrimination on the career aspirations of African

American women. Previous research identified by the authors supported their belief that

self-concept is related to career aspirations and choice. The authors hypothesized that

perceptions of discrimination against African Americans and women will be positively

related to traditional career aspirations. The study results indicated that neither

perception of discrimination against African Americans nor perceptions of discrimination

against women were significantly related to the career aspirations of African American

women. This finding calls into question Evans and Herr's (1991) belief that African

American women may disregard an occupation or redirect their ambition and goals based

on fear of a negative situation.

Professional African American women have survived and succeeded in racist and

sexist environments, particularly in identifying career strategies that lead to

accomplishment (Richie et al., 1997). Richie et al. (1997) asserted that high-achieving

African American women are aware of the prevalence of racism and sexism combined in

their career development. The authors outlined difficulties due to the interactive

oppressions of racism and sexism, described the salience of both oppressions in their

professional development, and noted that sexism and racism were inextricably linked. In

fact, Pearson and Bieschke (2001) found that professional African American women

reported that their experiences with racism and other forms of discrimination heightened

their level of determination. As Evans and Herr (1994) asserted, for African Americans

racial discrimination is a "way of life" that cannot change their career development or

aspirations. It may be concluded that racism and sexism have no influence on African

American women's career development.

African American Women and Social Cognitive Career Theory

Hackett and Byars (1996) proposed an exploration of the career development of African American women using Social Cognitive Career Theory. In the article, the authors applied self-efficacy theory, within the broader context of social cognitive theory, to the career development of African American women by expanding upon Hackett and Betz's (1981) self-efficacy approach to women's career development. The authors suggested that various contextual, socialization, and learning experiences form the four sources of self-efficacy (Bandura, 1986)—performance accomplishments, vicarious learning, verbal persuasion, and physiological state—to influence the career development of African American women. More specifically, gender role socialization, familial influences, and mentoring are highlighted in the literature review.

Gender role socialization. Hackett and Betz (1981) proposed that gender role socialization influences women's career development at least in part due to its effect on the mediating variable of self-efficacy expectations. Betz and Hackett (1981) identified a significant relationship between self-efficacy and gender role socialization in college women's career development with respect to traditionally male-dominated areas. However, the study results may not apply to African American women. Hackett and Betz (1996) discussed several studies that support the belief that African American women do not experience traditional gender role socialization due to the parent's childrearing methods. As part of the discussion, the authors stated that "because of family makeup and economics, African American girls often experience more crossover between traditionally male and female roles and duties in the household, because every member of

the family has to do whatever it takes to survive" (p. 329). Pearson and Bieschke (2001) examined gender role as one influence on the career development of professional African American women. The participants interviewed noted that the gender roles in a family were either androgynous or flexible. The authors stated that gender role socialization, defined as what participants learned about being a woman that influenced their career development, was a salient variable in the career development of participants. Hackett and Byars (1996) contend an increased access to a range of traditionally masculine experiences and tasks may facilitate African American women's academic and career self-efficacy and, as a result, their academic achievement and career behavior.

   Familial influences. It has been noted throughout the literature that familial influence plays a significant role in African American women's career development. Hackett and Byars' (1996) assertions of the role of self-efficacy in African American women's career development were supported by Pearson and Bieschke (2001). Pearson and Bieschke (2001) utilized a consensual qualitative method to examine familial influences on professional African American women's career development. Early influences, including ongoing contextual factors (e.g., family and socioeconomic status), and person inputs (e.g., gender and race)—elements expressed in SCCT (Lent et al., 1994)—were identified as relevant in the study. Participants noted that family encouragement and support (verbal persuasion) as well as the career experiences of those around them (vicarious learning) helped shape their career development.

   Richie et al. (1996) also found parental influence, particularly mother's influence, to be very positive and important in African American women's career development. According to the authors, the participants reported that their mothers had served as

inspirational role models. Hackett and Byars (1996) asserted the evident importance of

African American mothers in the career development of their daughters, which can be

explained by the relevance and proximity of the mother as a model for her daughter. In

their review of the literature, Hackett and Byars asserted that the mother's education level

profoundly influences achievement, self-esteem and, most likely, self-efficacy for

African American women.

    Mentoring. The influence of a mentor or model on career development is noted

throughout the social cognitive literature, particularly when the model is similar to the

observer. For example, in a mentoring program conducted by Green and King (2001),

African American female participants were paired with African American female

mentors. The participants noted strong feelings of camaraderie and empowerment about

participating in the program, particularly with other African American females.

However, Hackett and Byars (1996) asserted that race or ethnicity is only one dimension

of similarity between model and observer that may impact African American women's

career development.

    Women of color in corporate management: Three years later (Catalyst, 2001)

detailed the changes in the career advancement of women of color from 1998 to 2001.

The role of a mentor, defined as someone who usually holds a senior position and takes

an active interest in developing the protégés career, was featured in the report. Study

participants reported that having an influential mentor or sponsor was one of the top

success strategies affecting their career advancement. The authors found that since 1998,

the number of African American women with mentors increased substantially from 35%

in 1998 to 62% in 2001. In addition, 31% of the African American female participants

reported having a White male as a mentor. This would indicate that similarities in race or even gender are not necessary in the mentoring relationship.

Connectedness needs. Richie et al. (1997) used a grounded theory approach to develop an emergent theoretical model for understanding the career development of high-achieving African American and White women. Within the core story, the authors identified strength and perseverance, internal standards of judgment, passion for work, and a relational orientation that focuses on interconnectedness with others as the key elements. A sense of connection was prevalent throughout the study. The participants highlighted both personal and professional relationships with partner/spouses, family, community and other women as influencing their career development. This interconnectedness helped the African American participants to persist and succeed in their career experiences. Pearson and Bieschke (2001) also discussed the influence of connection to others as prevalent in professional African American women's career development. The authors found participants spoke of how nuclear family and extended family network domains helped the women increase their own self-efficacy beliefs and pursue, enter, and maintain their careers in the face of challenges.

<div align="center">Women's Leadership Aspirations</div>

Women's leadership development has focused on building skills rather than identifying factors that influence women's career aspirations to leadership roles. Although the literature reflects the knowledge, skills and abilities of leadership, the psychological factor(s), (affective and cognitive), that inspire an individual to leadership are unclear (Boatwright & Egidio, 2003; van Knippenberg, van Knippenberg, DeCremer & Hogg, 2004). According to Boatwright and Egidio (2003), many college experiences

provide the necessary skills for leadership skill development, but have not explicitly focused on the enlivening of leadership aspirations, a necessary element for many women. The authors believe stimulation of women's leadership aspirations may be critical in the career advancement of women to leadership roles.

Singer (1990) examined whether self-efficacy perceptions are predictive of adolescents' leadership aspirations. A cognitive approach was utilized to explore leadership aspirations as a special case of career choice by applying the various models of career choice behavior in identifying the underlying cognitive determinants of leadership aspirations. The author hypothesized that significant sex and age differences would be identified in all measures with reference to leadership aspirations. Participants (N=130 between 14 years 3 months and 17 years 9 months) were presented with a non-standardized questionnaire in the classroom by their own teachers to assess overall leadership aspirations. A single question, "How much would you like to be in a leadership position?" was used to measure overall leadership aspirations. The participants rated their aspirations using a 7-point rating scale ranging from 1 (not at all) to 7 (very much). An ANOVA analysis of sex and age was conducted on the overall leadership aspiration ratings. The results of the study indicated that all participants had a similar level of aspiration to leadership positions, regardless of sex or age. The author indicated that all of the participants had an equally strong desire to be leaders. Singer (1990) stated that the single item measure of leadership aspirations weakened the reliability of the data. One area indicated for future research based on the methodology used in the study was an assessment of the relevance of the findings to samples of organizational employees.

Kreuzer (1992) conducted a study of the extent to which college women aspire to leadership roles and to determine if there is a relationship between aspiration and selected sociological factors (e.g., gender, gender role orientation, leadership aspirations, socioeconomic status and parental influence). The author sampled 311 senior-level college students from business, teacher education, and political science majors via mail. Two questions were designed to investigate whether gender role orientation affects university seniors' aspirations to leadership and whether there are gender differences in the influence of specific sociological factors (socioeconomic status, mother's obtained occupation, and mothers' level of education) upon university seniors' aspirations to leader roles. The results indicated that for women participants, mother's education was related to their leadership aspirations. However, gender role orientation was found to be inconclusive.

Kreuzer (1992) also identified her study's limitations. First, the author did not use psychometrically sound standardized measures for data collection. Second, items constructed to assess gender role orientation had wording that may have been biased toward a contemporary answer, or made it difficult to confirm answers reflecting conservative attitudes. As the author asserted, "it introduces a caveat to the validity of the items" (p. 75). In addition, race/ethnicity was not part of the demographic questionnaire nor was an examination of race/ethnicity conducted in the final data analysis.

Boatwright and Egidio (2003) extended Kreuzer's (1992) study to identify the role of gender role orientation in college women's leadership aspirations. The authors examined whether connectedness needs, gender role orientation, self-esteem, and fears of

negative evaluation were predictors of college women's leadership aspirations. The authors sampled 213 female college students enrolled at a co-educational liberal arts college. The following instruments were utilized to collect data: the Career Aspiration Scale (O'Brien, Gray, Tourajdi, & Eigenbrode, 1996) to measure leadership aspirations; the Bem Sex-role Inventory (Bem, 1974) to measure gender role; Connectedness Scale (Welch, 1997) to measure connectedness needs; Fear of Negative Evaluation Scale (Watson & Friend, 1969) to measure fear of negative evaluation; and Rosenberg's Self-Esteem Scale (Rosenberg, 1965) to measure self-esteem. Both correlational and hierarchical regression methods were utilized to analyze data in the study.

The results indicated that each of the variables was significantly related to college women's leadership aspirations. Connectedness needs and self-identified masculine gender role traits were significantly related to the leadership aspirations of college women. The more college women considered themselves to be fitting in with the traditional feminine gender stereotype, the less likely they were to report leadership aspirations. Connectedness needs exerted the most important influence upon college women's leadership aspirations over all other variables. When variables found to be significantly related to women's leadership aspirations (gender role orientation, connectedness needs, self-esteem and fear of negative evaluation) were concurrently entered into the regression equation, each variable remained a significant contributor and accounted for 16% of the variance. While age and educational level were inserted into the data analysis, neither variable accounted for a significant influence on college women's leadership aspirations. The authors reported that due to the sample's racial/ethnic homogeneity (94% European American); race/ethnicity was not included as

a variable in the data analysis.

In their discussion, Boatwright and Egidio (2003) identified the following limitations of their study. First, the homogenous sample raised doubts about the generalizability of their findings. Second, racial/ethnic identity of students in the sample was predominantly European American, thus severely limiting the generalizability of their findings to college females of different racial/ethnic backgrounds. Third, the authors relied exclusively on self-report measures. Fourth, the authors collected data from college women at one particular point in their college experience. The authors suggested that future researchers should explore the possible theoretical explanations for the relationship between women's leadership aspirations and connectedness needs.

Chapter Summary

The purpose of this chapter was to review the literature on self-efficacy and professional African American women's career development. The review showed that people's beliefs about their personal efficacy constitute a major aspect of their self-knowledge (Bandura, 1997). The potential value of self-efficacy for the study of behavior in general, and work behavior in particular, derives from the proposition that not only is there a positive relationship between self-efficacy and behavior, but that this relationship is causal in nature (Bandura, 1977).

Highlights of the review include the following:

1. Efficacy expectations are likely to determine the amount of effort expended by people and the length of time in which they will persist in the face of obstacles and aversive experiences (Bandura & Adams, 1977; Sherer et al., 1982; Stajkovic & Luthans, 1998).

2. According to Hackett and Betz (1981), "the lack of behaviors that would facilitate women's pursuit of and achievements in careers correspondent with their individual capabilities and talents is postulated to be due to the lack of strong expectations of personal efficacy in relation to career-related behaviors" (p. 329).

3. Hackett and Betz (1981) cited a need to increase understanding of the relationship between women's socialization experiences and subsequent choice, and achievement behaviors that focus on the cognitive processes mediating women's vocational behaviors.

4. Studies (Evans & Herr, 1991, 1994; Hackett & Byars, 1996; Murrell, Frieze, & Frost, 1991; Pearson & Biescke, 2001; Richie et al, 1997) have revealed the need to explore the career development of ethnic minority females in light of their dual status in race and gender membership groups. Pearson and Bieschke (2001) examined gender role as one influence on the career development of professional African American women. Study participants noted that their family gender roles were either androgynous or flexible. The authors stated that gender role socialization, defined as what participants learned about being a woman that influenced their career development, was a salient variable in their career development.

5. In their literature review, Hackett and Byars (1996) asserted that mother's education level profoundly influences achievement, self-esteem, and, most likely, self-efficacy for African American women.

6. Hackett and Byars (1996) also asserted that race or ethnicity is only one dimension of similarity between model and observer that may impact African

American women's career development.

7. Pearson and Bieschke (2001) discussed the influence of connection to others as prevalent in professional African American women's career development. The authors found that participants spoke of how nuclear family and extended family network domains helped the women to increase their own self-efficacy beliefs and to pursue, enter, and maintain their careers in the face of challenges.

African American women's experience with racism and sexism in the workplace presents unique challenges to their career development. The experience with racism and sexism is a "way of life" that cannot change their career aspirations (Evans & Herr, 1994). The role of background variables such as age, education, occupation and years of experience in the occupation should not be ignored. The influence of various contextual, socialization and learning experiences such as gender role orientation, mom's education level, mentor's race and gender, and connectedness needs may influence career aspirations as well. More importantly, the role of self-efficacy beliefs as a mediator above all other factors may be the most significant to pursue, enter, and maintain their careers in the face of challenges. It is the influence of these factors on their leadership aspirations that will be examined in this study.

After completing the literature review on self-efficacy and professional African American women's career development, we turn now to the study methodology. Chapter three will highlight the mediating role of self-efficacy on professional African American women's leadership aspirations. It will also provide details on the population, procedures, instruments and methodology used to investigate African American women's leadership aspirations.

Chapter Three

Methodology

Chapter three describes the methodology to determine the mediating role of self-efficacy on African American women's leadership aspirations. This information is presented in the following sections: participants, procedures, research design, data analysis, and instruments.

Participants

To be eligible to participate in the study, participants must be (a) African American women and (b) have had a minimum 35 hours or more per week of paid employment for the last one year (12 calendar months). Prospective participants were recruited primarily through the listserv(s) of national organizations for African Americans and African American women. See Appendix A for a complete listing of national organizations for African Americans and African American women that were contacted for recruitment. Additional recruitment resulted in the email invitation being forwarded by participants.

Demographic profile of the respondents. There were 203 study participants who met inclusion criteria for analysis 21 to 65 years of age ($m = 39.72$, $sd = 10.709$). With respect to the highest level of participants' education completed, 3% had a high school diploma, 5% had completed two years of college, 28% had a bachelor's degree, 45% had a master's degree, and 19% had a professional degree. With respect to the highest level of mother's education completed, 41% had a high school diploma, 20% had completed two years college, 18% had a bachelor's degree, 13% had a master's degree, 5% had a

professional degree, and 3% were not reported. With respect to presence of a mentor, 93

participants reported having a mentor. Over 50% ($N = 48$) of African American women

with a mentor reported having an African American female mentor. Over 20% ($N = 20$)

of African American women with a mentor reported having an African American male

mentor.

Procedures

National organizations for African Americans and African American women were

identified (a) to disseminate the study invitation (Appendix B) and (b) to increase the

range of African American women represented in the sample. Participants were recruited

and asked to participate in a study of African American women's leadership aspirations.

Participants were informed of the criteria for participation and the purpose of the study.

Participants were told that the purpose of the study was to investigate the factors that

influence African American women's leadership aspirations. Participants were informed

that their participation was anonymous and voluntary, and that they could decline to

participate at any time. No incentive was provided for their participation.

Prior to the investigation, an application to conduct human subject's research was

completed and submitted to the Behavioral and Social Sciences Committee of the

Institutional Review Board at Pennsylvania State University. PsychData, a web-based

company that conducts Internet based research in the social sciences, was utilized to build

the survey, collect data, and store the dataset. The first page of the website began with a

letter informing participants of the purpose and objectives of the study (Appendix C),

followed by a voluntary informed consent form (Appendix D). If the participants

accepted the informed consent statement, they were forwarded to the demographic

questionnaire (Appendix E) to begin the study.

An email was sent to the national listservs to invite participation from African American women. Participants received a brief letter of invitation that forwarded them to the web-based survey. The web-based survey included an implied informed consent statement, demographic questionnaire, and four self-report measures. Participants were informed that completion of the survey implied consent to participate in the study. They were told that their participation was both voluntary and anonymous. Participants were asked to print the informed consent statement for their records. They were provided with the contact information for the primary researcher and the Office for Research Protections if they had any questions.

Research Design

The objective of this study was to investigate the role of self-efficacy as a mediator of the leadership aspirations of African American women. Correlation and multiple hierarchical regression methods were used as the research methods to examine these relationships. Using a correlation research design in this study allowed this researcher: (1) to identify the relationship between two or more variables and (2) to identify whether the relationship between the variables identified was positive or negative. There are some disadvantages to using this research design. Although a strong relationship may be identified between two variables, variable x may not demonstrate causation of variable y. Since correlation research designs are not experimental designs, causation may not be demonstrated. For example, if the relationship between presence of a mentor and leadership aspirations is greater than the relationship between connectedness needs and leadership aspirations, it cannot be demonstrated that presence

of a mentor causes leadership aspirations. Second, it is unclear whether confounding variables such as leadership training that may influence self-efficacy development will account for the direction of the relationships identified. Therefore, the possibility of a chance finding is present.

Hackett and Betz (1981) purported that self-efficacy expectations (Bandura, 1977) may have a mediating role on women's career development. This research study involved Self-efficacy Theory (Bandura, 1986) as its theoretical basis, a necessary element for the use of hierarchical regression. The use of hierarchical regression allowed this researcher: (1) to identify the strength of self-efficacy as a mediator of African American women's leadership aspirations and (2) to enter the identified variables in three blocks in a specific order. In this way, the contribution of each variable on African American women's leadership aspiration was identified. There are drawbacks to the use of hierarchical regression. Although hierarchical regression methods are based in theory, results found may not demonstrate causation of the relationships identified. In addition, confounding variables may account for some error resulting in an overestimate or underestimate of the strength of relationships identified.

Research on African American women's career development previously cited was primarily conceptual and qualitative. Therefore, data related to alpha, power, and effect size, elements necessary to specify sample size are not available. A "rule of thumb" approach (Green, 1991; Tabachnick & Fidell, 2001) was utilized to determine sample size for this study. The simplest rule of thumb $N \geq 50 + 8m$ (where m is the number of independent variables) for testing multiple correlations and $N \geq 104 + m$ for testing individual predictors should be utilized assuming a medium size relationship between the

IV and the DV, $\alpha = .05$, $\beta = .80$. There were seven independent variables in this study. Green (1991) suggested that researchers determine the sample size for both types of tests and select the larger sample size as the N for the study. A larger sample size ($N = 111$) was identified using the $N \geq 104 + m$ formula. However, a rule of thumb approach does not provide the accuracy and specificity of power analyses (Green, 1991).

Data Analysis

The objective of this study was to investigate the role of self-efficacy as a mediator of the leadership aspirations of African American women. In order to examine these relationships, correlation and multiple hierarchical regression methods were conducted. This study sought answers to the following questions to identify these relationships:

1. To what extent does the mentor's race and gender influence the leadership aspirations of professional African American women? Univariate data analyses were conducted to identify the mean and standard deviation of participant's age, participant's education level, and mother's education level. Second, correlation analyses were conducted among presence of a mentor and mentor's race and gender to examine their relationship to African American women's leadership aspirations.

2. What are the direct and indirect effects of participant's age, mother's education level, participant's education level, presence of a mentor, connectedness needs, and general self-efficacy level on the leadership aspirations of African American women? Correlation analyses were conducted among all variables to examine the direct effect on African American women's leadership aspirations. It was

assumed that the indirect effect of general self-efficacy beliefs would have a stronger influence on professional African American women's leadership aspirations. Therefore, the direct effect of general self-efficacy on leadership aspirations was not a focus of the study. Next, multiple hierarchical regression analyses were conducted to identify the role of self-efficacy as a mediator of African American women's leadership aspirations. Socially desirable responding was utilized in each regression step as a control variable. The first regression analysis included participant's age, mother's education level, participants' education level, presence of a mentor, and connectedness needs to identify the strength of their relationship to general self-efficacy level. The second regression analysis examined the strength of the relationship of participant's age, mother's education level, participants' education level, presence of a mentor, and connectedness needs to leadership aspirations. The final analysis included participant's age, mother's education level, participants' education level, presence of a mentor, and connectedness needs with the addition of general self-efficacy level to leadership aspirations.

Instruments

Demographic questionnaire. Respondents completed a brief questionnaire constructed by the researcher to gather data on demographic and work-related variables. Data included: (a) participant's age, (b) mother's education level, (c) participant's education level, (d) participant's occupation, (e) participant's years of experience in occupation, (f) presence of a mentor, (g) gender of the mentor, and (h) race/ethnicity of the mentor.

Leadership aspirations. Leadership aspirations were measured by participants'

responses to the Career Aspiration Scale (CAS) (O'Brien, 1996). This instrument

includes two self-report subscales to measure (a) Educational Aspirations (CASE) and (b)

Leadership and Achievement Aspirations (CASL). In this study, only responses to the

CASL subscale were analyzed. The CASL subscale consists of 6 items that assess

intentions to obtain promotions, manage and train others, and be recognized as a leader in

one's field. Sample items include: "I hope to move up through any organization or

business I work in"; and "I hope to become a leader in my career field." Responses to the

measure were recorded on a Likert scale with responses ranging from "0" (not at all true

of me) to "4" (very true of me). A total score of 24 indicated the highest level of

leadership and achievement aspirations. The authors reported internal consistency

reliability scores of the CASL for college women, adolescent women, post-college

women, and Mexican American adolescent women as .82, .72, .78 and .67, respectively.

An investigation of the test-retest reliability of the CASL subscale conducted over a two-

week interval with college women revealed that the CASL was stable over time ($r = .84$,

$p < .01$) (Gray & O'Brien, in press). The Cronbach's Alpha for the CASL in this study

was .75. According to the authors, factors such as racism, role models, and

socioeconomic factors may influence perceptions of leadership aspirations for women of

color. Gray and O'Brien noted that additional factors such as the importance of family

and gender role beliefs should be included in the conceptualizations of career aspirations

for women of color.

General Self-efficacy. General self-efficacy was measured by participants'

responses to the Self-efficacy Scale (Sherer et al., 1982). The Self-efficacy Scale (Sherer

et al., 1982) is a 23-item scale to measure generalized self-efficacy expectations

dependent on past experiences and on tendencies to attribute success to skill as opposed

to chance. The instrument includes two subscales to measure (a) General Self-efficacy

and (b) Social Self-efficacy. In this study, only responses to the General Self-efficacy

subscale were analyzed. The General Self-efficacy Subscale (GSE) consists of 17 self-

report items that measure self-efficacy without reference to any specific behavioral

domain. Sample items include: "When I make plans, I am certain I can make them

work"; and "I avoid facing difficulties." Responses to the measure are recorded on a 5-

point scale with responses ranging from A (disagree strongly) converted to a 1 value to E

(agree strongly) converted to a 5 value. Sherer and Adams (1983) reported a Cronbach's

alpha of .86 for the General Self-efficacy subscale. The GSE was positively associated

with masculinity on the Bem Sex-role Inventory (Choi, 2003; Sherer & Adams, 1983).

Sherer and Adams (1983) reported correlation coefficients between the Self-efficacy

subscale scores and the Bem Sex-role Inventory subscales. A correlation coefficient of

.54 was identified between the GSE scores and Masculinity scores on the BSRI. A -.19

correlation coefficient was reported between the GSE scores and the Femininity scores on

the BSRI. Similarly, Choi (2003) reported correlation coefficients of factorial validity

between the Self-efficacy subscale scores and the Bem Sex-role Inventory subscale

scores. A correlation coefficient of .52 was identified between the GSE scores and

Masculinity scores of the BSRI. There was no significance between the GSE scores and

Femininity scores of the BSRI. The Cronbach's Alpha for the GSE in this study was .88.

Connectedness Needs. African American women's needs for connection were

measured by the Connectedness Scale (CS; Welch, 1997). This self-report instrument

consists of a total of 28 items using a 5-point Likert scale and assesses the degree to which the participant values and needs meaningful relational ties with others. The participants rated how well each statement described them on a scale from 0 (strongly disagree) to 4 (strongly agree); total scores ranged between 0 and 200. Higher scores indicated a stronger interest in meaningful connections with others. Sample items included: "Trying to help friends through hard time is important to me"; "In a close friendship, you should be able to talk about anything"; and "I would be willing to sacrifice in order to help a friend in need." Welch developed three versions of the scale with 90, 50, and 28 items. Correlational studies between the 50 and 28 item versions were almost identical. The author reported a Cronbach's alpha coefficient of .96, indicating good internal consistency reliability. According to the author, "the reduction of items from the Conn50 to the Conn28 did not compromise convergent and discriminant validity of the instrument" (p. 85). Further research of the construct validity of the scale was not identified. For this study, the Cronbach's Alpha for the Conn28 was .91.

Social Desirability. According to Paulhus (1991), "socially desirable responding is the tendency to give answers that make the respondent look good" (p. 17). The Marlowe-Crowne Social Desirability Scale (MCSDS; Crowne & Marlowe, 1960) is used to measure socially desirable responding on the three self-report measures detailed above. The MCSDS is a 33-item measure that asks participants to describe either (a) desirable but uncommon behaviors or (b) undesirable but common behaviors. Responses to the measure are recorded as "true" or "false"—18 items are scored as true and 15 are scored as false. A total score of 33 indicates a high need for approval. Internal consistency

ranged from .73 to .88, with test-retest correlations of .88 over one month (Crowne &

Marlowe, 1960, as cited in Paulhus, 1991).

Reynolds (1982) conducted a study to develop the MCSDS Short Form. A 13-item measure utilizing items 3, 6, 10, 12, 13, 15, 16, 19, 21, 26, 28, 30, and 33 of the MCSDS Standard was constructed. On the 13-item short form, five items are scored as true and eight items are scored as false. The 13-item short form revealed a reliability of .76 utilizing the Kuder-Richardson formula 20. Correlations between the MCSDS short form and the MCSDS standard form revealed a product-moment correlation coefficient of .93 with a $p < .001$. Based on these results, Reynolds recommended the 13-item form as a viable short form for use in assessment of socially desirable responding. Therefore, the MCSDS 13-item Short Form developed by Reynolds was utilized in this study. For this study, Cronbach's Alpha for the MCSDS 13-item Short Form was .73.

Chapter Four

Results

The objective of this study was (a) to investigate the influence of the mentor's race and gender on leadership aspirations of African American women and (b) to investigate the role of self-efficacy as a mediator of the leadership aspirations of African American women. This chapter includes the analysis of data collected through the online survey. The study results are presented according to the two research questions:

1. To what extent does the mentor's race and gender influence the leadership aspirations of African American women?

2. What are the direct and indirect effects of participant's age, mother's education level, participants' education level, presence of a mentor, connectedness needs, and general self-efficacy level on the leadership aspirations of African American women?

Prior to addressing the two research questions, a description of the study participants and preliminary analyses is presented. Finally, the correlation and mediation analyses related to the research question are offered.

Pre-analysis

First, the survey data were downloaded from the PsychData website (www.psychdata.com). A total of 264 participants entered the study website; however some individuals did not meet inclusion requirements for this study. Twenty five surveys were excluded as eight respondents chose to exit the study without submitting any data, nine respondents that chose to continue did not contain any data and eight respondents completed demographic data only. A visual inspection of the data was conducted to

identify and eliminate those participants who did not match the inclusion requirements. This process led to the removal of eight surveys that listed student as an occupation, seventeen surveys with less than one year in their present occupation, and three surveys that listed retired as an occupation. An additional eight respondents were excluded as they did not complete all four surveys. The remaining 203 participant responses were analyzed for missing data.

Replacement of missing data. Missing data were observed in the following variables: mother's education level, general self-efficacy, connectedness needs and the socially desirable responding. A mean average of the scores was computed if more than 70% of the items were completed in each instrument. The mean average was utilized to compute the sum total of each case for each variable. Further, a listwise deletion was used in all analyses due to the low rate of missing data. This resulted in 197 respondents with analyzable data for the eight variables of interest.

Univariate Analysis

Summary Statistics of Scales. The means and standard deviations for scores of all measures are presented in Table 4.1. The mean of the dependent variable leadership aspirations ($m = 19.06$, $sd = 4.72$) suggests that African American women in this sample have moderate to high leadership aspirations. The mean of the independent variable connectedness needs ($m = 93.35$, $sd = 11.96$) suggests that African American women have moderate interest in meaningful relations with others. The mean of the mediator variable, general self-efficacy, ($m = 69.68$, $sd = 11.14$) suggests that African American women in this sample have strong general self-efficacy expectations. The mean of the control variable socially desirable responding ($m = 5.77$, $sd = 3.03$) suggests that African

American women have a moderate need for approval.

Table 4.1

Summary Statistics of Scales (N = 197)

	m	*sd*
General Self-efficacy	69.68	11.14
Leadership Aspirations	19.06	4.72
Connectedness Needs	93.35	11.96
Socially Desirable Responding	5.77	3.03

Variable Transformations. High levels of negative skewness were observed for the leadership aspirations (-4.72), connectedness needs (-4.46), and general self-efficacy (-7.39) variables. A rule of thumb is that the absolute value of the ratio of skewness to its standard error should be less than positive or negative 2. A second power transformation of the skewness was conducted for the connectedness needs variable, which brought the ratio of the skewness to the standard error to -1.93 within the acceptable range. Skewness values were transformed to the third power for general self-efficacy and leadership aspirations variables, which brought the ratio of the skewness to the standard error to -1.34 and -.61, respectively, within the acceptable range. The non-linear transformations allowed the distribution of variables to fit better in the linear regression model making the variables normally distributed. The transformed values were utilized to conduct scatter plot analyses. There was no evidence of curvilinear relationships among leadership aspirations, general self-efficacy level, or connectedness needs. The

data analysis more closely met assumptions of regression. The transformed values were used in all analyses.

Bivariate Analysis

Dependent Variable. Pearson correlations among the variables included in this study are presented in Table 4.2. Results from the Pearson correlation matrix revealed that connectedness needs, participant's education, and presence of a mentor were significantly related to the dependent variable, leadership aspirations. However, connectedness needs, participant's education, and presence of a mentor accounted for little of the variance ($p < .05$). Other demographic variables—participant's age, mother's education level, and mentor's race and gender were not found to be significantly related to leadership aspirations. Further, the control variable socially desirable responding was not found to be significantly related to leadership aspirations. The direct effect of general self-efficacy on participant's leadership aspirations was not a focus of this study. It was assumed that the indirect effect of self-efficacy beliefs would have a stronger influence on participant's leadership aspirations.

Correlation analyses demonstrated that connectedness needs were positively and significantly ($r = .17, p < .05$) related with African American women's leadership aspirations. This suggests that the stronger the participant's interest in meaningful relations with others, the greater the likelihood that she would express an interest in future leadership positions.

Correlation analyses revealed that participants' education level was positively and significantly ($r = .16, p < .05$) related with African American women's leadership aspirations. This suggests that the higher a woman's education level, the more likely she

would express an interest in future leadership positions.

Correlation analyses reveal that the presence of a mentor was positively and significantly ($r = .15, p < .05$) related with their leadership aspirations. This suggests that if a woman had a mentor, then it was more likely that she would express an interest in future leadership positions.

There was not a significant relationship among socially desirable responding, participant's age, or mother's education level to African American women's leadership aspirations.

Table 4.2

Correlations Among Leadership Aspirations and Variables of Interest

	1	2	3	4	5	6	7	8	9
1. Leadership Aspirations	-	.37**	.17*	-.11	.03	.16*	.06	.15*	.12
2. General Self-efficacy		-	.10	-.29**	.16*	.15*	.02	.14*	.16*
3. Connectedness Needs			-	.05	-.14*	.02	.02	.12	.16*
4. Socially Desirable Responding				-	-.34**	.12	.14	.06	.13
5. Participant Age					-	.11	-.18*	-.11	-.19**
6. Participant Education Level						-	.16*	.14	.10
7. Mother's Education level							-	.09	.11
8. Presence of a Mentor								-	.85**
9. Mentor Race and Gender									-

Mediator Variable. Results from the correlation matrix revealed that leadership aspirations ($r = .37$), socially desirable responding ($r = -.29$), participant's age ($r = .16$),

participant's education level ($r = .15$), presence of a mentor ($r = .14$), and mentor's race and gender ($r = .16$) were significantly related to the mediator, general self-efficacy. However, participant's age, participant's education level, presence of a mentor, and mentor's race and gender accounted for little of the variance ($p < .05$). Connectedness needs and mother's education level were not found to be significantly related to general self-efficacy level.

Results for Research Question One

The first research question was: To what extent does the mentor's race and gender influence the leadership aspirations of African American women? Correlation analyses were conducted among presence of a mentor and mentor's race and gender to examine their relationship to African American women's leadership aspirations. Correlation analyses indicated that presence of a mentor was positively and significantly ($r = .15, p < .05$) related with their leadership aspirations. This suggests that if a woman had a mentor, the greater the likelihood that she would express an interest in future leadership positions. Correlation analyses indicated that similarity to the mentor's race and gender was not significantly related to their leadership aspirations. This suggests that similarity in race and gender between the mentor and the protégé does not influence African American women's leadership aspirations.

Results for Research Question Two

The second research question was: What are the direct and indirect effects of participant's age, mother's education level, participant's education level, presence of a mentor, connectedness needs, and general self-efficacy level on the leadership aspirations of African American women? Regression analyses were conducted to identify the direct

effect of the independent variables on the dependent variable, leadership aspirations.

Tables 4.3 and 4.4 summarize the results of the multiple hierarchical regression analyses in testing general self-efficacy as a mediator of leadership aspirations. Multiple hierarchical regression procedures were utilized to test the mediation of general self-efficacy level on African American women's leadership aspirations as outlined by Baron and Kenny (1986). The procedures are summarized below.

Baron and Kenny (1986) stated that to establish mediation, four statistical criteria completed in three steps must be met. The first step examined whether the independent variables (e.g., participant's age, participant's education level, mother's education level, presence of a mentor, connectedness needs and socially desirable responding) significantly predicted the mediator (e.g., general self-efficacy) to meet the first criterion. The second step examined whether the independent variables significantly predicted the dependent variable (e.g., leadership aspirations) to meet the second criterion. In the third criterion, the mediator must significantly predict the dependent variable. In the final step, the relationship between the independent variables and dependent variable is re-examined while controlling for the mediator. The relationship between the independent variables and dependent variable must be nonsignificant or reduced and the mediator must significantly predict the dependent variable to meet the final criterion.

Independent Variables to the Mediator. Preliminary correlational analyses demonstrated that participant's age, participant's education level, presence of a mentor, and socially desirable responding were significantly related with general self-efficacy. The independent variables participant's age, participant's education level, mother's education level, presence of a mentor, connectedness needs, and socially desirable

responding were entered into the regression equation concurrently in the first step.

Results from the regression equation demonstrated that participant's education level (β=

.154, $p < .05$), presence of a mentor ($\beta = .134$, $p < .05$) and socially desirable responding

($\beta = -.301$, $p < .01$) accounted for a significant amount of the variance in predicting

general self-efficacy. However, participant's age did not remain a significant contributor

to general self-efficacy. The overall regression model in step one indicated that the

independent variables significantly predicted the mediator, general self-efficacy ($p <$

.01). This result meets the first mediation criterion.

Independent Variables to Dependent Variable. Preliminary correlational analyses

demonstrated that connectedness needs, participant's education, and presence of a mentor

were significantly related to leadership aspirations. The independent variables

participant's age, participant's education level, mother's education level, presence of a

mentor, connectedness needs, and socially desirable responding were entered into the

regression equation concurrently in the second step. Results from block one of the

regression equation demonstrated that participant's education level ($\beta = .148$, $p < .05$)

and connectedness needs ($\beta = .155$, $p < .05$) accounted for a significant amount of the

variance in predicting leadership aspirations. However, presence of a mentor did not

remain a significant contributor to leadership aspirations. The overall regression model

one indicated that the independent variables significantly predicted the dependent

variable, leadership aspirations ($R^2 = .086$, Adjusted $R^2 = .057$, $p < .008$). This result met

the second criterion for mediation analysis.

Mediator to Dependent Variable. Preliminary correlational analysis demonstrated

that general self-efficacy was significantly related to leadership aspirations. Results from

the regression analysis demonstrated that general self-efficacy ($p < .01$) significantly

predicted leadership aspirations. This result met the third criterion for mediation

analysis.

Independent Variables with the Mediator to Dependent Variable. The

independent variables were entered concurrently into the regression equation with the

addition of general self-efficacy. Results from block two of the regression equation

demonstrated that the relationship between the independent variables and leadership

aspirations is not significant when general self-efficacy is added to the equation in the

third step. General self-efficacy is the only variable that significantly ($p < .01$) predicts

leadership aspirations in the regression equation. The addition of the mediator to the

regression equation resulted in an increase in the amount of variance in the dependent

variable by the independent variables from .08 to .17. The overall model explained 17%

of the variance in African American women's leadership aspirations ($R^2 = .175$, Adjusted

$R^2 = .144$, $p < .01$). This result met the final criterion for mediation analysis.

Table 4.3

Summary of Regression Analysis Predicting General Self-efficacy

	b	β	*p*
Participants Age	990.75	.074	.320
Participants Education Level	24009.66	.154	.029*
Mother's Education Level	3518.79	.031	.652
Presence of a Mentor	38017.25	.134	.051*
Connectedness Needs	7.297	.108	.112
Socially Desirable Responding	-13928.84	-.301	.000***

Model F and (p)	5.722 (.000***)
Total R²	.153
Adjusted R²	.126
R² Change	.153

Notes: * $p < .05$. **$p < .01$. ***$p < .001$. Connectedness Needs were transformed to the second power. Leadership aspirations and General Self-efficacy were transformed to the third power.

Table 4.4

Summary of Regression Analysis in Testing for Mediation of Leadership Aspirations by General Self-efficacy

Variable	Model 1			Model 2		
	b	β	p	b	β	p
Participants Age	4.76	.011	.887	-5.64	.013	.860
Participants Education Level	747.76	.148	.043*	495.88	.098	.163
Mother's Education Level	177.78	.049	.499	140.86	.039	.574
Presence of a Mentor	109.41	.119	.096	692.58	.075	.272
Connectedness Needs	.340	.155	.029*	.263	.120	.077
Socially Desirable Responding	-213.57	-.142	.060	-67.45	-.045	.549
General Self-efficacy				.010	.323	.000***
Model F and (p)	2.980 (.008***)			22.762 (.000***)		
Total R²	.086			.175		
Adjusted R²	.057			.144		
R² Change	.086			.089		

Notes: * $p < .05$. **p< .01. ***p< .001. Connectedness Needs were transformed to the second power. Leadership aspirations and General Self-efficacy were transformed to the third power.

Chapter Five

Discussion

The objective of this study was to investigate the role of self-efficacy as a mediator of African American women's leadership aspirations. This study had two purposes: (1) to identify whether a relationship existed between mentor race and gender and African American women's leadership aspirations; and (2) to investigate whether general self-efficacy level had a greater influence than participant's age, mother's education level, participant's education level, presence of mentor, connectedness needs, and socially desirable responding on African American women's leadership aspirations. A correlation analysis was used to identify the relationship between the variables identified in the study. Hierarchical regression analysis was also used to test the role of self-efficacy as a mediator of African American women's leadership aspirations. This study involved Self-efficacy Theory (Bandura, 1986) as its theoretical basis.

Research Question One

Mentor's Race and Gender. Research question one sought to investigate the relationship between mentor's race and gender and the formation of African American women's leadership aspirations. Specifically, the following question was posed: to what extent does the mentor's race and gender influence the leadership aspirations of African American women? A correlation analysis was conducted to identify whether a significant relationship existed between the presence of a mentor and leadership aspirations. The demographic question, do you currently have a mentor (i.e. someone who usually holds a senior position and takes an active interest in developing the protégés career) was asked of each participant. A total of 93 participants responded "yes" to having a mentor. The

presence of a mentor was found to be positively and significantly correlated with African American women's leadership aspirations although it accounted for little of the variance ($r = .15$, $p < .05$). This indicates that while having a mentor is important relative to also having leadership aspirations, other factors play a major role in developing these aspirations among African American women. These include connectedness needs and participants' education level.

The influence of a mentor or role model on career development is noted throughout the social cognitive literature (see Bandura, 1986, 1997). Previous research supports having an influential mentor as one of the top success strategies affecting the career advancement of women of color in corporate management (Catalyst, 2001). The results of this study further support the belief that the presence of a mentor is significantly correlated to African American women's career development, specifically their leadership aspirations. Vicarious experience, such as mentoring, involves seeing others cope with challenging activities without negative consequences, confirming that they too will improve if they intensify and persist in their efforts (Bandura, 1986). Similarity in physical characteristics is not suggested as a necessary component of the experience. Based on the findings of this study an examination of the mentor's race and gender on the formation of leadership aspirations was conducted.

When the participant responded "yes" to having a mentor, two additional questions were presented requesting that the participants indicate the race and gender of their respective mentors. The data were coded to reflect the extent of similarity in race and gender between the mentor and the protégé. A correlation analysis was conducted to identify whether a significant relationship existed between mentor's race and gender and

leadership aspirations among the participants. More than 50% (N = 48) of participants reported their mentor as an African American female. This indicates that similarity in race and gender between the mentor and the protégé was prevalent in this sample. In this study, the relationship between mentor's race and gender and leadership aspirations among the participants was not significant statistically (r = .12, p > .05).

Researchers (Green & King, 2001; Stajkovic & Luthans, 1998) believe that the greater the similarity between the mentor and the protégé, the greater the model's influence on the observer's learning. However, only 5% of all people employed in management, professional, and related occupations are African American women. Due to the low number of African American women in senior positions, the possibility of similarity between mentor and protégé in both race and gender is small. One explanation for this finding is that race or ethnicity is only one dimension of similarity between model and observer that may influence African American women's career development (Hackett & Byars, 1996). Additional factors such as gender role traits and fear of negative evaluation (Boatwright & Egidio, 2003) may offer explanatory power as well.

The other possibility of women selecting men as models of successful performance accomplishments has been noted (Catalyst, 2001; Hackett & Betz, 1981; Hackett & Byars, 1996). Indeed, 32% (N = 30) of the respondents identified mentors of the male gender. This finding is similar to the results reported by Catalyst (2001) in which 31% of African American female participants' identified a White male mentor. More importantly, the results support Hackett and Betz's (1981) belief that women may select men as models of successful performance accomplishment. Therefore, the experience of seeing a mentor successfully execute the behavior to produce the outcome

is more significant for African American women's career development than the mentor's race or gender.

Research Question Two

Research question two sought to identify the direct and indirect effect of participants' age, mother's education level, participant's education level, presence of a mentor, connectedness needs, and general self-efficacy on leadership aspirations while controlling for socially desirable responding. The following question was posed: What are the direct and indirect effects of participant's age, mother's education level, participant's education level, presence of a mentor, connectedness needs, and general self-efficacy level on the leadership aspirations of African American women?

Direct Effects. A correlation analyses was conducted to identify whether a significant relationship existed among the independent variables (participant's age, participant's education level, mother's education level, presence of a mentor, connectedness needs, and socially desirable responding) and the dependent variable, leadership aspirations. Positive and significant relationships were identified for participants' education level, connectedness needs, and presence of a mentor. There was not a significant relationship among socially desirable responding, participants' age, or mother's education level to African American women's leadership aspirations. Further, the direct effect of general self-efficacy on leadership aspirations was not the focus of this study. It was assumed that the indirect effect of self-efficacy beliefs would have a stronger influence on participant's leadership aspirations.

For the variable connectedness needs, the results indicate that African American women value and need meaningful relational ties with others to pursue their leadership

aspirations. The results of this study confirm Richie et al.'s (1997) assertion that a

relational orientation that focuses on interconnectedness with others is a key element of

African American women's career development. The authors reported that professional

and personal lives are interconnected making career decisions become life decisions for

high-achieving women. A sense of connection to others may be critical in reducing

African American women's physiological arousal (source of self-efficacy information)

brought on by stress and anxiety in the workplace. A gap exists in the literature for a

theoretical explanation for this finding.

The results also indicate that the higher the participant's education level, the

greater the likelihood that she would express an interest in leadership positions. Murrell,

Frieze, and Frost (1991) reported that African American college women were more likely

to plan careers in male-dominated professions and more education than the minimum

necessary for the career desired. The authors concluded that African American women

aspire to careers with higher levels of prestige, status, and salary more often than their

White counterparts. Therefore, African American women with high education levels

often have high leadership aspirations.

For the variable presence of a mentor, the results indicate that African American

women with a mentor had higher leadership aspirations than those without a mentor.

This finding is consistent with the Catalyst (2001) study that identified having an

influential mentor or sponsor as one of the top success strategies affecting the career

advancement of African American women in corporate management. Self-efficacy

theory acknowledges that human behavior can be learned vicariously through seeing

others, such as a mentor, cope with challenging activities. Hence, African American

women benefit from having a mentor when it comes to developing leadership aspirations.

Indirect Effects. Multiple hierarchical regression procedures were utilized to test the role of general self-efficacy as a mediator of African American women's leadership aspirations. Preliminary correlation analysis indicated that mother's education level was not significantly correlated to general self-efficacy or leadership aspirations. However, mother's education level remained in the regression analysis to assess its contribution to the variance in the overall regression analysis. Four statistical criteria were completed in three steps to establish mediation.

Independent Variables to the Mediator. All independent variables (participant's age, participant's education level, mother's education level, presence of mentor, connectedness needs, and socially desirable responding) were concurrently entered into the regression equation in step one. Results from the first step of the regression analysis demonstrated that participants' education level (β= .154, p < .05), presence of a mentor (β = .134, p < .05) and socially desirable responding (β = -.301, p < .01) accounted for a significant amount of the variance in predicting general self-efficacy. The overall regression model significantly predicted general self-efficacy level (R^2 = .15, ΔR^2 = .13, p < .01) of African American women.

Sherer et al. (1982) asserted that individuals might generalize past experiences of success and failure in one area to new situations within vocational areas. The tendency will be to attribute that success to skill rather than chance. Further, Bandura (1982) stated that successful past performance accomplishments produce the highest, strongest, and most generalized increases in coping efficacy. Participant's education level was a source of successful performance accomplishment for African American women.

Therefore, the success an African American woman attributes to her education level is a source of self-efficacy information. African American women should seek additional education or professional development opportunities to increase their self-efficacy level.

Based on the results for this study, the presence of a mentor contributes to the development of African American women's general self-efficacy level. Mentors provide opportunities for protégés to observe the mentor persist in the face of obstacles providing a model for their future behavior. As a result the presence of a mentor allows African American women to observe the mentor cope with challenging activities confirming that they too will improve if they intensify and persist in their efforts (Bandura, 1986). In addition, African American women are more likely to learn relevant leadership skills if they are exposed to a variety of developmental experiences on the job, with superiors and peers as coaches and mentors (Yukl, 1994). Hence, the presence of a mentor is a significant contributor to the general self-efficacy development of African American women.

The Marlowe-Crowne Scale (Crowne & Marlowe, 1960) was used in this study to measure socially desirable responding, particularly impression management. According to Paulhus (1991), "impression management refers to subjects tailoring their answers to create the most positive social image" (p. 21). Bandura (1997) stated that people's beliefs about their personal efficacy contribute to their self-knowledge. For this sample, socially desirable responding was a significant but negative (β = -.301, p < .01) contributor to the variance of general self-efficacy (i.e., low socially desirable responding was predictive of strong general self-efficacy). Impression management implies that individuals may misrepresent themselves only to avoid social disapproval (Crowne,

1979). In this study, African American women with strong self-efficacy beliefs were less likely to respond in a manner to receive social approval. Based on the findings of this study, it may be implied that African American women attribute their success to skill as opposed to approval from others.

Participants' education level and presence of a mentor were significant predictors of general self-efficacy. When performance accomplishments such as educational attainment are lacking, African American women have lower self-efficacy beliefs. Without this personal mastery experience, African American women cannot generalize past success to skill. In addition, the lack of a mentor prevents African American women from learning skills and/or coping behaviors relevant to the development of strong self-efficacy. As a result, African American women with weak self-efficacy beliefs may present false images of themselves to gain approval in the workplace. This would indicate a need to develop self-efficacy beliefs of African American women through further education and/or mentoring opportunities.

Independent Variables to Dependent Variable. All independent variables (participant's age, mother's education level, participant's education level, presence of mentor, connectedness needs, and socially desirable responding) were concurrently entered into the regression equation in step two. Results from the second step of the regression analysis demonstrated that participant's education level (β = .148, p < .05) and connectedness needs (β = .155, p < .05) accounted for a significant amount of the variance in predicting leadership aspirations. The overall regression model accounted for 9% of the variance in leadership aspirations (R^2 = .09, ΔR^2 = .06, p < .01).

In the current study, the demographic variable participant's education level was a

significant contributor to the variance in predicting participants' leadership aspirations. This finding supports previous research that found African American women who maintain high educational goals aspire to careers in male-dominated professions with high levels of prestige and status (Murrell, Frieze, & Frost, 1991). African American women with high education levels were not deliberately sought out for this study. It is likely that the participants in this sample aspire to leadership positions due to their educational achievements.

In step two of the regression analysis connectedness needs was a positive and significant contributor to the variance in predicting participants' leadership aspirations. Similar findings were reported by Boatwright and Egidio (2003), Richie et al. (1997), and Pearson and Bieschke (2001). Boatwright and Egidio's (2003) research revealed connectedness needs as the most important influence on college women's leadership aspirations. Richie et al. (1997) found a sense of interconnectedness to be an overall theme present throughout their emergent theoretical model of high achieving women's career development. Pearson and Bieschke (2001) also found the influence of connection to others to be prevalent in professional African American women's career development. African American women value and need meaningful relational ties with others to enliven their leadership aspirations. African American women's connectedness needs were not significantly related to their general self-efficacy level. Further research is needed to identify possible theoretical explanations for the relationship between connectedness needs and leadership aspirations.

Independent Variables with the Mediator to Dependent Variable. All independent variables were entered into the regression equation concurrently with the

addition of general self-efficacy in the final step. Results from the final step of the

regression analysis demonstrated that general self-efficacy (β = .32, p < .01) accounted

for a significant amount of the variance in predicting leadership aspirations. The overall

regression model accounted for 18% of the variance in leadership aspirations (R^2 = .18,

ΔR^2 = .09, p < .01).

Hackett and Betz (1981) proposed self-efficacy expectations (Bandura, 1977) as

having particular relevance to the understanding and explanatory power of women's

career development. The results of the present study support general self-efficacy as a

mediator of participants' leadership aspirations above contextual, socialization and

learning experiences such as participant's education level and presence of a mentor.

Clearly, self-efficacy experiences based on age, educational achievements, and mentoring

facilitate understanding of African American women's leadership aspirations. The

results of this study indicate that past self-efficacy experiences mediate African American

women's intention to pursue promotions, manage and train others, and be recognized as a

leader in one's field.

Implications for Practice

Counseling. African American women's general self-efficacy level is

significantly related to participant's age, participant's education level, presence of a

mentor, and mentor's race and gender. Further, strong self-efficacy significantly predicts

whether an African American woman intends to pursue her leadership aspirations. In this

study, general self-efficacy was defined as the ability to take past experiences and

generalize the experiences into new areas specifically vocational areas. Career

counselors can help African American women build their self-efficacy in pursuit of

career goals through the following:

1. Discussion of clients' past experience with mentoring relationships.

   Mentoring relationships provide an African American woman with a source of

   self-efficacy information when she sees others cope with difficult experiences.

   If the client has had experience with a mentor, discuss how the mentor's

   approach (what mentor would try) versus avoidance (things mentor would not

   try) behavior influenced the client's perceived self-efficacy. For example,

   client's observation of her mentor managing difficult task could be

   generalized to her own experiences. Details about the mentor's behavioral

   characteristics during difficult experiences based on the situation and/or

   person(s) involved should be explored to assist the client with identifying

   strategies that may work well for her. If the client has not had experience with

   a mentor, discuss ways to identify a mentor in her organization. Be careful

   not to assume that similarity in race and/or gender is a necessary element for

   mentor selection. Although similarity in race and/or gender is related to the

   African American women's development of self-efficacy, it is not related to

   her career development.

2. Discussion of clients' experience in achieving her educational goals.

   Personal mastery experiences, such as educational achievements, provide an

   African American woman with a source of self-efficacy information.

   Reflection on the educational achievement can provide the client with the

   belief that she can successfully perform the behaviors required in career areas.

   For example, African American women's educational experiences may have

contained negative incidents such as racism and/or sexism. However, achieving her educational goals in the face of negative incidents is evidence of her ability to persist in the face of obstacles. Career counselors can assist African American female clients to recognize coping behaviors from her educational experiences that can generalize to career areas.

3. Administration of the General Self-efficacy Subscale, if appropriate. Clients' results on the General Self-efficacy Scale will help the counselor identify the strength of the client's self-efficacy level. For example, self-efficacy is influenced by mastery, modeling, and persuasion (Gist, 1987). These experiences must be directly experienced and/or observed by the client. Discuss of experiences such as overcoming obstacles, achieving goals, or managing tasks can help develop and sustain the client's self-efficacy beliefs. The development of strong self-efficacy beliefs can help the client effectively utilize her abilities' to develop her talents and abilities for future career opportunities (Betz & Hackett, 1981).

4. Administration of the Connectedness Needs Scale, if appropriate. Both presence of a mentor (professional) and connectedness needs (personal) influence African American women's career development. By using the Connectedness Needs Scale, the career counselor can differentiate how the presence of a mentor and connectedness needs are necessary elements for the client's career advancement. For example, the counselor can assist the client to integrate personal and professional support networks as she faces challenges in pursuit of career advancement. The counselor and client can

discuss ways to (a) utilize existing personal relationships to enliven her career aspirations and (b) develop meaningful professional relationships in the workplace to achieve career goals.

Leadership Development. Authors (Gist, 1987; Malone, 2001; Pittenger & Heimann, 2000; Stajkovic & Luthans, 1998) have identified the influence of self-efficacy in human resource development and organizational development practice. Specifically, Gist (1987) suggests self-perceived competencies could be useful in prescribing leadership training. The findings for this sample confirmed African American women's beliefs of personal efficacy affect their aspirations to leadership (Bandura, 1997). Below are suggestions for leadership development professionals to provide developmental experiences to build African American women's self-efficacy and enliven their leadership aspirations.

First, leadership development professionals should provide socialization experiences for African American women facilitated by African American women in a senior position. The results of this study indicated African American women's self-efficacy was influenced by similarity in race and gender to someone who holds a senior position. Further, strong self-efficacy beliefs enliven leadership aspirations. The experience of seeing another African American woman achieve positive outcomes in her career advancement is critical to the development of an African American women's belief in her talent and abilities. For example, provide formal and informal professional development opportunities with African American women in senior positions. The opportunity to observe and network can facilitate the development of African American women's self-efficacy and enliven her intention to pursue promotions.

Second, leadership development professionals should provide African American women with formal one on one mentoring experiences. In this study, presence of a mentor was significantly related to African American women's leadership aspirations. More importantly, similarity in race and gender to the mentor was not significantly related to their leadership aspirations. Mentoring relationships provide African American women with the opportunity to develop both the skills and behaviors for effective leadership in the organization by seeing the mentor cope with challenging experiences. The mentoring relationship can serve to enliven African American women's desire to obtain promotions for managing and training others.

Finally, leadership development professionals should develop leadership development programs that provide shared experiences with others. The results for this study indicate that African American women value and need meaningful relational ties with others to pursue their leadership aspirations. The impact of a connection to others to manage difficulties encountered in the program can help African American women to persist and succeed in career experiences. For example, construct group based leadership development programs with other women to facilitate a connection to others. A sense of connection to others is critical in reducing stress and anxiety. African American women can sustain relationships with group members as she makes career advancements to leadership roles.

Recommendations for Future Research

The current study investigated self-efficacy and the career development of African American women. The specific goal of this study was to identify the role of self-efficacy as a mediator of African American women's leadership aspirations. Various

contextual, socialization, and learning experiences were assessed in this study. Participant's age, education level, presence of a mentor, and mentor's race and gender were significantly correlated to African American women's general self-efficacy. However, only participants' education level and presence of a mentor remained significant predictors of their general self-efficacy. Participant's education level, connectedness needs, presence of a mentor, and general self-efficacy level were significantly related to African American women's leadership aspirations. Presence of a mentor did not remain a significant predictor of their leadership aspirations. More importantly, general self-efficacy level was identified as a mediator of African American women's leadership aspirations above all other variables. Based on these findings, the following recommendations for future research and practice are presented.

When the independent variables were entered concurrently into the regression equation, the overall model of each regression equation accounted for a significant amount of the variance in the mediator and the dependent variable. Yet, each of the independent variables did not significantly predict the mediator and/or the dependent variable. This observation does not rule out the possibility that independent variables if entered individually may account for a significant amount of the variance in the mediator and/or the dependent variable. One suggestion for future research is to conduct a hierarchical regression analysis to account for the influence of each variable individually as a predictor of African American women's general self-efficacy and/or leadership aspirations.

General self-efficacy level was identified as a mediator of African American women's leadership aspirations. Bandura (1986) defined perceived self-efficacy as task-

specific, while Sherer et al. (1982) conceptualized the generality of self-efficacy within vocational and social areas apart from a specific task. Woodruff and Cashman (1993) identified a strong relationship between the Self-efficacy Scale (Sherer et al., 1982) and task-specific self-efficacy scale. A direct relationship between general self-efficacy and African American women's leadership behaviors was not assessed. Suggestions for future research include an examination of the direct relationship between African American women's career self-efficacy and the task-specific behaviors of leadership.

The influence of years of experience in occupation was reported by participants as a demographic variable; it was not included in the data analysis. Singer (1991) identified differences in self-efficacy to leadership aspirations based on female participants' years of experience. Future studies should examine the differences in years of experience and African American women's general self-efficacy as these affect the formation of their leadership aspirations.

Based on this sample, strong general self-efficacy mediates African American women's leadership aspirations. It is possible for an individual to have strong self-efficacy beliefs and negative outcome expectations. Social Cognitive Career Theory (SCCT; Lent et al., 1994) asserts that self-efficacy beliefs interact with outcome expectations and personal goals on career behaviors. Lent and Brown (1994) postulated that choice behavior may be influenced directly by self-efficacy and outcome expectations. Researchers may want to focus on the interaction of self-efficacy beliefs, outcome expectations and personal goals on the career behavior of African American women utilizing Social Cognitive Career Theory.

The presence of a mentor was a significant predictor of African American

women's self-efficacy. The influence of a mentor or model on career development is noted throughout the social cognitive literature, particularly when the model is similar to the observer. Similarity in physical characteristics is not suggested as a necessary component of the mentoring experience. Although 52% of the participants' identified an African American woman as a mentor, it is unclear whether similarity in physical characteristics (i.e. race and gender) to the mentor was a significant predictor of African American women's self-efficacy. Suggestions for future research include an investigation of similarity in physical characteristics to the mentor to African American women's self-efficacy.

Researchers (e.g., Hackett & Byars, 1996; Richie et al., 1997) have noted that mother's may serve as an inspirational role model for their daughters. Hackett and Byars (1996) asserted that mother's education level most likely influences self-efficacy level of African American women. The results of this study did not support their assertion. However, the presence of a mentor or model did influence African American women's self-efficacy. Further, more than 52% of the participants identified an African American woman as a mentor. The possibility exists that the African American female mentor reported in this study was the participant's mother. Future researchers of African American women's career development may want to examine the influence of the mother as a mentor.

Limitations

This study identified the influence of self-efficacy as a mediator of African American women's leadership aspirations. There were limitations identified in this study. First, the design of the study limits generalizability of the findings as random

sampling was not utilized. National organizations for African Americans and African American women were identified (a) to disseminate the study email invitation and (b) to increase the range of African American women represented in the sample. Further, word of mouth via email and/or internet communication served as a means of disseminating the study invitation. There is a concern that participation was limited only to African American women with access to the Internet and/or a computer. The influence of the leadership aspirations of African American women across all education levels may not be accounted for in the data.

Second, the results of this study support the view that the presence of a mentor is significantly correlated to African American women's career development, specifically their leadership aspirations. Although 52% of the participants' identified an African American woman as a mentor, similarity in physical characteristics (i.e. race and gender) to the mentor was not significant to participant's leadership aspirations. This result supports Hackett and Betz's (1981) assertion that women may select men as mentors. This presents the possibility that father's education level or even presence of a father in the home may have influenced participant's selection of a mentor.

Third, researchers (e.g., Hackett & Byars, 1996; Richie et al., 1997) have noted that mother's may serve as an inspirational role model for their daughters. However, participants were not asked whether the African American female mentor was their mother. The possibility exists that the presence of an African American female mentor reported in this study was the participant's mother.

Fourth, researchers identified significant relationships among general self-efficacy and masculine traits (Choi, 2003; Sherer & Adams, 1983) as well as gender role

socialization (Betz & Hackett, 1981). Based on previous findings (Harris, 1994; Pearson & Bieschke, 2001), it was assumed that African American women had an androgynous gender role orientation. This study did not support the existence of a significant relationship between general self-efficacy level and gender role socialization for African American women. Further, there is concern whether differences in participant's gender role socialization could account for differences in leadership aspirations.

Fourth, Bandura (1999) conceptualized self-efficacy as task specific, while Sherer et al. (1982) conceptualized the generality of self-efficacy within vocational areas apart from a specific task. There is a positive relationship between self-efficacy and behavior (Bandura, 1978). A direct relationship between self-efficacy and the task-specific behaviors of leadership was not assessed in this study.

Finally, no therapeutic treatment was administered or measured in this study. The results of this study indicate statistical significance for the variables measured; however, there is a question of clinical significance of the findings. Clinical professionals should use caution when using the results of this study in practice.

References

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84,* 2, 191-215.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37,* 2, 122-147.

Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory*. Upper Saddle River, New Jersey: Prentice Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: W.H. Freeman and Company.

Bandura, A., & Adams, N. E. (1977). Analysis of self-efficacy theory of behavioral change. *Cognitive Therapy and Research, 1,* 4, 1, 287-310.

Baron, R.M. & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.

Bem, S.L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology, 42,* 2, 155-162.

Betz, N. E. (1994). Self-concept theory in career development and counseling. *The Career Development Quarterly, 43,* 1, 32-43.

Betz, N. E. (2000). Self-efficacy theory as a basis for career assessment. *Journal of Career Assessment, 8,* 3, 205-222.

Betz, N. E., & Hackett, G. (1981). The relationship of career-related self-efficacy

    expectations to perceived career options in college women and men. *Journal of*

    Counseling Psychology, 28, 5, 399-410.

Betz, N.E. & Voyten, K.K. (1997). Efficacy and outcome expectations influence career

    exploration and decidedness. *The Career Development Quarterly, 46,* 2, 179-189.

Boatwright, K.J. & Egidio, R.K. (2003). Psychological predictors of college women's

    leadership aspirations. *Journal of College Student Development, 44*, 5, 653-669.

Catalyst. (2001). Women of color in corporate management: Three years later. Retrieved

    September 2, 2006 from the Catalyst Organization Website:

    http://www.catalyst.org/knowledge/titles/title.php?page=woc_corpmngt3yrs_01.

Choi, N. (2003). Further examination of the Self-efficacy Scale. *Psychological Reports,*

    92, 473-480.

Crowne, D. P. & Marlowe, D. (1960). A new scale of social desirability independent of

    psychopathology. *Journal of Consulting Psychology, 24*, 349-354.

Crowne, D.P. (1979). *The experimental study of personality*. Hillsdale, NJ: Erlbaum.

Evans, K.M. & Herr, E.L. (1991). The influence of racism and sexism in the career

    development of African American women. *Journal of Multicultural Counseling &*

    Development, 19, 3, 130-135.

Evans, K.M. & Herr, E.L. (1994). The influence of racial identity and the perception of

    discrimination on the career aspirations of African American men and women.

    Journal of Vocational Behavior, 44, 173-184.

Gall, J.P., Gall, M.D., & Borg, W.R. (2005). *Applying educational research: A practical*

    guide. Boston: Pearson/Allyn & Bacon.

Gibson, S.K. (2004). Being mentored: The experience of women faculty. *Journal of Career Development, 30,* 3, 173-188.

Gist, M. (1987). Self-efficacy: Implications for organizational behavior and human resource management. *Academy of Management Review, 12,* 3, 472-485.

Gist, M. & Mitchell, T.R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management, 17,* 2, 183-211.

Gray, M.P. & O'Brien, K.M. (in press). Advancing the assessment of women's career choices: The Career Aspiration Scale. *Journal of Career Assessment.*

Green, S. B. (1991). How many subjects does it take to do a regression analysis? *Multivariate Behavioral Research, 26,* 499-510.

Green, C.E. & King, V.G. (2001). Sisters mentoring sisters: Afrocentric leadership development for Black women in the academy. *Journal of Negro Education, 70,* 3, 156-165.

Hackett, G., & Betz, N. E. (1981). A self-efficacy approach to the career development of women. *Journal of Vocational Behavior, 18,* 326-339.

Hackett, G., & Betz, N. E. (1995). Self-efficacy and career choice and development. In *Self-Efficacy, Adaptation, and Adjustment: Theory, Research, and Application* (pp. 249-280). New York: Plenum Press.

Hackett, G., & Byars, N. (1996). Social cognitive theory and the career development of African American women. *Career Development Quarterly, 44,* 4, 322-340.

Harris, A.C. (1994). Ethnicity as a determinant of sex role identity: A replication study of item selection for the Bem Sex-role Inventory. *Sex Roles, 31,* 3/4, 241-273.

Kreuzer, B.K. (1992). Women and leadership: The effect of gender, gender role orientation, socioeconomic status, and parental influence on women's aspirations to leader roles. (Doctoral dissertation. Western Michigan University). Dissertation Abstracts International, 53, 4495.

Lent, R.W. & Brown, S.D. (1996). Social cognitive approach to career development: An overview. *Career Development Quarterly, 44,* 4, 310-321.

Lent, R.W., Brown, S.D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior, 45,* 79-122.

Lindley, L.D. (2005). Perceived barriers to career development in the context of social cognitive career theory. *Journal of Career Assessment, 13*, 3, 271-287.

Luzzo, D.A. & McWhirter, E.H. (2001). Sex and ethnic differences in the perception of educational and career-related barriers and level of coping efficacy. *Journal of Counseling and Development, 79,* 1, 61-67.

Malone, J.W. (2001). Shining a new light on organizational change: Improving self-efficacy through coaching. *Organization Development Journal, 19*, 27-36.

Murrell, A.J., Frieze, I.H., & Frost, J.L. (1991). Aspiring to careers in male and female-dominated professions: A study of Black and White college women. *Psychology of Women Quarterly, 15,* 103-126.

Niles, S.G. & Harris-Bowlsbey, J. (2005). Understanding and applying emerging theories of career development. In *Career Development Interventions in the 21st Century* (2nd ed., pp. 85-116). Upper Saddle River, NJ: Prentice Hall.

Niles, S.G. & Sowa, C.J. (1992). Mapping the nomological network of career self-efficacy. *Career Development Quarterly, 41,* 1, 13-21.

O'Brien, K.M. (1996). The influence of psychological separation and parental attachment on the career development of adolescent women. *Journal of Vocational Behavior, 48,* 257-274.

Paulhus, D.L. (1991). Measurement and Control of Response Bias. In *Measures of Personality and Social Psychological Attitudes* (1st ed., pp. 17-59). San Diego: Academic Press.

Paulsen, A.M. & Betz, N.E. (2004). Basic confidence predictors of career decision-making self-efficacy. *The Career Development Quarterly, 52*, 4, 354-362.

Pearson, S.M. & Bieschke, K.J. (2001). Succeeding against the odds: A examination of familial influences on the career development of professional African American women. *Journal of Counseling Psychology, 48,* 3, 301-309.

Pittenger, K.K.S., & Heimann, B.A. (2000). Building effective mentoring relationships. *Review of Business, 21*, 38-42.

Reynolds, W.M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology, 38*, 1, 119-125.

Richie, B.S., Fassinger, R.E., Linn-Geschmay, S., Johnson, J., Prosser, J., & Robinson, S. (1997). Persistence, connection, and passion: A qualitative study of the career development of highly achieving African American-Black and White women. *Journal of Counseling Psychology, 44,* 2, 133-148.

Rosenberg, M. (1965). *Society and the adolescent self-image.* Princeton, N.J.: Princeton

    University Press.

Sherer, M. & Adams, C.H. (1983). Construct validation of the Self-efficacy Scale.

    Psychological Reports, 53, 899-902.

Sherer, M., Maddux, J.E., Mercandante, B., Prentice-Dunn, S., Jacobs, B., & Rogers,

    R.W. (1982). The Self-efficacy Scale: Construction and validation. *Psychological*

    Reports, 51, 663-671.

Singer, M. (1990). Cognitive correlates of adolescents' aspirations to leadership: A

    developmental study. *Journal of Adolescence, 13*, 2, 143-155.

Singer, M. (1991). The relationship between employee sex, length of service and

    leadership aspirations: A study from valence, self-efficcy and attribution

    perspectives. *Applied Psychology: An International Review, 40*, 417-436.

Stajkovic, A. D., & Luthans, F. (1998). Self-efficacy and work-related performance: A

    meta-analysis. *Psychological Bulletin, 124,* 2, 240-261.

Tabachnick, B.G., & Fidell, L.S. (2001). Using multivariate statistics. (4th ed.). Boston:

    Allyn & Bacon.

U.S. Department of Labor, Bureau of Labor Statistics. (2005, May). *Women in the labor*

    force: A databook. Retrieved September 26, 2006, from Bureau of Labor

    Statistics website: http://www.bls.gov/cps/wlf-table3-2005.pdf.

van Knippenberg, D., van Knippenberg, B., De Cremer, D., & Hogg, M. A. (2004).

    Leadership, self, and identity: A review and research agenda. *The Leadership*

    Quarterly, 15, 825-856.

Watson, D. & Friend, R. (1969). Measurement of social-evaluative anxiety. *Journal of*

Consulting and Clinical Psychology, 33, 448-457.

Welch, N.C. (1997). The development and validation of a scale measuring the construct

of connectedness. (Doctoral dissertation, University of Texas at Austin).

Dissertation Abstracts, 59, 0085.

Woodruff, S.L. & Cashman, J.F. (1993). Task, domain, and general efficacy: A

reexamination of the Self-efficacy Scale. *Psychological Reports, 72,* 423-432.

Appendix A

National Organizations for African Americans and African American women

National Coalition of 100 Black Women

National Black Women's Network

National Black MBA Association

National Association of Negro Business and Professional Women's Clubs

National Council of Negro Women

National Association of Black Accountants

BlackLiving – International Black Women's Network

Sigma Gamma Rho Sorority Inc.

Alpha Kappa Alpha Sorority Inc

Delta Sigma Theta Sorority Inc

Zeta Phi Beta Sorority Inc.

Appendix B

Announcement of Research (email)

Hello,

My name is Tristana Harvey and I am a doctoral student in the Counselor Education and Supervision program at Penn State University. You have received this email because you are subscribed to the listserv of a national organization for African Americans and/or African American women.

I am seeking research volunteers for my study on African American women's career development. The objective of this study is to explore factors that influence the leadership aspirations of African American women. By participating in this study, you will:

a. Help inform career development and human resources professionals how to design programs for the career advancement of African American women to leadership roles.

b. Provide information regarding whether similarity of race and gender between the mentor and the protégé influences leadership aspirations.

c. Help an African American woman complete her goal to complete her PhD degree.

If you are interested in participating in the study, please follow this link (PsychData link here). The password to enter the survey is ***harveyncc***. You must use this password to enter the study. If you know of someone else who might want to participate, please forward this email to them.

Thank you for your time and consideration.

Sincerely,
Tristana Harvey, ABD, M.A., NCC, LPC
Doctoral Candidate, Counselor Education and Supervision
The Pennsylvania State University
Email: trh10@psu.edu
Phone: 814-404-4409

Supervised by:
Dr. Spencer Niles, Professor & Department Head
Department of Counselor Education, Counseling Psychology,
& Rehabilitation Counseling
The Pennsylvania State University
327 Cedar Building
University Park, PA 16802
814-863-2412

Appendix C

Letter to Participate (PsychData Intro Page)

Dear Prospective Participant,

My name is Tristana Harvey and I am a doctoral student at Pennsylvania State University in the Counselor Education and Supervision Program. As an African American woman and a doctoral student, I have struggled with whether to pursue leadership roles for career advancement in organizations. I am excited to conduct this research to inform professionals involved in the development of leadership programs how to meet the career development needs of African American women.

If you are an African American women, 18 years of age or older, and working a minimum 35 hours per week in paid employment for the last year (12 calendar months), you are eligible to participate in this study. The survey will take approximately 30 minutes. The survey contains four brief questionnaires. No identifying information is requested therefore your responses are anonymous.

By completing this study, you will: (1) add to the body of knowledge about the career development needs of African American women, (2) inform career development and human resources professionals about the leadership development needs of African American women, and (3) help an African American women meet one of her goals to complete her PhD degree.

Upon completion of my dissertation, an executive summary of the findings will be posted to my personal website (www.personal.psu.edu/trh10/AAWLDStudy) for a period of six months beginning March 2007. This summary will provide details related to the findings of the study as well as recommendations for career development and human resources professionals for the enhancement of African American women's leadership development.

If you have any questions, please feel free to contact me via email at trh10@psu.edu.

Thank you in advance for your time.

Sincerely,
Tristana Harvey, M.A., NCC, LPC
Doctoral Candidate, Counselor Education
The Pennsylvania State University

Appendix D

Implied Informed Consent for Social Science Research

IMPLIED INFORMED CONSENT FOR SOCIAL SCIENCE RESEARCH
The Pennsylvania State University, University Park, PA

Title of Project: Professional African American Women's Career Development: The Role of Self-efficacy as a Mediator of their Leadership Aspirations.

Principal Investigator: Tristana Harvey, 327 Cedar Bldg., University Park, PA 16802, trh10@psu.edu. Supervisor: Dr. Spencer Niles, 327 Cedar Building, University Park, PA 16802, sgniles@psu.edu.

Purpose of the Study: This study will explore the influence of various factors on African American women's career development.

Criteria for eligibility: In order to participate in this study, participants must be: (a) African American woman; (b) 18 years of age or older; and (c) working a minimum of 35 hours per week in paid employment for the last year (previous 12 months).

Procedures to be followed: You will be asked to respond to a demographic questionnaire and four self-report surveys.

Discomforts and Risks: There are no risks in participating in this research beyond those experienced in everyday life. Some of the questions are personal however none should cause discomfort.

Benefits:
A.   This research will examine how the results may be used to design leadership development programs for the career advancement of professional African American women.
B.   This research will serve to increase the understanding of contextual factors on the career development and aspirations of professional African American women.
C.   This research will provide information regarding whether similarity of race and gender between the mentor and the protégé influences leadership aspirations.
D.   This research will provide important information to organizations involved in developing leadership programs for African American women of all ages.

Duration: It will take about 30 minutes to complete the survey.

Statement of Confidentiality: The survey does not ask for any information that would identify who the responses belong to. Therefore, your responses are recorded anonymously. If this research is published, no information that would identify you will be written since your name is in no way linked to your responses.

Right to Ask Questions: You can ask questions about the research. The person in charge will answer your questions. Contact Tristana Harvey by email at trh10@psu.edu. If you have questions about your rights as a research participant, contact Penn State's Office for Research Protections at (814) 865-1775.

Compensation: Participants will not receive any compensation for participation in this study. An executive summary of the research findings and recommendations will be posted to my personal website (www.personal.psu.edu/trh10/AAWLDStudy) for a six month period no later than March 2007.

Voluntary Participation: You do not have to participate in this research. You can stop your participation at any time. You do not have to answer any questions you do not want to answer.

You must be 18 years of age or older to consent to participate in this research study.

Completion of the survey implies that you have read the information in this form and consent to participate in the research.

Your confidentiality will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception of data sent via the Internet by any third parties.

Please print off this form for your records or future reference.

If you agree with these statements and consent to participate, please click on the 'Continue' button below to begin the study.

Appendix E

Demographic Questionnaire

1. What is your age?

2. What is your highest education level completed i.e. High School, Two year college, Bachelor's (B.A., B.S.), Master's (M.A., M.S., etc), Professional (PhD, J.D., M.D.)?

3. What is your occupation?

4. How long have you worked in that occupation?

5. Do you currently have a mentor (i.e. someone who usually holds a senior position and takes an active interest in developing your career)? Yes or No

6. What is the race/ethnicity of your mentor?

7. What is the gender of your mentor?

8. What is your mother's highest level of education completed i.e. High School, Two year college, Bachelor's (B.A., B.S.), Master's (M.A., M.S., etc), Professional (PhD, J.D., M.D.)?

Appendix F

Questionnaires

General Self-efficacy Subscale

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

Mark: A If you **Disagree Strongly** with the statement.
        B If you **Disagree Moderately** with the statement
        C If you **Neither Agree nor Disagree** with the statement
        D If you **Agree Moderately** with the statement
        E If you **Agree Strongly** with the statement

1. When I make plans, I am certain I can make them work.
2. One of my problems is that I cannot get down to work when I should.
3. If I can't do a job the first time, I keep trying until I can.
4. When I set important goals for myself, I rarely achieve them.
5. I give up on things before completing them.
6. I avoid facing difficulties.
7. If something looks too complicated, I will not even bother to try it.
8. When I have something unpleasant to do, I stick with it until I finish it.
9. When I decide to do something, I go right to work on it.
10. When trying to learn something new, I soon give up if I am not initially successful.
11. When unexpected problems occur, I don't handle them well.
12. I avoid trying to learn new things when they look too difficult to me.
13. Failure just makes me try harder.
14. I feel insecure about my ability to do things.
15. I am a self-reliant person.
16. I give up easily.
17. I do not seem capable of dealing with most problems that come up in my life.

O'Brien, K.M. (1996). The influence of psychological separation and parental attachment on the career development of adolescent women. *Journal of Vocational Behavior, 48*, 257-274.

Leadership Aspirations Subscale

In the space next to the statements below please circle a number from "0" (not at all true of me) to "4" (very true of me). If the statement does not apply, circle "0". Please be completely honest. Your answers are entirely confidential and will be useful only if they accurately describe you.

Not at All True of me	Slightly True of me	Moderately True of me	Quite a Bit True of me	Very True of me
0	1	2	3	4

1. I hope to become a leader in my career field. 0 1 2 3 4

2. When I am established in my career, I would like to manage other employees. 0 1 2 3 4

3. I do not plan to devote energy to getting promoted in the organization or business I am working in. 0 1 2 3 4

4. When I am established in my career, I would like to train others. 0 1 2 3 4

5. I hope to move up through any organization or business I work in. 0 1 2 3 4

6. Attaining leadership status in my career is not that important to me. 0 1 2 3 4

Welch, N.C. (1997). The development and validation of a scale measuring the construct of connectedness. (Doctoral dissertation, University of Texas at Austin). Dissertation Abstracts, 59, 0085.

The Connectedness Scale

Instructions: Please indicate the extent to which you agree or disagree with the following statements by marking the appropriate choice.

A   Strongly Disagree
B   Disagree
C   Neutral
D   Agree
E   Strongly Agree

1. I get satisfaction from feeling that I belong.
2. Trying to help friends through hard times is important to me.
3. It would be a terrible pain to lose the people closest to me.
4. My greatest satisfactions come from my relationships with other people.
5. Close relationships are what give my life meaning.
6. I feel proud if I see that I have helped someone.
7. If I do something well, it brings pride to my family.
8. A good friend will accept a person for who he/she really is.
9. My friends share their feelings with me.
10. I stick with my friends, even if it means accepting some sacrifices or putting up with some unpleasantness.
11. When I am having a conflict or problem with my family, I tend to feel upset.
12. The joys of my friends/family are my joys.
13. A gesture of affection from someone I care about can make my day.
14. Spending time with a friend tends to make me happy.
15. If I needed to talk over a problem, I would expect the people to whom I was closest to listen and be supportive.
16. If I believe I have failed a friend, I feel distressed.
17. I get satisfaction from knowing that I am part of a team.
18. If something sad were to happen, I would expect my friends to be there for me.
19. I tend to be happy when a friend gets good news.
20. If I see that a friend is down, I usually do something to try to cheer him/her up.
21. My relationships help define who I am.
22. I like to show my friends that I understand their feelings.
23. In a close friendship, you should be able to talk about anything.
24. It energizes me to reach out and help someone else.
25. If someone in my family accomplished something, I would feel proud.

26. I would be willing to sacrifice in order to help a friend in need.
27. The people who care about me will be happy for me when something good happens.
28. My sense of myself comes partly from my relationships with others.

The Marlowe-Crowne Social Desirability Scale (Short Form)
(Crowne & Marlowe, 1960)

Personal Reaction Inventory

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

1. It is sometimes hard for me to go on with my work if I am not encouraged.

2. I sometimes feel resentful when I don't get my way.

3. On a few occasions, I have give up doing something because I though too little of my ability.

4. There have been times when I felt like rebelling against people in authority even though I knew they were right.

5. No matter who I'm talking to, I'm always a good listener.

6. There have been occasions when I took advantage of someone.

7. I'm always willing to admit it when I make a mistake.

8. I sometimes try to get even rather than forgive and forget.

9. I am always courteous, even to people who are disagreeable.

10. I have never been irked when people expressed ideas very different from my own.

11. There have been times when I was quite jealous of the good fortune of others.

12. I am sometimes irritated by people who ask favors of me.

13. I have never deliberately said something that hurt someone's feelings.

VITA

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EDUCATION

Ph.D.	The Pennsylvania State University, University Park, PA	May 2007
M.A.	Governors State University, University Park, IL	August 2000
B.S.	Northern Illinois University, DeKalb, IL	December 1993

TEACHING EXPERIENCE

- Foundations of Career Development, Penn State University, Spring 2006
- Dialogues on Race, Penn State University, Spring 2005
- Diversity Issues in Counseling, Indiana University of Pennsylvania, Summer 2004
- Scholarship & Community, Penn State University, Fall 2001
- Life After College, Penn State University, Fall 2001

PROFESSIONAL MEMBERSHIPS

- Chi Sigma Iota (Initiated 2004)
- American Counseling Association
- Society for Human Resource Management
- Association for Counselor Education and Supervision
- National Career Development Association

SPECIAL AWARDS AND ACHIEVEMENTS

- 2004 Graduate Research Exhibition, The Pennsylvania State University, Third Place
- 2004 Frederick Douglas Teaching Scholar, Indiana University of Pennsylvania
- Puksar Holmes Scholar, The Pennsylvania State University, Since 2003
- Educational Opportunity Program Grant, The Pennsylvania State University, Spring 2001

RESEARCH

- Core Strengths of Positive Change Agents (Appreciative Inquiry Competency Study), Fall 2005
- Understanding Leadership Development in an International Setting, London England UK, Summer 2005
- Critical Incident Interviews with Organizational Development Practitioners, Fall 2004
- Ethnic Minority Student Expectations of the Multicultural Resource Center, Fall 2004
- Evaluation of Career Development at University of Belize, Belize, South America, Spring 2004

CERTIFICATIONS & LICENSES

- Licensed Professional Counselor, Commonwealth of Pennsylvania (Licensed since 2003)
- National Certified Counselor (Certified since 2002)

UNIVERSITY AND COMMUNITY SERVICE

- Member, Diversity and Community Enhancement Committee, Dept of Counselor Education, Counseling Psychology, and Rehabilitation Counseling, Pennsylvania State University, 2004-2006
- Member, Multicultural Music Series, Pennsylvania State University, 2001-2002