

**Leadership Styles of Minority Women Administrators in Academic Medicine: A
Quantitative Study**

Laura De La Cruz

Dissertation Submitted to the Doctoral Program
of the American College of Education
in partial fulfillment of the requirements for the degree of
Doctor of Education in Leadership
July 2022

**Leadership Styles of Minority Women Administrators in Academic Medicine: A
Quantitative Study**

Laura De La Cruz

Approved by:

Dissertation Chair: Sue Adragna, PhD

Committee Member: Wendy Kaaki, PhD

Copyright © 2022

Laura De La Cruz

Abstract

Leader development in academic medicine is lacking for women, particularly women of color. The problem is Black and Hispanic/Latinx women are underrepresented in leadership positions in academic medicine. The purpose of this quasi-experimental quantitative study was to determine if a statistically significant difference existed between the transformational, transactional, and passive/avoidant leadership styles of Black and Hispanic/Latinx women administrators in academic medicine to gain a greater understanding of the differences between their leadership styles. The study sample was 131 Black and Hispanic/Latinx women administrators in U.S. medical schools who self-identified as either Black or Hispanic/Latinx. They were recruited via professional social media contacts and volunteered to participate. The theoretical framework for the study was the full range of leadership theory. The study instrument was the Multifactor Leadership Questionnaire (MLQ) Form 5X. Data were analyzed using an independent samples t-test. The study's findings suggest a statistically significant difference between the leadership styles of Black and Hispanic/Latinx women administrators in all three leadership styles, with Hispanic/Latinx women indicating they are more transformational, transactional, and passive/avoidant than Black women. The findings also suggest sub-group differences in Hispanic/Latinx women in transformational leadership. Data results support the development of leadership programs that recognize the differences among women administrators, as well as programs that recognize the differences between minority women.

Keywords: leadership styles, transformational leadership, transactional leadership, passive/avoidant leadership, women, minority, diversity, healthcare, healthcare organizations, and healthcare leadership

Dedication

I dedicate this dissertation to all my students, two-legged and four, who never wavered in their dedication to their education and growth and inspired me to do likewise.

Acknowledgments

There are many who helped me along the way on this journey. I want to take a moment to thank them.

First, I wish to thank my dissertation committee. Without their guidance I would not have made it. Dr. Wendy Kaaki served as a wise and supportive committee member and Dr. Sue Adragna, my Chair, went above and beyond to help me reach my goal. Thank you to all the TORs who offered insight along the way. Special thanks to Dr. Harold Whitfield, the best stats coach ever.

To my friends and family: you put up with me being distracted, grouchy, and missing too many events. I am forever grateful for your patience and understanding. I hope to have time to reconnect with each of you. Huge thanks to my sister Helen for her encouragement, my best friend Joan for her support, my dear friend and colleague Hillary for her mad Word technical skills, and all my ACE classmates for their inspiration.

Table of Content

List of Tables	11
List of Figures.....	12
Chapter 1: Introduction	13
Background of the Problem	14
Statement of the Problem.....	15
Purpose of the Study.....	16
Significance of the Study.....	17
Research Questions	18
Hypotheses	19
Theoretical Framework.....	20
Definition of Terms	21
Assumptions.....	23
Scope and Delimitations	23
Limitations	24
Summary	25
Chapter 2: Literature Review	27
Theoretical Framework.....	28
Literature Review	34
Leadership and Women	34
Leadership and Academic Medicine	39
Leadership, Academic Medicine, and Women	42

Leadership, Academic Medicine, and Minority Women.....	45
Leadership Styles: Additional Theories.....	47
Leadership Instruments.....	48
Literature Review Summary	52
Chapter 3: Methodology.....	54
Research Methodology, Design, and Rationale	56
Role of the Researcher	58
Research Procedures.....	58
Population and Sample Selection.....	59
Data Instrumentation	61
Data Collection.....	62
Data Analysis	63
Reliability and Validity.....	66
Ethical Procedures.....	67
Summary	68
Chapter 4: Research Findings and Data Analysis Results	69
Data Collection.....	69
Data Analysis and Results	73
Assumption of Dependent Variable Scale of Measurement.....	73
Assumption of Two Categorical Independent Variables.....	74
No Significant Outliers.....	75
Assumption of Independence.....	75
Assumption of Normality	75

Homogeneity of Variances Assumption	83
Research Question/Hypothesis Testing	84
Research Question 1/Hypothesis 1	84
Research Question 2/Hypothesis 2	85
Research Question 3/Hypothesis 3	86
Summary	88
Chapter 5: Discussion and Conclusions	90
Findings, Interpretations, and Conclusions	91
Findings	91
Interpretations	92
Conclusions	94
Limitations	94
Recommendations	96
Recommendations for Future Research	96
Recommendation for Future Practice	97
Implications for Leadership	97
Conclusion	99
References	101
Appendix A MLQ Form 5X	117
Appendix B Participant Email	119
Appendix C American College of Education IRB Letter	120
Appendix D Introductory Letter	121

Appendix E Consent Form	122
-------------------------------	-----

Appendix F Power Analysis	124
---------------------------------	-----

List of Tables

Table

1. Current Academic Role at U.S. Medical School	71
2. Administrative Role at U.S. Medical School by Racial/Ethnic Self-Identity.....	72
3. Descriptive Statistics	73
4. Frequency Distribution of Transformational Leadership Scores	74
5. Shapiro-Wilk Test of Normality Results	76
6. Levene's Test for Equality of Variances	83
7. Group Means and T-Test Results.....	84
8. Descriptive Statistics for Mann-Whitney U Tests	87
9. Test Statistics for Mann-Whitney U Tests ^a	88
10. Hypothesis Summary and Outcomes	88

List of Figures

Figure

1. Transformational Leadership by Racial/Ethnic Self-Identity	77
2. Box and Whisker Plot Transformational Leadership by Racial/Ethnic Self-Identity	78
3. Transactional Leadership by Racial/Ethnic Self-Identity	79
4. Box and Whisker Plot Transactional Leadership by Racial/Ethnic Self-Identity	80
5. Passive/Avoidant Leadership by Racial/Ethnic Self-Identity	81
6. Box and Whisker Plot Passive/Avoidant Leadership by Racial/Ethnic Self-Identity	82

Chapter 1: Introduction

Women account for over 50% of the U.S. population and over 50% of medical school students and residents, with minority women comprising 30% of U.S. women and less than 15% of medical school students and residents (Association of American Medical Colleges, 2020).

While the number of women and minority women in medical schools increased, a corresponding increase in their representation in leadership positions has not occurred. An Association of American Medical Colleges' (AMMC) study identified 41% of medical school faculty as women; however, only 16% are deans, and 15% are department chairs (AAMC, 2020; Girod et al., 2016). Minority women are significantly underrepresented in leadership positions in academic medicine, comprising 13% of faculty women and 15% of women department chairs (AAMC, 2020).

Women, particularly minority women, have been historically absent in leadership positions in healthcare and medical schools even as their numbers increased (Madsen & Andrade, 2018). Over the past 20 years, medical school administrators have committed to increasing the number of women and minority women not only in the student classes but in administrative positions. Medical school administrators have made identifying potential leaders within underrepresented groups, such as minority women, a top priority to mentor and promote (Rochon et al., 2016). Mentoring programs need information on the leadership styles of participants to successfully offer professional development activities tailored to the participants (Brown et al., 2019).

The intent of this chapter is to provide an overview of the study and provide support for the purpose and problem. Background information on minority women in academic medicine clarifies the need described in the purpose and problem statements. The significance of the study

and its potential positive influence on academic medicine is discussed. For this study, the quasi-experimental quantitative methodology and design are explained, and research questions and corresponding hypotheses are provided. An overview of the theoretical framework supporting the research is included. A definition of terms is incorporated into the Chapter. Assumptions, limitations, and delimitations are stated and explained. The Chapter will end with a summary and overview of the subsequent Chapters.

Background of the Problem

Leadership and leadership styles have been the subject of extensive research, particularly over the past 100 years, yet no single definition or theory is accepted as fully encompassing all the nuances of leadership (By, 2021). Researchers determined a significant variety in leadership styles, personality traits, cultural characteristics, and situational influences (Abdalla et al., 2018). The differences led some theorists to hypothesize that leadership is a result of learned behaviors, while others postulated that leadership was innate. As this distinction in research theories evolved, theories, such as the full range of leadership theory, gained acceptance (Thompson & Glaso, 2018).

The full-range leadership model theory proposes that leadership is on a continuum of active/inspirational to passive leadership. The three styles, transformational, transactional, and passive/avoidant, encompass both traits and situational concepts (Abdalla et al., 2018; Bass & Avolio, 1997). Leadership theorists and researchers applied the full-range leadership model theory in multiple industries and in different demographic groups, including women. Some researchers aligned transformational leadership qualities with societal expectations of women and hypothesized it is more accepted as a leadership style for women (Silva & Mendis, 2017). In a seminal meta-analysis, Eagly et al. (2003) found that the women they studied scored higher on

transformational leadership scales than men did in their studies and others. Researchers including Burkinshaw and White (2017) and Girod et al. (2016) theorized that understanding the leadership styles of women, particularly along the full-range leadership model continuum, may guide institutions, such as universities and medical schools, to revise their professional development programs and potentially remove barriers to advancement for women.

Researchers in all industries document that women, particularly those of color, are not moving into leadership positions at expected rates (Latten & Perez, 2019). In academic medicine, minority women are underrepresented in all leadership positions, including professorship, dean, and chair positions (Kaplan et al., 2018). In a longitudinal study of medical school faculty by Carr et al. (2018) between 1995 and 2013, they determined that even after adjusting for research-based publication accomplishments, gender disparities for women continued to exist. Minority women, in particular, were not promoted or retained at the same rates as men and reached leadership positions less frequently than men did (Coe et al., 2020). Woods et al.(2018) found similar results in their research that minority women in academic medicine were not only less promoted but retained less than male counterparts.

Statement of the Problem

The problem is Black and Hispanic/Latinx women are underrepresented in leadership positions in academic medicine (Carr et al., 2018). Researchers including Abdalla et al. (2018) observed a link between an individual's leadership style and corresponding position in the organizational hierarchy, including a correlation between those in upper administration and transformational leadership. Brown et al. (2019) hypothesized that by determining the leadership styles of minority women administrators in academic medicine, these organizations would be better positioned to identify and mentor future leaders. Applying the full-range leadership model

theory in this study aligns with leadership research from the past 20 years (Abdalla et al., 2018; Antonakis et al., 2003).

Historically, medical schools in the U.S. focused their leadership development efforts on generalized training and mentoring without actually identifying or understanding the leadership characteristics of potential leaders (Coe et al., 2020). Researchers analyzed leadership characteristics, including transformational leadership, in a variety of settings and between men and women, yet few researchers have focused on the leadership styles of minorities, particularly women (Latten & Perez, 2019). Applying the dimensions of the full-range leadership model theory supported the purpose of this study because it helped the researcher fill the gap in the existing literature on minority women leaders in academic medicine (Toledo et al., 2017).

Purpose of the Study

The purpose of this quasi-experimental quantitative study was to determine if a significant difference existed between the transformational, transactional, and passive/avoidant leadership styles of Black and Hispanic/Latinx women administrators in academic medicine to gain a greater understanding of the differences between their leadership styles. Understanding the difference in leadership styles may allow organizations to tailor leadership programs to meet diverse styles. A quantitative research methodology was selected because, as Neuman (2006) purported, this research approach is appropriate when researching differences by collecting data utilizing surveys or questionnaires.

Researchers determined that questionnaires are acceptable for quantitative research given they are inexpensive and efficient, and this type of data collection has been utilized in leadership research when analyzing leadership skills (Creswell, 2009). An additional benefit of surveys and questionnaires is the ease of execution as they allow researchers to place them online and reach

more participants. Instruments such as these also provide researchers the ability to overcome limitations on time, finances, and geographic location (Neuman, 2006).

The Multifactor Leadership Questionnaire Form 5X (MLQ Form 5X) is the survey used in this quasi-experimental quantitative study. Permission from the instrument creator was obtained prior to initiating the study. Participants were Black or Hispanic/Latinx women who are administrators in a U.S. medical school. The independent variable for this study, therefore, was race/ethnicity. The race/ethnicity is a grouping variable and was measured by a demographic question on the survey (Salkind, 2010).

Dependent variables for this study are transformational, transactional, and passive/avoidant leadership styles, as defined by Bass and Avolio (1997) and measured by the MLQ Form 5X. Transformational, transactional, and passive/avoidant leadership styles were assessed with subscales for each style. The questionnaire contains 45 items and utilizes a Likert scale. While Likert scale data are typically ordinal, the data in this study were measured on a numerical scale with equal distances and were therefore considered interval (Neuman, 2006).

Descriptive statistics were performed on the data, including standard deviation and frequencies. An independent samples *t*-test was performed on the data as well. This statistical test is appropriate when the difference between the means of two independent groups is analyzed. The *t*-test is also appropriate when analyzing interval data, such as the overall Likert scale results of the MLQ Form 5x (Neuman, 2006).

Significance of the Study

A lack of minority women in leadership positions in medical schools exists (Coe et al., 2020). The results of this study offer insight into the leadership styles of minority women leaders, providing medical schools with data to support tailored professional development

opportunities. A deeper understanding of the leadership styles of minority women in academic medicine may also help the minority women who aspire to leadership positions by providing clarity on leadership styles (Latten & Perez, 2019).

Organizational change may also occur as a result of this research. By knowing the leadership styles of the marginalized groups within medical schools, top administrators can take proactive steps to change the organization to support these groups, thus increasing their chances of promotion, rates of retention, and building salary equity. Building more inclusive medical schools will reflect the changes currently happening in other industries and society (Lewiss et al., 2020). Results from this study may positively impact social change if it provides an impetus for structural change, not only in academic medicine but in healthcare in general (Storberg-Walker & Madsen, 2017).

Research Questions

The purpose of this quasi-experimental quantitative study was to determine if a significant difference existed between the transformational, transactional, and passive/avoidant leadership styles of Black and Hispanic/Latinx women administrators in academic medicine to gain a greater understanding of the differences between their leadership styles. A quasi-experimental quantitative study design was chosen to answer the specific research questions. SPSS 23 for Windows was utilized to analyze the data obtained in the study and to answer the three research questions. The three research questions were analyzed utilizing a *t*-test on participant scores calculated from answering subscale questions on the MLQ Form 5X.

The *t*-test provided the data to identify if a statistically significant difference existed in the leadership styles between the two groups of women. The mean responses of Black women and Hispanic/Latinx women administrators were compared, and any difference of $p < .05$ was

considered statistically significant (Vogt, 2007). For each subscale, the scores were sorted by race/ethnicity, and a mean score was also calculated.

Research Question 1 was an analysis of the subscales for transformational leadership, identified as idealized influence attributed, idealized influence behavioral, inspirational motivation, intellectual stimulation, and individualized consideration. Research Question 2 was an analysis of the subscales for transactional leadership, which are contingent reward and management by exception active. Research Question 3 was an analysis of the subscales for passive/avoidant, identified as management by exception passive and passive/avoidant (Bass & Avolio, 1997). The following research questions guided the study:

Research Question 1: To what extent is there a statistically significant between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style?

Research Question 2: To what extent is there a statistically significant difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style?

Research Question 3: To what extent is there a statistically significant difference between Hispanic/Latinx and Black women administrators in academic medicine in passive/avoidant leadership styles?

Hypotheses

The research hypotheses for this study were:

H1₀: There is no statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style.

H1_a: There is a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style.

H2₀: There is no statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style.

H2_a: There is a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style.

H3₀: There is no statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in passive/avoidant leadership style.

H3_a: There is a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in passive/avoidant leadership style.

Theoretical Framework

The current study is framed within the full-range leadership model (FRL) theory described by Bass and Avolio (1997), which assesses leadership on a continuum of transformational, transactional, and passive/avoidant styles. The FRL theory proposes that leaders employ both transformational and transactional styles, simply showing a preference for one. Over the past 3 decades, leadership theorists have applied the FRL theory in multiple settings and determined that transformational leaders achieved greater success in building organizational change and meeting organizational goals (Abdalla et al., 2018; Larson et al., 2019).

Leadership theorists in the past decade have also identified a correlation between transformational leadership style and women leaders in different industries, including academia (Silva & Mendis, 2017). A gap remains in the research on leadership styles of minority women, particularly those in medical school administration (Larson et al., 2019). As medical schools

continue to reach diversity parity with society at large, the need to mentor and train minority women for leadership positions grows (Coe et al., 2020). The theoretical framework is further discussed in the literature review in Chapter 2.

Definition of Terms

Administrator is defined for this study as an individual in a leadership position.

Administrators in academic medicine may have different titles. For this study, administrators will include division dean, assistant dean, associate dean, department chair, associate department chair, vice-chair, program director, and program coordinator (Dickerman, et al., 2018).

Black or African American is defined as any individual identifying as having ancestry from any of the different racial groups from Africa is typically considered Black or African American (McFarland, et al., 2017).

Contingent reward is defined as an exchange relationship between leader and follower whereby leaders offer rewards in return for performance. Followers feel motivated to receive those rewards (Alegbeleye & Kaufman, 2020).

Hispanic/Latinx is defined as any individual identifying as having ancestry from Mexico, Puerto Rico, Cuba, South or Central America, or anyone identifying as having a Spanish or Hispanic/Latinx culture or origin, regardless of race is typically referred to as Hispanic/Latinx (McFarland, et al., 2017).

Idealized influence/charisma is defined as what happens when leaders inspire followers via a strong vision and mission which increases follower pride and loyalty (Zineldin, 2017).

Individualized consideration is defined as what happens when leaders interact with followers in an individualized manner as a coach or mentor. Followers respond by feeling valued and commit more strongly to organizational goals and objectives (Zineldin, 2017).

Intellectual stimulation is defined by what happens when leaders encourage critical thinking, problem-solving, and innovation (Zineldin, 2017).

Inspirational motivation is defined as when leaders provide clear communication and strong emotional appeals (Zineldin, 2017).

Management-by-exception (active) is defined as a transactional leadership style identified by leaders who actively supervise followers and act to correct mistakes or errors before they happen (Alegbeleye & Kaufman, 2020).

Management-by-exception (passive) is defined as a transactional leadership style identified by leaders who passively supervise followers and act to correct mistakes or errors after they happen (Alegbeleye & Kaufman, 2020).

Passive/avoidant or passive/avoidant leadership is defined as the complete absence of leadership, formerly known as laissez-faire leadership. Passive/avoidant leaders abdicate all responsibility and decline to intervene or act when needed (Zineldin, 2017).

Race/ethnic group is defined as a system of classification to identify racial or ethnic culture or heritage. Race and/or ethnicity are defined by the individual (McFarland, et al., 2017).

Transactional leadership is defined as a style of leadership that involves motivation via a system of contingent rewards. It is an exchange relationship based on external rewards and may be either active or passive (Alegbeleye & Kaufman, 2020).

Transformational leadership is defined as a style of leadership that involves motivation via a system of charisma, inspirational motivation, individualized consideration, and intellectual stimulation. It is an exchange relationship based on internal rewards (Alegbeleye & Kaufman, 2020).

Women are defined as any individual selecting the label woman as their gender, in contrast to sex, which is a biological definition (Heise, et al., 2019).

Assumptions

Many assumptions were made in this study. The first assumption was that the questionnaire respondents would provide honest answers based on unbiased self-reflection. According to Vogt (2007), quantitative research reduces the potential for self-bias from respondents. Second, it was assumed respondents would understand the questions presented in the questionnaire and how to complete the instrument. Clear instructions were provided to participants in the communication email. The third assumption was the transformational, transactional, and passive/avoidant model known as the full-range leadership model theory, developed by Bass (1985) applied to academic medicine (Coe et al., 2020).

A fourth assumption was that the full-range leadership model theory applied to minority women in academic medicine. The fifth assumption was the full-range leadership model theory survey, the MLQ Form 5X, would accurately measure the constructs of transformational, transactional, and passive/avoidant leadership (Gebremariam & Mulu, 2018). Sixth, it was assumed that the review of the literature was sufficient to truly address the body of knowledge regarding leadership styles. The final assumption was that data analysis would be conducted in a scholarly manner and that the results would contribute to the body of knowledge in leadership (Salkind, 2010).

Scope and Delimitations

The scope of this study was limited to medical schools located in the United States. Only participants who identified as a woman and as either Black or Hispanic/Latinx were included. The MLQ Form 5X questionnaire was used, and participants were evaluated along with the full

range of leadership continuum of transformational, transactional, and passive/avoidant styles (Bass & Avolio, 1997). A convenience sample was utilized, and 131 minority women administrators in medical schools were questioned.

Several delimitations must also be addressed. Delimitations are study attributes limiting the scope of the study while defining boundaries. Researchers make conscious choices when designing a research study, from the initial choice of topic to the statistical tools used to analyze the data. The delimitations provide relevance for the scope of the research (Theofanidis & Fountouki, 2019).

First, the focus study was on minority women administrators in academic medicine. Minority women in business have been studied, while minority women in medical schools have largely been ignored. Focusing on women in general or men was not directly relevant to the study purpose. A second delimitation of this study was that the scope is restricted to minority women administrators in medical schools located within the United States. No medical schools outside the U.S. were included, as including schools outside the U.S. was not feasible (Theofanidis & Fountouki, 2019).

Given that participation in the study was voluntary, there was no method for determining what influence non-responders may or may not have had on the results. Fourth, the research did not address the influence of childbearing and other life choices on the tenure of these women and their promotion options. Finally, the research did not address cultural perceptions of gender and the work performance of women in academic medicine (Theofanidis & Fountouki, 2019).

Limitations

Some limitations to this study exist that must be addressed. Limitations are any issues or circumstances that pose potential weaknesses for a study. All studies have limitations that can

potentially affect results, interpretations, and conclusions (Theofanidis & Fountouki, 2019).

First, the current study focused primarily on the full-range leadership model theory, and the MLQ Form 5X was the only instrument used to measure leadership styles. Although the MLQ Form 5X is considered a valid and reliable instrument, other leadership instruments could have potentially drawn other conclusions. Second, convenience sampling reduced the generalizability of the results to a larger population and increased the potential for bias. Convenience sampling was acceptable in this situation, given the specific focus of the study (Vogt, 2007). While 360-degree feedback is preferred, the design of this study did not include it, increasing the potential for self-bias in responses. Nevertheless, given that researchers have shown that reliable instruments enhance the accuracy of responses and the MLQ Form 5X is considered a reliable instrument, the study proceeded (Gomez-Garcia et al., 2020).

Summary

The current study was an analysis of the leadership styles of minority women administrators in medical schools in the U.S. The theoretical framework for the study was the full-range leadership model theory (Bass & Avolio, 1997), and the MLQ Form 5X survey will be utilized. In Chapter 1, an overview of the research problem, the research purpose, and research questions were provided and placed in the context of the theoretical framework. Important terms were defined, and assumptions, limitations, and delimitations were explained. Other elements of the chapter include a description of the methodology, data collection, and data analysis procedures.

A detailed literature review is provided in Chapter 2. Topics including leadership, leadership and women, leadership in academic medicine, and leadership and minority women will be addressed, building the theoretical framework. The research methodology, study design,

and data collection and analysis are also described and expanded upon in Chapter 3, justifying utilizing a quasi-experimental quantitative research design.

Chapter 2: Literature Review

The problem is Black and Hispanic/Latinx women are underrepresented in leadership positions in academic medicine (Carr et al., 2018). The purpose of this quasi-experimental quantitative study was to determine if a significant difference existed between the transformational, transactional, and passive/avoidant leadership styles of Black and Hispanic/Latinx women administrators in academic medicine to gain a greater understanding of the differences between their leadership styles. For the study, administrators included the division dean, assistant dean, associate dean, department chair, associate department chair, vice-chair, program director, and program coordinator. The proposed study may contribute to the leadership knowledge base by assessing the leadership styles of minority women leaders in U.S. medical schools (Carr et al., 2018; Rodriguez et al., 2016).

Prior to conducting the study, a thorough literature review was performed. The literature review focused on the variables of transformational leadership, gender and race/ethnicity, the relationship between the variables, and leadership position in academic medicine. The background of the problem is also described in the literature review and supports the goal of the research study. Finally, the research design and methodology are defined as well.

The focus of the chapter is the relationship between leadership styles of minority women administrators within the academic medicine environment. Therefore, an extensive literature search was conducted to identify studies related to leadership, gender, minority women, and healthcare. Foundational background information concerning leadership, gender, minority women, and healthcare was reviewed. Search engines utilized included EBSCO, ProQuest, Google Scholar, and Business Source Premier. Major leadership publications were also searched. Keywords and terms included *leadership styles*, *transformational leadership*, *transactional*

leadership, passive/avoidant leadership, passive/avoidant leadership, women, gender, minority, diversity, healthcare, healthcare organizations, and healthcare leadership.

Articles unavailable through databases provided by the American College of Education library were obtained via inter-library loan. The search resulted in numerous leadership studies on women and leadership, minorities and leadership, minority women and leadership, and leadership in academic medicine. Few studies exist on minority women and leadership in healthcare, and those studies focused primarily on nursing. No studies on minority women administrators in academic medicine and their leadership styles were located.

Theoretical Framework

Researchers have studied concepts of leaders and leadership extensively, yet no single definition or theory of either dominates the literature (By, 2021). A review of different leaders demonstrates a great variety in the style of leadership, personality traits, and cultures, a result found by multiple researchers (Abdalla et al., 2018). Differences in leaders led some theorists to see leadership as a form of behavior while others see leadership as a way of being. During this time, theories such as the full range leadership model of transformational, transactional, and passive-avoidant leadership styles have gained predominance in the literature (Thompson & Glaso, 2018).

Until the early 1980s, most leadership theories focused on leadership as a transaction based on an exchange between leader and follower (Abdulrazaq et al., 2020). Leaders clarified organizational goals and offered rewards for successfully reaching set goals and punishment for failing to achieve said goals, a style labeled as transactional. Transactional leaders emphasized clearly defined tasks and goals, clearly articulated external rewards and punishments, the span of control, administrative procedures, and spheres of influence. Transactional leadership has three

characteristics: (a) contingent reward, (b) management-by-exception active, and (c) management-by-exception passive (Alegbeleye & Kaufman, 2020).

Contingent reward refers to an agreement between leader and subordinate whereby the leader offers rewards or benefits for the successful completion of a task. Effective transactional leadership relies on the leader's ability to understand subordinate motivations, offer rewards, or benefits specific to individual motivations, and provide rewards or benefits when needed. Contingent reward sets the bar for performance but offers no incentive for going beyond a set level. Efficiency is rewarded while innovation is not (Alegbeleye & Kaufman, 2020; Zineldin, 2017).

Management-by-exception is a transactional leadership style characterized by a hands-off approach, either active or passive. Leaders who employ this style stand by and observe, monitoring for either failure to meet performance expectations or for problems to arise. The timing of leader action is what differentiates management-by-exception active from management-by-exception passive level. Leaders who carefully monitor subordinate actions and wait until they observe problems before acting are using the management-by-exception active style of leadership. The management-by-exception active style of leadership is reactive, focusing more on negative feedback than a proactive form with a positive direction level. Management-by-exception active is often referred to as micromanagement, with its focus on preventing errors before they occur (Zineldin, 2017).

Management-by exception passive leadership style is utilized by leaders who wait until all tasks are completed before acting to rectify problems or deficiencies. As a leadership style, management-by-exception passive is almost non-leadership because actions are retroactive, leaving subordinates to guess about expectations. Leaders who utilize this style of leadership

offer little motivation for followers to excel. Researchers have linked passive leadership with decreases in workplace safety and organizational commitment (Alegbeleye & Kaufman, 2020; Zineldin, 2017).

Transactional leadership was criticized as being too task-oriented and superficial, but nevertheless, the transactional style remained a common approach to leadership (Bass & Bass, 2008). Leaders who are transactional are often noted for their efficiency. As a leadership style, transactional leadership is most effective when leading teams of self-motivated people. Research does indicate positive results for contingent reward behavior on follower performance and satisfaction, but most researchers believe transactional leadership fails to reflect the full dimension of the leader-follower relationship (Rawashdeh et al., 2020).

During the 1980s, researchers returned to the trait theory, incorporating the concept of traits into behavior-situation concepts to develop a more comprehensive theory encompassing behavior, situation, and personality to answer the question of why leadership works (Anderson, 2017). Researchers began to analyze the impact of leader-subordinate interactions upon both leaders and followers. The basic premise of this type of research was traits give individuals the potential to become leaders, given the proper situation and if the person knew which behaviors were most effective (Abdalla et al., 2018).

The dominant theory from the era was the transformational leadership theory. Based on the work of James Burns (1978) and further refined by Bernard Bass (1985), transformational leadership is at the other end of the continuum from non-leadership, also known as passive/avoidant leadership. Transactional leadership falls in the middle of the leadership continuum (Bass & Bass, 2008; Bass & Riggio, 2009). Unlike transactional leadership with its reliance on external rewards, transformational leadership uses internal rewards to motivate and

inspire followers. Transformational leadership is further differentiated from transactional leadership and focuses on the needs of the leader by focusing on the needs of the follower. The transformational leader exhibits four characteristics: charisma/idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Kwan, 2020).

Idealized influence/charisma occurs when leaders inspire followers by articulating a clear vision and defining the organizational mission in such a manner as to instill pride and create loyalty. Leaders who effectively utilize charisma inspire followers to internalize the needs and goals of the organization, thereby replacing the follower's own needs and goals. Charismatic leaders typically have high communication skills, allowing them to connect with followers (Alegbeleye & Kaufman, 2020).

Inspirational motivation is the process through which leaders create follower buy-in to the vision and mission through effective communication and emotional appeals. Effective leaders create a sense of team spirit and cohesion, fostering a commitment to the success of the organization. Leaders strive to understand and appeal to the intrinsic motivators of followers (Zineldin, 2017).

Individualized consideration occurs when leaders treat followers as individuals, and leaders act as coaches and mentors to help followers grow personally. Followers feel valued as team members, and as a result, their commitment to the organization is enhanced. Effective leaders create a supportive environment where followers feel empowered (Kwan, 2020).

Intellectual stimulation takes place when leaders promote critical thinking and creative problem-solving in followers. Effective leaders create an environment where followers feel confident enough to challenge the status quo and present new or radical ideas. Transformational

leaders provide a safe place for followers to experiment and make mistakes without fear of criticism (Alegbeleye & Kaufman, 2020; Zineldin, 2017).

Burns (1978) hypothesized leaders were consistent in leadership styles, performing either as a transactional leader or transformational leader with strong consistency. Bass, on the other hand, believed leaders would employ both transformational and transactional styles, depending on the situation (Bass & Riggio, 2009). The leadership theory Bass and Avolio (1997) conceptualized became known as the full-range leadership model (FRL) theory. These scholars proposed that truly effective leadership encompasses both transactional and transformational characteristics and are complementary styles, not exclusive as Burns proposed. Leaders may be characterized as transactional or transformational depending on the style employed most often. Based on this concept, the Multifactor Leadership Questionnaire (MLQ) was developed to reflect the full-range leadership model, and the MLQ Form 5X contains 45 items designed to evaluate and differentiate leadership styles: transactional, transformational, and passive/avoidant styles. Leaders would be classified as transformational, transactional, or passive/avoidant not because they exclusively displayed just one style but based on the leadership style employed most frequently (Bass & Avolio, 1997).

Bass and Avolio's (1997) full-range leadership model (FRL) theory has been studied extensively over the past three decades in a variety of settings, and the researchers found transformational leaders as individuals who predominately utilized the characteristics identified by Bass (1985) to be more successful in orchestrating organizational change and achieving organizational goals. Transformational leaders are credited with enhancing employee job satisfaction and organizational commitment as well. Leaders of this type were observed more frequently in upper-management positions, while individuals predominately displaying

transactional leadership characteristics were observed more frequently in middle managers (Alegbeleye & Kaufman, 2020).

Researchers have indicated the positive effects of transformational leadership on organizational health (Alamir et al., 2019), team and group outcomes (Zineldin, 2017), and employee attitudes, performance, and satisfaction (Apoi & Binti Abdul Latip, 2019; Malik et al., 2017; Weller et al., 2019). Additional researchers studied the leader-follower relationship and found employees prefer transformational leaders (Hildenbrand et al., 2018). Transformational leadership has been found effective in government (Susilo, 2018), religion (Mirayani et al., 2019), occupational therapy (Carleton et al., 2018), education (Anderson, 2017), non-profit organizations (Kwapisz et al., 2019), and business (Abdulrazaq et al., 2020; Diaz-Funez et al., 2021; Rawashdeh et al., 2020; Strukan et al., 2017).

The purpose of this quasi-experimental quantitative study was to determine if a significant difference existed between the transformational, transactional, and passive/avoidant leadership styles of Black and Hispanic/Latinx women administrators in academic medicine to gain a greater understanding of the differences between their leadership styles. The theoretical framework for the research study is based on Bass and Avolio's (1997) full-range leadership model theory of transformational, transactional, or passive/avoidant leadership styles. The full-range leadership model is based on the work of James Burns (1978) and was later refined by Bernard Bass (1985). Bass and Avolio (1997) propose a leadership continuum where transformational leadership exists at one end while passive-avoidant leadership occupies the other end. Transactional leadership is between transformational and passive-avoidant leadership styles on the continuum (Bass & Bass, 2008; Bass & Riggio, 2009; Giddens, 2017).

Literature Review

Leadership theorists over the past 2 decades have also proposed transformational leadership qualities are more aligned with societal expectations of women and thus more accepted as a leadership style for women (Silva & Mendis, 2017). In a meta-analysis, Eagly et al. (2003) determined women consistently scored higher on transformational leadership scales than men. Recognizing potential women leaders provides organizations with the opportunity to mentor and promote women with aspirations for upper management positions while removing barriers to leadership positions (Kalaitzi et al., 2017; Roth et al., 2016). Researchers including Burkinshaw and White (2017) and Girod et al. (2016) proposed improvements in universities and medical schools would remove barriers to advancement for women.

Leadership and Women

Eagly and Carli (2007) proposed men and women are remarkably similar in the traits and abilities most relevant to leadership--intelligence, extraversion, openness to experience, agreeableness, and conscientiousness. The researchers did note some differences in ethical and moral qualities where women tend to be more critical of unethical and immoral actions. Eagly and Carli (2007) believed given the fact that women are equally as qualified for leadership positions as men; there must be other factors holding women back from advancing to leadership positions. Researchers have proposed numerous theories to describe the factors explaining the slow progress of women advancing to upper management positions. The theories include the glass ceiling, social role theory, role congruity theory, and similarity attraction (Carr et al., 2018; Gobaw, 2017).

Some researchers theorized a glass ceiling still exists, preventing women from reaching top positions in management (Avolio et al., 2009; Burkinshaw & White, 2017; Kalaitzi et al.,

2017). The idea of a glass ceiling came from a 1986 *Wall Street Journal* article that asserted women would eventually reach a barrier to upward advancement, a barrier both invisible and impenetrable (Gobaw, 2017). The glass ceiling was formed within corporations and businesses by prejudice and tradition and was often maintained by initially written and, later, unwritten policies. The glass ceiling prevented women and minorities from reaching top positions solely because of gender and race/ethnicity, not because of education, experience, or training (Carr et al., 2018; Gobaw, 2017).

The metaphor of the glass ceiling remained an important one throughout the 1990s (Gobaw, 2017). Eagly and Carli (2007) envisioned a different metaphor, the labyrinth. The authors presented the labyrinth metaphor to show reaching the top is no longer impossible for women and minorities, but instead, there are multiple paths to the top. The researchers asserted the glass ceiling metaphor implied a deterrence to progress for women could not be removed without extensive measures to counteract discrimination and breaking the glass ceiling could not be accomplished by women themselves. The labyrinth metaphor, on the other hand, puts women in control of reaching personal goals by understanding what barriers stand in the way and empowering women to overcome barriers. The labyrinth metaphor also allows for recognizing obstacles to advancement exist at all organizational levels for women, not just at the top. Data such as these do not mean other factors, such as discrimination, do not exist and inhibit women's advancement (Gobaw, 2017; Kalaitzi et al., 2017).

Researchers also proposed the social role theory approach to leadership, where leaders are constrained not only by the limits of the position held as defined by the organization but also by the limits of gender roles (Gobaw, 2017). Gender roles are the shared perceptions of the attributes and behaviors of men and women. Gender roles not only influence how people view

each other, including leaders, but how people view themselves. Researchers determined within groups that demographic variables such as gender were used to formulate initial impressions and expectations regarding leadership potential (Suranga Silva & Mendis, 2017).

Women are often seen as incompatible with the requirements for effective leadership since women are often considered to have communal qualities while simultaneously, leaders are seen as needing agentic or results-oriented qualities, characteristics more frequently associated with men (Silva & Mendis, 2017). Communal qualities include sensitivity and nurturing, while agentic qualities include assertiveness and confidence. Assigning communal qualities to women and agentic qualities to men formulate sex trait stereotypes accepted by many in society and are used to characterize both men and women (Avolio et al., 2009). More recently, researchers have documented a positive relationship between women's agentic qualities and follower beliefs regarding a leader's transformational style (Saint-Michel, 2018).

The perception of women's skills as incompatible with effective leadership is what theorists refer to as role incongruity. According to Eagly (2005), role congruity exists when people's social roles and behaviors match expectations. Most people are content when men act as men and women act like women fitting into preconceived roles. Role incongruity happens when people act in ways different than expected, such as when women act like men or vice versa. Theorists such as Eagly and Carli (2007) believe role incongruity explains much of the prejudice towards women leaders and potential leaders. Women are evaluated less favorably as leaders and potential leaders because leadership is seen as a male characteristic and a male role. For many people, women simply could not be as effective leaders as men because women lack the necessary qualities. Women who do obtain leadership positions are often devalued because their presence conflicts with role expectations (Silva & Mendis, 2017).

Eagly and Carli (2007) also postulated any attempt by women to develop male leadership characteristics by becoming more agentic, for example, is considered undesirable as leading in that manner conflicts with preconceived gender roles. Women who try to act more agentic as leaders can experience negative feedback from both superiors and subordinates (Saint-Michel, 2018). The perception of women using male leadership styles can inhibit potential female leadership as women may become afraid of incurring the reaction. The phenomenon of women fearing organizational backlash for acting masculine known as stereotype threat may be a factor inhibiting them from striving for upper management positions (Johnson et al., 2008).

Johnson et al. (2008) researched the influence of role incongruity in leader evaluations. They found male leaders are evaluated positively when exhibiting agentic qualities, yet female leaders were not evaluated positively unless exhibiting both agentic and communal qualities. The researchers further found that when men and women exhibit the same qualities, women are perceived differently. Men are perceived more favorably when acting agentic than women are when exhibiting the same behaviors. Conversely, men are perceived less favorably than women when exhibiting only communal behaviors. Sex-role stereotypes are frequently reflected in the evaluations of women leaders and potential leaders, as women are often viewed negatively regardless of accomplishments, known as a backlash effect (Saint-Michel, 2018). According to Madera et al. (2009), “communal characteristics were negatively related to hireability ratings, and the communal ratings mediated the relationship between applicant gender and hireability ratings” (p. 1596). Leaders who adhere to sex-role stereotypes are more likely to be accepted, supported, and promoted (Johnson et al., 2008; Saint-Michel, 2018).

Madera et al. (2009) believed that role incongruity presents challenges for women not only because leadership is considered a male character but because the communal qualities

associated with women are incongruent with leadership roles. Women find what comes naturally are behaviors that inhibit their movement into leadership positions and are required to develop a balanced leadership style incorporating male behaviors. A balanced style allows women to both fit into societal roles while meeting leadership role expectations. Women who do so can avoid both negative perceptions and negative evaluations.

Saint-Michel (2018) utilized role congruity theory and leadership prototype theory when researching the influence of leader self-perceptions of gender role identity and follower perceptions regarding transformational leadership style. The research documented a positive relationship between leader self-perceptions as having communal attributes and follower perceptions of transformational style. One interesting finding was a positive relationship between female leaders' self-perception of having agentic attributes and follower perceptions of transformational style when compared to male leaders. Findings such as these previous challenge findings of a backlash effect affecting women leaders.

Eagly (2005) found when leadership roles are perceived to be masculine, men are selected more frequently than women to fill specific roles. Gender hiring inequity happens regardless of the gender composition of the organization or the skills and qualifications of individuals aspiring to fill the positions (Latten & Perez, 2019). As a result, women end up holding fewer leadership positions, and a male leader norm is created and accepted in many organizations. The men in top leadership positions look for other men to promote, a phenomenon known as similarity attraction. The system perpetuates itself, and perceptions are reinforced (Hentschel et al., 2018).

According to Jogulu and Wood (2006), early research into women and leadership compared women to men on interpersonal skills and task-orientation. In a meta-analysis, Eagly

et al. (2003) found women scored higher than men did on transformational leadership scales. Eagly and Carli (2007) found although men and women performed equally in specific areas, women were found to act more democratically while men were more autocratic. While initially autocratic leadership skills were valued more highly, by the early 1990s, democratic or participative skills increased in value. As a result of the shift, Eagly and Carli (2007) proposed transformational leadership qualities were more congruent with societal expectations of women and more accepted as a leadership style for women. Some researchers concluded women are more likely to possess the leadership skills necessary to effectively lead during challenging times (Sharif, 2018). Other research findings indicate men are still more likely to utilize transactional and passive/avoidant leadership qualities (Silva & Mendis, 2017).

Hentschel et al. (2018) evaluated transformational leadership styles in women and men in a three-study research design to compare transformational leadership and autocratic leadership. The researchers found transformational leadership was perceived as more effective, and the style contributed to positive perceptions of promotability. Researchers found these perceptions were primarily applied to men, as women did not receive a similarly high positive effect from utilizing transformational leadership. According to the researchers, although transformational leadership styles reflect positively on leaders, women still lag in benefitting from those perceptions, particularly in the area of promotability. This disconnect was present across all industries, including academics and academic medicine (Abdalla et al., 2018).

Leadership and Academic Medicine

Leadership theorists over the past two decades have found individuals who move successfully into upper management in business and education are more likely to exhibit transformational leadership characteristics, while conversely, individuals in middle management

display transactional leadership characteristics (Abdalla et al., 2018; Larson et al., 2019). Leadership theorists have also identified a positive effect of transformational leadership on managerial performance and organizational outcomes (Abdalla et al., 2018; Nguyen et al., 2016). Anderson (2017) conducted a meta-analysis of transformational leadership in education and documented a positive effect of transformational leadership style on managing educational institutions. The effect is similarly documented in academic medicine and healthcare in general (Bradd et al., 2017; Giddens, 2017).

Medical school administrators are under increasing pressure to accomplish more with fewer resources and to develop new leadership strategies (Barilla et al., 2019). Understanding the competencies separating good leaders from great leaders provides healthcare administrators the ability to recruit and train future leaders. Competencies are the skills, knowledge, beliefs, and values that provide the foundation for behaviors and decisions (Nelson et al., 2020). The Healthcare Leadership Alliance (HLA) identified five competencies for healthcare administrators, including professionalism, business skills, knowledge of the healthcare delivery system, communication and relationship-building, and leadership (Barilla et al., 2019; DeVoy, 2021). Leadership skills are important in leaders in healthcare and individuals teaching future leaders in medical schools.

Leaders in academic medicine face a drastically changing educational environment. Medical schools are graduating physicians facing rapid technological change, the shift to retail, medical delivery systems, increased demand for value-based healthcare, and a diverse student body. One particular challenge healthcare administrators face is uniting specialized departments that traditionally have worked independently of each other (Hawkes et al., 2017). Leadership strategies are essential to meet these and future demands. Top administrators must develop

effective and visionary leadership skills, and many skills can be learned from other industries (Harris & Mayo, 2018).

Many of the principles of Six Sigma (Laureani & Antony, 2017) and Total Quality Management (TQM) have been applied to healthcare, education, and academic medicine, particularly in the areas of patient services (Mutahar et al., 2017; Robinson et al., 2017). Nicolaou and Kentas (2017) found that leadership plays a critical role in successfully implementing TQM programs in healthcare. The authors found organizational failure resulted from many factors, including lack of resources, cost of investment, and resistance to change across the organization. Many healthcare administrators feel both the healthcare industry and academic medicine are in an era of transformation (Brown et al., 2019). The transformational-transactional leadership model is particularly applicable in organizations and industries facing uncertainty and ongoing change (Bass & Bass, 2008).

In the early part of the twenty-first century, researchers began to study the applicability of the transformational-transactional leadership theory to healthcare and academic medicine (Bromley & Kirschner-Bromley, 2007). The majority of these studies focused on nurses, nurse managers, and nurse educators (Giddens, 2017). Researchers found a correlation between transformational leadership in nurse leaders and staff nurse commitment (Diaz et al., 2019). Other researchers determined a relationship between transformational leadership and nurse satisfaction and retention (Boamah et al., 2017; Echevarria & Patterson, 2017). Kwan (2020), in their research, observed a positive influence of transformational leadership on student outcomes. Sanner-Stiehr and Kueny (2017) and Anderson and Sun (2017) all found empirical support for the transformational-transactional leadership theory in healthcare administration, while Guevarra et al. (2020) found empirical support among physician executives. Although researchers studied

the impact of transformational-transactional leadership in multiple areas in healthcare, fewer focused on academic medicine and women administrators.

Leadership, Academic Medicine, and Women

Women as a group comprise more than half of the medical school students and graduates in the United States, yet fewer women than men reach leadership positions in academic medicine (Larson et al., 2019). The Association of American Medical Colleges (2020) reported women to make up 42% of full-time faculty, 25% of full professors, 16% of deans, and 18% of department chairs. According to Larson et al. (2019), these numbers have not significantly changed in the past decade, despite diversity efforts in medical schools (Association of American Medical Colleges, 2020).

Women, particularly women of color, are not advancing to leadership positions, including professorship, dean, and chair positions, in academic medicine at hoped-for rates. Women comprise half the students in medicine, yet only 15% of department chairs and division deans in academic medicine (Wong, 2018). The role of gender in leadership has been researched, while the role of gender in academic medicine leadership has received less attention (Issac & Griffin, 2014; Soklaridis et al., 2017; Wong, 2018).

Issac and Griffin (2014) interviewed three female chairs in an academic medicine program and analyzed the interviews in comparison to interviews with 28 faculty. Although all three leaders stated gender was not a leadership issue, the faculty reflected gender bias in their descriptions of leader-follower interactions. Furthermore, the three chairs described needing to utilize communal and consensus-building activities to avoid being judged as too masculine, reflecting a transformational leadership style. Whether this is an adaptive or learned style is unknown.

Soklaridis et al. (2017) interviewed 12 women hospital Chief Executive Officers throughout Canada to analyze their experiences, if any, with gender bias. The majority of the women interviewed indicated they experienced no gender bias, although some acknowledged other women may have experienced some degree of discrimination. Women in the study expressed a belief that discrimination no longer exists and that success or failure was contingent upon personal drive and skills. The women in the study believed success was based solely on personal leadership traits. As a result of these beliefs, the leaders felt women would continue to move into leadership positions over time. Not all the women interviewed agreed with the perspective and indicated gender bias is still prevalent in healthcare organizations. Overall, the group strongly questioned the validity of the concept of traits-based success and instead recommended mentoring future female leaders.

Wong (2018) conducted a sequential mixed-methods study of 65 leaders to understand the relationship between gender and leadership in academic medicine. The researchers determined women and men viewed effective leadership in similar ways, shared similar motivations for attaining leadership positions, and enjoyed acting as leaders. The research indicated both the men and women interviewed failed to recognize the existing biases and barriers facing women who aspire to leadership positions. Wong also found the women interviewed recommended mentorship as an important tool for training and building future leaders, while the men interviewed preferred role models as a leadership development tool.

Rodriguez et al. (2016) researched department chairs in U.S. and Canadian dental schools. The researchers analyzed the demographic data, roles, and professional needs of the department chairs. Professional development and leadership training were identified as important

to success in leadership positions in academic dentistry. The demographic data obtained revealed only 22.3% of participating department chairs were women (Rodriguez et al., 2016).

Theorists proposed numerous factors explaining why women are not reaching leadership positions in academic medicine, including gender stereotypes, family obligations, lack of mentorship programs, schedule inflexibility, and what was termed the “pipeline effect.” The pipeline effect hypothesized when the number of women in medical schools and the number of women physicians increased, the number of women in leadership positions would correspondingly increase (Girod et al., 2016). The data does not appear to support the theory as the number of women in medical school increased while the number of all women in leadership positions remained low. Furthermore, Larson et al. (2019) studied the number of women physicians who attained the leadership position of dean and found women physicians were under-represented compared to men, regardless of level. Larson et al. (2019), hypothesized the data also refutes the pipeline effect, requiring researchers to analyze other factors impeding women's movement into leadership positions.

According to Girod et al. (2016), women often encounter implicit biases when pursuing leadership positions, including in academic medicine. Women are still expected to utilize communal leadership qualities such as being nurturing and acting with sensitivity, while men are encouraged to be more agentic, that is, more assertive and confident. Women who utilize agentic or masculine styles are often rated much lower as leaders by followers. Girod et al. (2016) addressed implicit and explicit gender bias in their research by assessing the effect of educational interventions on faculty perceptions of said bias. The researchers determined educating faculty on bias and providing strategies for reducing bias can have a positive, minimal effect on implicit biases. Explicit biases were not influenced by the educational efforts (Girod, et al., 2016).

While educational programs for employees can be productive, many theorists, including Burkinshaw and White (2017), recommended reeducating higher education itself when addressing gender equity. The researchers utilized two case studies analyzing two generations of women leaders and hypothesized educational programs have historically focused on perceived deficiencies in women, particularly leadership styles. Burkinshaw and White (2017) proposed, as did Girod et al. (2016), that women do not need fixing, but the culture of the institutions where the women worked needed fixing. Improving organizations is particularly relevant as higher education is undergoing many changes and, as Burkinshaw and White (2017) asserted, the traditional masculine leadership techniques may no longer be appropriate. Collaborative, transformational leadership styles are becoming more relevant in higher education. As higher education and academic medicine in particular have reduced gender disparity, research on minority women in leadership positions remains scarce (Kaplan et al., 2018).

Leadership, Academic Medicine, and Minority Women

Gender disparities in academic medicine are significant, as noted in the research, yet even greater disparities exist for minority women (Association of American Medical Colleges [AAMC], 2020). Hispanic/Latinxs as a group are unrepresented in medical school by almost 70%, Black males by almost 60%, and Black women by approximately 40%, when compared to age-matched counterparts. Minorities are also significantly underrepresented in academic medicine leadership positions. According to 2019 Association of American Medical Colleges (AAMC) data, 3.2% of full-time medical school faculty are Hispanic/Latinx (5.5% when multiple-race Hispanic/Latinxs are included), and 3.6% are Black or African American. Interestingly, within those groups, more than half of the Black faculty are women (57.7%), and almost half of the Hispanic/Latinx faculty are women (42.8%). The figures drop significantly in

the ranks of full professors, where 37% of Black/African Americans and 30% of Hispanic/Latinxs are females (Association of American Medical Colleges, 2020; Poole Jr. & Brownlee, 2020).

Women, particularly women of color, are not advancing to leadership positions, including professorship, dean, and chair positions, in academic medicine at hoped-for rates (Kaplan et al., 2018). In their research, Carr et al. (2018) conducted a longitudinal study of faculty in academic medicine between 1995 and 2013, specifically looking at the promotion and retention of women. The researchers found even after adjusting for research-based publication efforts, gender disparities remained almost 20 years later, particularly for women of color. Minority women obtained leadership positions less frequently than men did, and retention rates were lower (Woods et al., 2018).

Leadership development efforts in academic medicine have focused primarily on offering training or mentorship opportunities without identifying leadership characteristics, such as transformational or transactional styles (Coe et al., 2020). Researchers studied transformational leadership in business and education settings and between men and women but research on leadership styles of minorities, particularly minority women, is lacking (Latten & Perez, 2019). The application of the dimensions of the transformational theory supports the purpose of the study because it will help fill the gap in the existing literature on minority women, particularly individuals in leadership positions in academic medicine (Toledo et al., 2017). Identifying leadership styles in medical school faculty and administrators may allow schools to create professional development programs building-specific leadership skills (Bradley-Baker & Murphy, 2013). Although the full-range of leadership theory is widely utilized in academic research, it is not the only leadership concept currently employed.

Leadership Styles: Additional Theories

Although Bass and Avolio's (1997) full-range leadership model is considered the preeminent transformational theory, additional transformational theories have been proposed. The first is Conger and Kamungo's theory of charismatic leadership (Rowold & Heinitz, 2007; Sacavem et al., 2017). The similarities between the two theories included a focus on the leader's vision and the leader as an agent of change. In addition, both theories blend traits, behaviors, and situations in defining leadership styles. Both the full range model and the charismatic theory are extensions of earlier trait theories with a focus on personality traits as well as a merger with earlier situational theories with an acknowledgment of the importance of the situation on leadership (Gandolfi et al., 2017). Significant differences exist between the two theories. First, charisma is the primary element of the charismatic leadership theory, unlike transformational leadership, where charisma is one of many elements. Second, charismatic leadership addresses leadership as a process that includes distinct stages, while transformational leadership addresses leadership at a specific point in time (Gandolfi & Stone, 2018).

Kouzes and Posner (2007) took a new look at transformational leadership, focusing on leadership as a skillset comprised of honesty, competency, a sense of direction, and the ability to inspire. Characteristics such as these provided leaders with credibility, which was the foundation for leadership. Credibility was achieved over time as leaders gained the trust of followers and were accomplished by presenting a vision that followers could believe in, showing competency in all actions, and being honest in all transactions. As with transformational leadership, the vision was important; however, the researchers believed vision was insufficient without credibility. Leadership is a learned skill, best enhanced through self-exploration and development. Unlike

other transformational theories, the Kouzes and Posner model emphasize behaviors almost exclusively (Northouse, 2010).

Robert Greenleaf developed his theory of servant leadership in the 1970s, where he applied biblical concepts to the field of leadership, refocusing the emphasis away from the power of the leader to the needs of the followers (Gandolfi et al., 2017). The leader addresses the needs of followers, leading through the act of caring. Servant leaders are particularly concerned with social injustice and the social responsibility of the organization. Greenleaf proposed the theory as a situational model, and the primary purpose of the leader is to empower followers to the point where the leader is no longer needed. Servant leadership is considered a transformational model because leaders must inspire followers and offer a vision for followers. Several measurement instruments have been developed to measure servant leadership, but no one instrument has received common acceptance (Gandolfi & Stone, 2018).

Authentic leadership is a similar theory, proposed initially by Luthans and Avolio, who defined authentic leadership as a combination of self-awareness, positive behaviors, and organizational capability (Northouse, 2010). Authentic leaders display relational transparency, consistency between moral action and reason, and focus on developing positive behavioral traits in themselves and their followers. Like servant leaders, authentic leaders inspire followers by offering a clear vision. However, authentic leaders work to present an internalized moral compass contrary to servant leaders (Anderson & Sun, 2017; Harris & Mayo, 2018).

Leadership Instruments

Given the focus of this study, a review of leadership instrumentation is necessary. According to Allen and Hartman (2008), the instruments are an important part of the research because they can offer either feedback on leadership development or an assessment of leadership

potential. The proposed study will focus on the leadership potential of minority women in leadership in academic medicine; therefore, feedback assessment instruments will be reviewed.

The primary purpose of feedback instruments is to collect and assess leader qualities and behaviors (Carrara et al., 2018). Many are self-rating instruments, allowing leaders to analyze individual leadership styles. Other instruments, often referred to as 360-Degree leadership assessments, utilize feedback from multiple sources to assess leadership style (Abdalla et al., 2018). Feedback instruments provide leaders with input from co-workers, including superiors and subordinates. The information gained from feedback assessments can be used by leaders to modify behaviors and adjust their leadership styles (Carrara et al., 2018).

Blake and Mouton's Management Grid is one of the best-known feedback instruments and offers a model for the employee-production leadership scale (Burns, 1978). The grid aligns managers and leaders along a two-dimensional grid where each axis ranges from 1 to 9—vertically for employee orientation and horizontally for production orientation. After responding to a set of statements, managers and leaders were classified into five categories. The first (identified as 9, 1) is known as authority-obedience management and demonstrates maximum concern for production and minimum concern for employees. Second (1, 9) is known as country club management and demonstrates minimum concern for production and maximum concern for employees. Third (1, 1) is known as impoverished management and shows minimum concern for production and employees. Finally, the fourth (5, 5) is known as organization man management and is known for maintaining the status quo. The final category (9, 9) is known as team management and demonstrates a high concern for production and employees. The final category is the recommended leadership style (Sivarat et al., 2021).

Researchers at Ohio State University also developed a feedback assessment of leadership but instead differentiated between leaders who were employee-oriented and task-oriented completion (Carrara, et al., 2018). Starting with a list of over 1,800 statements which were eventually reduced to 150, researchers developed the Leader Behavior Description Questionnaire (LBDQ). Three versions of the questionnaire were eventually developed; however, concerns about the validity and reliability of each were soon raised. Subsequent revisions attempted to address these concerns; the most significant refocused the LBDQ from how respondents rated a leader's behaviors to how the leader should behave (Carrara et al., 2018).

Fiedler's contingency model has been studied extensively, particularly his Least Preferred Coworker (LPC) assessment, which came out of Fiedler's initial work on leadership involving a measure of Assumed Similarity between Opposites (ASo) and included the LPC rating and a rating of a most preferred co-worker (Burns, 1978). ASo scores were computed by determining the difference between the two ratings. Eventually, Fiedler focused primarily on the LPC, asking respondents to review their personal work history and picture the co-worker they liked the least and describe them using the LPC (Carrara et al., 2018). The LPC has 16 items, and respondents scored the co-worker along a scale with 8 being most favorable and 1 being least. For Fiedler, individuals rated high on the LPC scale were employee-oriented, while individuals rated low were task-oriented (Carrara et al., 2018).

Hersey and Blanchard (2014) created a different feedback assessment, focusing instead on the maturity levels of followers. The researchers theorized if a follower's maturity level was low (unable and unwilling), a leader should be high-task and low-employee oriented, directing followers to complete tasks. If a follower displayed a moderate-low maturity level (unable but willing), the leader should be high-task and high-employee oriented, selling the follower on how

to complete tasks. For followers who are moderate-to-high in maturity level (able but unwilling), the leader would act as high-employee and low-task oriented to encourage participation in task accomplishment. Finally, for followers who are high maturity (able and willing), the leader's best option is to act both low-task and low-employee oriented, delegating tasks to followers. Hersey and Blanchard developed the Leader Adaptability and Style Inventory (LASI), which was subsequently refined, and renamed the Leadership Effectiveness and Adaptability Description (LEAD) to assess these leadership styles (Sivarat et al., 2021).

The leader-member exchange theory feedback instrument (LMX7) assesses the relationship between leader and follower, focusing on the relationship as an exchange between the two. One of the best-known instruments to come out of the exchange theorists, the LMX7, heralded the shift from traits to behaviors. The LMX7 offers leaders insight allowing leaders to modify individual behaviors to maximize organizational effectiveness and performance. A clear link between the LMX7 and organizational effectiveness has yet to be established (Carrara et al., 2018).

Recent interest in transformational and charismatic leadership has led researchers to create several feedback assessment instruments focused on these styles. Kouzes and Posner (2007) created a Leadership Practices Inventory (LPI) to provide leaders with an assessment of individual leadership practices, looking specifically at five practices and two commitments. Using a Likert-type scale, the LPI contains 30 questions answered by both the leader and their subordinates (Carrara et al., 2018).

In the late 1970s, Robert Greenleaf developed the Servant Leadership Instrument (SLI) to provide feedback assessment of servant Leaders. The SLI is designed to assess a leader's servant tendencies: empathy, ethics, consideration, social awareness, and empowerment. Additional

measurements of the servant Leadership style have been developed, including a 23-item questionnaire created by Barbuto and Wheeler in 2006 and a 35-item questionnaire created by Sendjaya et al. in 2008. Additional tools have been developed, yet disagreement abounds on the appropriateness of the instruments and their validity (Gandolfi et al., 2017).

The Multifactor Leadership Questionnaire (MLQ) was developed to reflect the full-range leadership model theory. According to Northouse (2010), the MLQ is quite probably the most widely used assessment tool for both the transformational leadership theory and the full-range leadership model. The MLQ Form 5X contains 45 items designed to evaluate nine leadership factors and differentiate between three leadership styles: (a) transactional, (b) transformational, and (c) passive/avoidant. Leaders would be classified as transformational, transactional, or passive/avoidant not because they exclusively displayed just one style but based on the style employed the majority of the time (Carrara et al., 2018).

The MLQ Form 5X is considered a valid and reliable feedback assessment instrument. Researchers demonstrated the MLQ Form 5X represents the characteristics of the full range model of leadership and its underlying theory. Furthermore, studies on the MLQ produced a reliability coefficient ranging from 0.74 to 0.94 and found validation with Cronbach's alphas ranging from .91 to .94 (Carrara et al., 2018).

Literature Review Summary

Leadership theorists over the past 20 years have found alignment with the transformational leadership style identified by Bass (1985) and organizational success in both the public and private sectors (Abdalla et al., 2018; Larson et al., 2019). Leadership theorists have also identified a correlation between women's leadership styles and transformational leadership styles (Silva & Mendis, 2017), yet a gap remains in the research on the leadership styles of

minority women, particularly individuals in academic medicine leadership (Larson et al., 2019). No studies exist examining the leadership styles of minority women in academic medicine, reinforcing the appropriateness of this topic for study. The research methodology, study design, and data collection and analysis were described here, justifying utilizing the quasi-experimental quantitative research design outlined in Chapter 3.

Chapter 3: Methodology

Women comprise over 50% of the population, and minority women make up 30% of the U.S. population (Association of American Medical Colleges, 2020). Women historically have been under-represented in leadership positions in all industries, including healthcare (Madsen & Andrade, 2018) and education (Wheat & Hill, 2016). Identifying potential leaders within under-represented groups, such as minority women, may provide academic medicine with a pool of candidates that can be mentored and promoted to leadership positions (Girod et al., 2016; Rochon et al., 2016). A key to developing successful mentoring programs is identifying the leadership styles of current minority women administrators (Brown et al., 2019; Burkinshaw & White, 2017).

The problem is Black and Hispanic/Latinx women are underrepresented in leadership positions in academic medicine (Carr et al., 2018). Identifying the leadership styles of minority women administrators in medical schools in the U.S.A. may allow organizations to identify and mentor future leaders through professional development programs (Jones & Jones, 2017). Focusing on transformational, transactional, and passive avoidant leadership styles aligns with leadership research from the past 20 years (Brown et al., 2019). Researchers identified a link between organizational position and leadership style, including a correlation between administrative leaders and transformational leadership (Abdalla et al., 2018).

The purpose of this quasi-experimental quantitative study was to determine if a significant difference existed between the transformational, transactional, and passive/avoidant leadership styles of Black and Hispanic/Latinx women administrators in academic medicine to gain a greater understanding of the differences between their leadership styles. The proposed study may contribute to the leadership knowledge base by assessing the leadership styles of

minority women leaders in U.S. medical schools (Carr et al., 2018; Rodriguez et al., 2016). The Multifactor Leadership Questionnaire (MLQ) Form 5X, which assesses leadership styles along the transformational, transactional, and passive avoidant continuum defined by the full-range leadership model, was used (Bass & Avolio, 1997).

The full-range leadership model has been studied extensively in a variety of environments, but a review of the literature showed no empirical research on leadership styles specifically for minority women in healthcare administration. A study of leadership styles of Black and Hispanic/Latinx women in administrative leadership positions in academic medicine is important to fill the gap in the leadership literature. The following research questions were addressed:

Research Question 1: To what extent is there a statistically significant between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style?

Research Question 2: To what extent is there a statistically significant difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style?

Research Question 3: To what extent is there a statistically significant difference between Hispanic/Latinx and Black women administrators in academic medicine in passive/avoidant leadership styles?

The research hypotheses were:

H1₀: There is no statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style.

H1_a: There is a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style.

H2₀: There is no statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style.

H2_a: There is a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style.

H3₀: There is no statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in passive/avoidant leadership style.

H3_a: There is a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in passive/avoidant leadership style.

The study, although quasi-experimental, offered sufficient descriptive statistical data to answer the research questions. Elements that follow describe the methodological framework for the study. First, the research method and design are explained in greater detail. Operational definitions of the variables are also provided. The survey instrument is discussed, along with psychometric properties that describe the reliability and validity of the instrument. Data collection, processing, and analysis are addressed. Finally, methodological assumptions, limitations, delimitations, and ethical assurances are discussed.

Research Methodology, Design, and Rationale

Quantitative research is appropriate when the researcher seeks to analyze research questions by collecting data via surveys or questionnaires to gain a deeper understanding of relationships (Neuman, 2006). Surveys are acknowledged as efficient and inexpensive tools for quantitative research, particularly when collecting data on perceptions such as leadership skills (Creswell, 2009). Surveys also allow researchers to reach larger numbers of participants,

particularly online surveys. A survey instrument also provides the researcher the ability to overcome limitations on personal finances and geographic location (Neuman, 2006). The MLQ Form 5X survey was used in this study to measure the leadership styles of the study participants.

A quasi-experimental design was appropriate for the study given that in this type of research design, the independent variable was manipulated, while the participants were not randomly assigned. The independent variable in the study was the race/ethnicity, either Hispanic/Latinx or Black (those who self-identify) of women administrators in U.S. medical schools. This type of nonequivalent quasi-experimental group design was suitable for the study since the independent variable was race/ethnicity (Salkind, 2010). For the study, the dependent variable was the leadership style of the participants as defined by the full-range leadership theory (Bass & Avolio, 1997) and was measured by the Multifactor Leadership Questionnaire Form 5X. The independent variable of the race/ethnicity was measured by a demographic question on the online survey. All three research questions were analyzed using an independent samples *t*-test, which was the appropriate statistical test to compare the means of two different groups, such as the two identified in the study (Neuman, 2006).

The Multifactor Leadership Questionnaire (MLQ) Form 5X survey assessment instrument designed by Bass and Avolio (1997) and subsequently revised (Begum et al., 2018) was used to obtain data. The MLQ Form 5X has been extensively utilized in leadership research in the past and was appropriate for the study (Gebremariam & Mulu, 2018). Permission from Mind Garden, Inc. was obtained to use the questionnaire (Appendix A). Although surveys such as the MLQ Form 5X do have disadvantages, including the lack of 360-degree feedback, the potential for self-censoring, and the failure of the instrument to sufficiently address the role of leadership in a larger context, the MLQ Form 5X was still utilized (Vogt, 2007).

Role of the Researcher

A convenience sample was used for the study, and participants were recruited through snowballing efforts via social media professional connections. No participant had any prior working relationship with me. The study did not take place at my place of employment, and no conflict of interest occurred. No incentives were offered. My primary role in this quasi-experimental research study was to coordinate the data collection and the analysis process. Researchers who utilize quasi-experimental designs should also try to manage potential confounding variables, such as motivation, by carefully designing the study to include only participants who meet the study requirements. This was accomplished by demographic questions on the survey. Other potential confounding variables, such as participant health, stress level, mental health, and quality of life, could be managed (Samil, 2016).

I communicated the purpose of the study to each potential participant prior to the dissemination of the survey instrument. A hyperlink to the survey was provided to participants via email (see Appendix B), along with detailed instructions on how to complete the survey and information regarding the intent of the study and the terms of informed consent. Once the survey was completed, the data were coded and analyzed. I also managed security by keeping all data in a secure location. A private laptop with encrypted security was used to store the data in a locked cabinet at my home where it will be kept for 3 years before destroying.

Research Procedures

Leadership styles of men and women have been extensively studied over the past 20 years; however, the data on minorities, particularly minority women, is lacking. Research on minority women in leadership positions in academic medicine is even more scarce (Brown et al., 2019). In the proposed research study, a quantitative quasi-experimental design was used to

determine if a statistically significant difference in leadership styles existed between Hispanic/Latinx and Black women in academic medicine leadership. A snowball convenience sample of 131 minority women, 65 Hispanic/Latinx and 66 Black were surveyed using the MLQ Form 5X. According to the latest data from the American Association of Medical Colleges, there are approximately 200 Black women and 180 Hispanic/Latinx women department chairs and deans at medical schools in the U.S.A. (Association of American Medical Colleges, 2020), while data on the number of minority women in other leadership positions was not available.

Population and Sample Selection

The first step in the process involved obtaining approval from the American College of Education Institutional Review Board (IRB) (see Appendix C). Once IRB approval was obtained, potential participants were contacted via email to explain the purpose of the study and their roles as participants. Participants were identified through social media connections on Facebook as employed by U.S. medical schools and further identified based on self-identified characteristics of race/ethnicity and employment and then recruited for participation. These participants were asked to refer additional potential participants for the study, snowballing recruitment efforts. Participants were then contacted via email (Appendix D).

All participants received an informed consent form for review before participating in the study and were asked to electronically acknowledge (see Appendix E). The form included the purpose of the study, participation criteria, instructions for completing the MLQ Form 5X questionnaire, and a brief description of the risks and benefits of participation. Participants were also assured of confidentiality and offered the right to withdraw at any point in time (Nusbaum et al., 2017). The survey questionnaire was administered via Survey Monkey, and as data were collected and analyzed, the results were stored on a secured computer in a locked cabinet.

Onwuegbuzie and Collins (2007) recommend a sample size of 64 per group for a two-tailed hypothesis to achieve .80 statistical power at the 0.05 level of significance. An a priori power analysis also indicated a sample size of 128 was needed for the study with 64 participants per group in order to have an 80% probability of finding a statistically significant result if one existed (Laerd Statistics, 2018) (see Appendix F). Based on those recommendations, the study sample included 66 Black and 65 Hispanic/Latinx women administrators in U.S. medical schools. The sample size and the associated statistical power ensured if the data offered no statistically significant results, the potential for Type II error was mitigated (Onwuegbuzie & Collins, 2007). A contingency plan was created in case challenges arose in recruiting sufficient numbers of participants. First, recruitment efforts could have expanded on social media platforms, including MeetUp and LinkedIn. Second, the sampling frame could have been expanded to include retirees that met the demographic requirements for participation, specifically women Hispanic/Latinx or Black administrators who retired from academic medicine. Finally, the sampling frame could have been expanded to include interim administrators and former but currently employed administrators that met the demographic requirements. These additional steps were not necessary.

The group surveyed was selected after taking deliberative steps to ensure those queried were minority women administrators in medical schools. The convenience sample was the best representation of a population that is difficult to sample randomly, and snowball sampling was employed to reach additional participants. Although the results cannot be generalized beyond the sample, the results could be theorized to apply to the larger population of minority women in leadership positions in academic medicine (Vogt, 2007). The study was established for 2 months, and potential participants were given 1 month to reply with a follow-up email sent 2 weeks after

the first. Data analysis commenced when the required number for each sample group was reached, and the survey closed.

Data Instrumentation

The survey instrument used was the MLQ Form 5X survey. The MLQ Form 5X was developed by Bass and Avolio in 1997 and published by Mind Garden, Inc. Permission to use the MLQ Form 5X was obtained prior to initiating the study (see Appendix A). The MLQ Form 5X is recognized as a valid and reliable leadership assessment tool for determining leadership styles that fall along the full-range leadership model continuum (Antonakis et al., 2003). The instrument measures transactional, transformational, and passive avoidant leadership styles by measuring nine specific leadership characteristics. The survey contains 36 items related to leadership and nine related to output for a total of 45 items, and all scored on a 5-point Likert-type scale ranging from “0” (*not at all*) to “4” (*frequently, if not always*), with scores ranging from 0 to 4.

The subscales for transformational leadership are idealized influence attributed, idealized influence behavioral, inspirational motivation, intellectual stimulation, and individualized consideration. The subscales for transactional leadership are contingent reward and management by exception active. The subscales for passive avoidant are management by exception passive and passive/avoidant (Bass & Avolio, 1997). A correlational analysis of the components and subscales of the MLQ Form 5X indicates a strong relationship between each other and indicates a good fit (Gebremariam & Mulu, 2018).

Research from Gebremariam and Mulu (2018) found the MLQ Form 5X fit the leadership data on transformational, transactional, and passive avoidant styles in the following goodness of fit indices: ratio of chi-square to degrees of freedom, Root Mean Square Error of

Approximation (RMSEA), Normed Fit Index (NFI), Relative Fix Index (RFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Akaike Information Criteria (AIC), and Expected Cross-Validation Index (ECVI). The MLQ Form 5X is accepted as a valid and reliable instrument with a reliability coefficient ranging between 0.74 and 0.94 and validation with Cronbach's alphas from 0.91 to 0.94 (Antonakis et al., 2003). The results indicate high reliability that meets the standard for internal consistency (Hasan, 2020).

The MLQ Form 5X has been used extensively in a variety of settings to analyze the leadership styles of individuals in areas ranging from business to education. The MLQ Form 5X has been completed by over 57,000 individuals and over 200 samples (Crede et al., 2019). Over the past 20 years, the instrument has been translated and used in 33 other countries and shows strong consistency (Hasan, 2020). The MLQ Form 5X is valid, reliable, and easy to use, factors that have contributed to its popularity as a leadership instrument (Crede et al., 2019).

Completing the survey instrument takes approximately 15 minutes to complete and requires a United States ninth grade reading level. The included instructions from Mind Garden are specific and direct participants to complete the questions to the best of their ability while leaving answers blank if they are unclear about how to respond, do not know the answer, or if the item is not applicable to their position (Bass & Avolio, 1997). This type of survey instrument is appropriate when conducting quantitative research such as the one described (Neuman, 2006; Samil, 2016). Permission to use the instrument was obtained from Mind Garden, the organization that has publishing rights.

Data Collection

Data collection was conducted via a secured online survey site that did not require cookies or in any way to track the participants. Internet Protocol (IP) addresses were not

collected, saved, or stored. Research data was collected and will be saved on an encrypted flash drive in a locked and secured location for 3 years. After 3 years, the data will be destroyed by deleting it from the flash drive. Participants were provided with an introductory letter and informed consent form with details of the purpose of the study, participation requirements, potential risks, and potential benefits. Participants were also assured of confidentiality, as well as provided details regarding their right to withdraw from the study at any time. Participants were not deceived in this study, and debriefing was not mandatory. Nevertheless, debriefing can be effective for feedback, and participants were offered the opportunity at the end of the survey to submit questions and/or comments for the researcher to review and answer (Lee et al., 2020). Incomplete data sets were removed from the analysis and not included in the total number of respondents.

Data Analysis

The quantitative research design was selected to answer the study questions of whether a statistically significant difference exists between the leadership styles of Black and Hispanic/Latinx women in leadership positions in academic medicine. The MLQ Form 5X was completed by participants via an online process using Survey Monkey. The survey instructions from Mind Garden were used and directed respondents to leave any answers blank if they did not know the answer, were unsure, or if they believed the item did not apply to them (Bass & Avolio, 1997). Any item left blank was not included in the final analysis. The MLQ Form 5X scoring key provided by Mind Garden was used to collect and sort the raw data obtained from the survey. SPSS 23 for Windows was used to analyze the data.

Data analysis and procedures for each of the research questions are explained below following each question:

Research Question 1: To what extent is there a statistically significant between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style?

H1₀: There is no statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style.

H1_a: There is a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style.

Question 1 was addressed utilizing a *t*-test on the subscales for transformational leadership of idealized influence attributed, idealized influence behavioral, inspirational motivation, intellectual stimulation, and individualized consideration. The rater scores for these subscales were sorted according to race/ethnicity, and a mean score was calculated. Results were calculated in SPSS 23 for Windows and presented in table format.

Research Question 2: To what extent is there a statistically significant difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style?

H2₀: There is no statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style.

H2_a: There is a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style.

Question 2 was answered utilizing a *t*-test on the subscales for transactional leadership, which are contingent reward and management by exception active. The rater scores for these subscales were sorted according to race/ethnicity, and a mean score was calculated. These results were also analyzed in SPSS 23 for Windows and presented in table format.

Research Question 3: To what extent is there a statistically significant difference between Hispanic/Latinx and Black women administrators in academic medicine in passive/avoidant leadership styles?

H3₀: There is no statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in passive/avoidant leadership style.

H3_a: There is a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in passive/avoidant leadership style.

Question 3 was also addressed utilizing a *t*-test on the subscales for passive avoidant, which are management by exception passive and passive/avoidant. The rater scores for these subscales were sorted according to race/ethnicity, and a mean score was calculated. Results were calculated in SPSS 23 for Windows and also presented in table format.

SPSS 23 for Windows was utilized for the statistical analysis. Descriptive statistics were also performed on the data, including standard deviation and frequencies. When the difference between two mean values between two independent groups is analyzed, independent samples *t*-test is typically utilized (Creswell, 2009). The independent *t*-test provided data to identify if a statistically significant difference existed in the leadership styles between the two groups of women. The mean responses of Black women and Hispanic/Latinx women administrators were compared, and any difference of $p \leq .05$ was considered statistically significant (Vogt, 2007).

The assumptions for an independent samples *t*-test included the assumption of independence, assumption of normality, assumption of homogeneity of variance, assumption of dependent variable scale of measurement, assumption of two categorical independent variables, and the no significant outliers test (Laerd Statistics, 2018). Assumption of independence refers to the sample which requires two independent, categorical groups that represent the independent

variable of the study, and this proposed design meets that assumption. Assumption of normality refers to the dependent variable, whereby the dependent variable is measured on a continuous scale. The MLQ Form 5X is a Likert scale and the data was converted to mean responses and considered continuous. Assumption of homogeneity of variance is also a consideration when using independent samples *t*-tests, as comparison groups should have the same variance. The assumption of homogeneity of variance was managed by ensuring the two groups were equal in size within a ratio of 1.5 (Aloe et al., 2017).

Assumption of dependent variable scale of measurement reflects the assumption that the dependent variable is interval or ratio. As noted, the MLQ Form 5X results are interval and measured on a continuum. Assumption of two categorical independent variables requires the independent variables to be two categorical independent groups. Independent variable in this study was women racial/ethnic self-identity with two levels that were mutually exclusive for the purposes of this study. The no significant outliers assumption requires there be no significant outliers. Outliers were evaluated with Box and Whisker Plots (Laerd Statistics, 2018).

Reliability and Validity

Reliability and validity are critical elements in assessing any measurement tool. Validity refers to how effectively the instrument measures what it purports to measure, while reliability refers to the confidence in the results of the instrument. The MLQ Form 5X is considered a valid and reliable instrument with convincing convergent and discriminant validity, as well as the goodness of fit, and has been used extensively over the past three decades (Gebremariam & Mulu, 2018). Multiple researchers have analyzed the validity and reliability of the MLQ Form 5X and documented its representation of the characteristics of the full range model of leadership and its underlying theory (Hasan, 2020). Research on the MLQ indicates a reliability coefficient

ranging from 0.74 to 0.94 and found validation with Cronbach's alphas ranging from .91 to .94 (Antonakis et al., 2003; Begum et al., 2018; Mohammadkhani & Gholamzadeh, 2016).

External limitations did exist relative to this study, including sample size and the collection process. The sample size was sufficient for the research design, but it was a convenience sample obtained through social media contacts. Randomization was not possible, and the sample may be skewed towards those most willing to participate. Every effort was made to ensure adequate participation, including contacting potential participants twice. The collection process involved data from the participant's self-perspective and lacked 360-degree feedback, which was another potential external limitation. The MLQ Form 5X is considered a valid and reliable instrument for assessing leadership style even without the 360-degree feedback, and as a result, the limitation was mitigated (Aloe et al., 2017).

Ethical Procedures

Approval from the Institutional Review Board (IRB) at the American College of Education was obtained prior to collecting any data (see Appendix C). Participants were assured of confidentiality. Participants were not required to provide any personal or professional information other than demographic information. Participation was voluntary, and there were no consequences for withdrawing from the study. No participant was placed in any personal or professional conflicts of interest, physical discomfort, or psychological distress during the study (Day & Benner, 2002).

The informed consent form was provided to participants prior to beginning the survey, and participants were not permitted access to the rest of the survey without acknowledging the informed consent form. The survey instrument and method of the collection did not involve any deception or misinformation. No participant had any prior working relationship with me. The

study did not take place at my place of employment, and no conflict of interest occurred. No incentives were offered and all means were endeavored to minimize bias or self-deception in conducting the research. Every attempt was made to conform to the research standards for conducting research with human subjects set forth by the American College of Education (Cope, 2014).

Data obtained from the study will be kept by me, and secured with access restricted. Participants received feedback on their individual results only. Research data will be saved on an encrypted flash drive in a locked and secured location for 3 years. After 3 years, the data will be destroyed by deleting it from the flash drive (Cope, 2014).

Summary

The purpose of this quasi-experimental quantitative study was to determine if a significant difference existed between the transformational, transactional, and passive/avoidant leadership styles of Black and Hispanic/Latinx women administrators in academic medicine to gain a greater understanding of the differences between their leadership styles. Black and Hispanic/Latinx women administrators in medical schools were surveyed via an online, secured website after being recruited through social media connections. The Multifactor Leadership Questionnaire (MLQ) Form 5X was utilized as the assessment survey and demographic questions on race/ethnicity and gender. Detailed analysis of the survey results and interpretation of the data findings will be discussed in Chapter 4.

Chapter 4: Research Findings and Data Analysis Results

The purpose of this quasi-experimental quantitative study was to determine if a significant difference existed between the transformational, transactional, and passive/avoidant leadership styles of Black and Hispanic/Latinx women administrators in academic medicine to gain a greater understanding of the differences between their leadership styles. Multifactor Leadership Questionnaire Form 5X (MLQ Form 5X) was the survey instrument used in this study (Appendix A). Dependent variables for this study were transformational, transactional, and passive/avoidant leadership styles, as defined by Bass and Avolio (1997) and measured by the MLQ Form 5X. The independent variable in the study was the self-identified race/ethnicity, either Hispanic/Latinx or Black, of women administrators in U.S. medical schools. Data from respondents who did not self-identify were not included in the analysis. Chapter 4 discusses the data collection, analysis, assumptions testing, and results, of the *t*-tests. The chapter concludes with an analysis of the study's results in relation to the research questions.

Data Collection

Data collection was conducted over a 2-month period via a secured online survey site that did not require cookies or in any way track the participants. Potential participants were contacted via email to explain the purpose of the study and their roles as participants. Participants were identified through social media connections on Facebook as employed by U.S. medical schools and further identified based on self-identified characteristics of race/ethnicity and employment and then recruited for participation. These participants were asked to refer additional potential participants for the study, snowballing recruitment efforts. Participants were then contacted via email to ensure eligibility.

The research questions and hypotheses were as follows:

Research Question 1: To what extent is there a statistically significant between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style?

H1₀: There is no statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style.

H1_a: There is a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style.

Question 2: To what extent is there a statistically significant difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style?

H2₀: There is no statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style.

H2_a: There is a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style.

Question 3: To what extent is there a statistically significant difference between Hispanic/Latinx and Black women administrators in academic medicine in passive/avoidant leadership styles?

H3₀: There is no statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in passive/avoidant leadership style.

H3_a: There is a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in passive/avoidant leadership style.

Chapter 4 is organized by a discussion of the sample demographics, descriptive statistics, data screening, research questions/hypothesis testing, and a summary of the results. Data were

analyzed with SPSS 23 for Windows. The following provides a discussion of the sample demographics.

Sample Demographics

The sample consisted of 131 female administrators in academic medicine, of whom 50.4% ($n = 66$) were Black and 49.6% ($n = 65$) were Hispanic/Latinx. Their most frequent current or previous academic roles included Program Director (26.0%, $n = 34$), Department Chair (20.6%, $n = 27$), and Associate Dean (19.1%, $n = 25$) respectively. Less frequent roles included “other,” (1.5%, $n = 2$) which consisted of Lead Instructor and Assistant Clerkship Director, Associate Department Chair (2.3%, $n = 3$), and Division Dean (6.1%, $n = 8$) to name a few. Current or previous academic role is presented in Table 1.

Table 1

Current Academic Role at U.S. Medical School

Current or Previous Role	<i>n</i>	%
Assistant Dean	16	12.2
Associate Dean	25	19.1
Associate Department Chair	3	2.3
Department Chair	27	20.6
Division Dean	8	6.1
Other (please specify)*	2	1.5
Program Coordinator	16	12.2
Program Director	34	26.0
Total	131	100.0

Note: Other includes Lead Instructor and Assistant Clerkship Director.

Regarding race/ethnicity relative to their most frequent current or previous academic roles, 13.7% ($n = 18$) of the sample identified as Black women who were or had been Program Directors compared to 12.2% ($n = 16$) of the sample who identified as Hispanic/Latinx women who were or had been Program Directors. Department Chair was the second most frequent role

and 9.9% ($n = 13$) of the sample identified as Black women who were or had been Department Chairs compared to 10.7% ($n = 14$) of the sample who identified as Hispanic/Latinx women who were or had been Department Chairs. Associate Dean was the third most frequent role, and 8.4% ($n = 11$) of the sample identified as Black women who were or had been Associate Deans compared to 10.7% ($n = 14$) of the sample who identified as Hispanic/Latinx women who were or had been Associate Deans. See Table 2.

Table 2

Administrative Role at U.S. Medical School by Racial/Ethnic Self-Identity

		Racial/Ethnic Self-Identity		
		Hispanic/Latinx		
		Black Woman	Woman	Total
Assistant Dean	Count	5	11	16
	% of Total	3.8%	8.4%	12.2%
Associate Dean	Count	11	14	25
	% of Total	8.4%	10.7%	19.1%
Associate Department Chair	Count	2	1	3
	% of Total	1.5%	0.8%	2.3%
Department Chair	Count	13	14	27
	% of Total	9.9%	10.7%	20.6%
Division Dean	Count	6	2	8
	% of Total	4.6%	1.5%	6.1%
Other (please specify)	Count	1	1	2
	% of Total	0.8%	0.8%	1.5%
Program Coordinator	Count	10	6	16
	% of Total	7.6%	4.6%	12.2%
Program Director	Count	18	16	34
	% of Total	13.7%	12.2%	26.0%
Total	Count	66	65	131
	% of Total	50.4%	49.6%	100.0%

Note: Other includes Lead Instructor and Assistant Clerkship Director.

Data Analysis and Results

Scores were computed for the variables of interest (transformational leadership, transactional leadership, passive/avoidant leadership) according to the instructions in the scoring manual for the MLQ Form 5X. For transformational leadership, scores ranged from 2.40 to 3.50 ($M = 3.05$, $SD = 0.21$). The reliability of the instrument for the sample was tested with Cronbach's alpha. The internal consistency of transformational leadership was acceptable ($\alpha = .779$). For transactional leadership, scores ranged from 1.29 to 2.75 ($M = 1.90$, $SD = 0.37$). The reliability was questionable ($\alpha = .658$). For passive/avoidant leadership, scores ranged from 0 to 1.63 ($M = 0.65$, $SD = 0.31$). The reliability was considered unreliable ($\alpha = .392$). Therefore, the results should be interpreted with caution. Descriptive statistics are presented in Table 3.

Table 3

Descriptive Statistics

Variable	<i>Minimum</i>	<i>Maximum</i>	<i>M</i>	<i>SD</i>
Transformational Leadership	2.40	3.50	3.05	0.21
Transactional Leadership	1.29	2.75	1.90	.037
Passive/Avoidant Leadership	.00	1.63	0.65	0.31

Research questions/hypotheses were tested with six independent samples t-tests. Prior to the analyses, the assumptions of the independent samples t-test were tested.

Assumption of Dependent Variable Scale of Measurement

The independent samples t-test requires that the dependent variable be on an interval or ratio scale of measurement (Laerd Statistics, 2018). Interval variables are measured on a continuum. For instance, scores for transformational leadership ranged from 2.40 to 3.50, but there were 19 other values between them. This is presented in a frequency distribution in Table 4.

Table 4*Frequency Distribution of Transformational Leadership Scores*

Score	<i>n</i>	%	Cumulative %
2.40	1	.8	.8
2.45	1	.8	1.5
2.50	2	1.5	3.1
2.60	4	3.1	6.1
2.65	2	1.5	7.6
2.70	2	1.5	9.2
2.75	3	2.3	11.5
2.80	1	.8	12.2
2.85	3	2.3	14.5
2.90	6	4.6	19.1
2.95	8	6.1	25.2
3.00	9	6.9	32.1
3.05	29	22.1	54.2
3.10	17	13.0	67.2
3.15	8	6.1	73.3
3.20	7	5.3	78.6
3.25	8	6.1	84.7
3.30	11	8.4	93.1
3.35	5	3.8	96.9
3.40	3	2.3	99.2
3.50	1	.8	100.0
Total	131	100.0	

Assumption of Two Categorical Independent Variables

The independent samples t-test requires that the independent variable consists of two categorical independent groups (Laerd Statistics, 2018). The independent variable in this study was women racial/ethnic self-identity with two levels, Black women and Hispanic/Latinx women. The groups were mutually exclusive. The participants self-identified as Black women or Hispanic/Latinx women.

No Significant Outliers

The independent samples t-test requires that there be no significant outliers (Laerd Statistics, 2018). Outliers are data points that do not follow the typical pattern. Outliers can be evaluated with Box and Whisker Plots (Figures 2, 4, 6).

Assumption of Independence

The independent samples t-test requires the observations in one sample to be independent of the observations in another sample (Laerd Statistics, 2018). In other words, the same case cannot appear in both samples. This assumption was checked by observing the data in the data set. Based on the layout of the data and respondent identification numbers, the observations were independent.

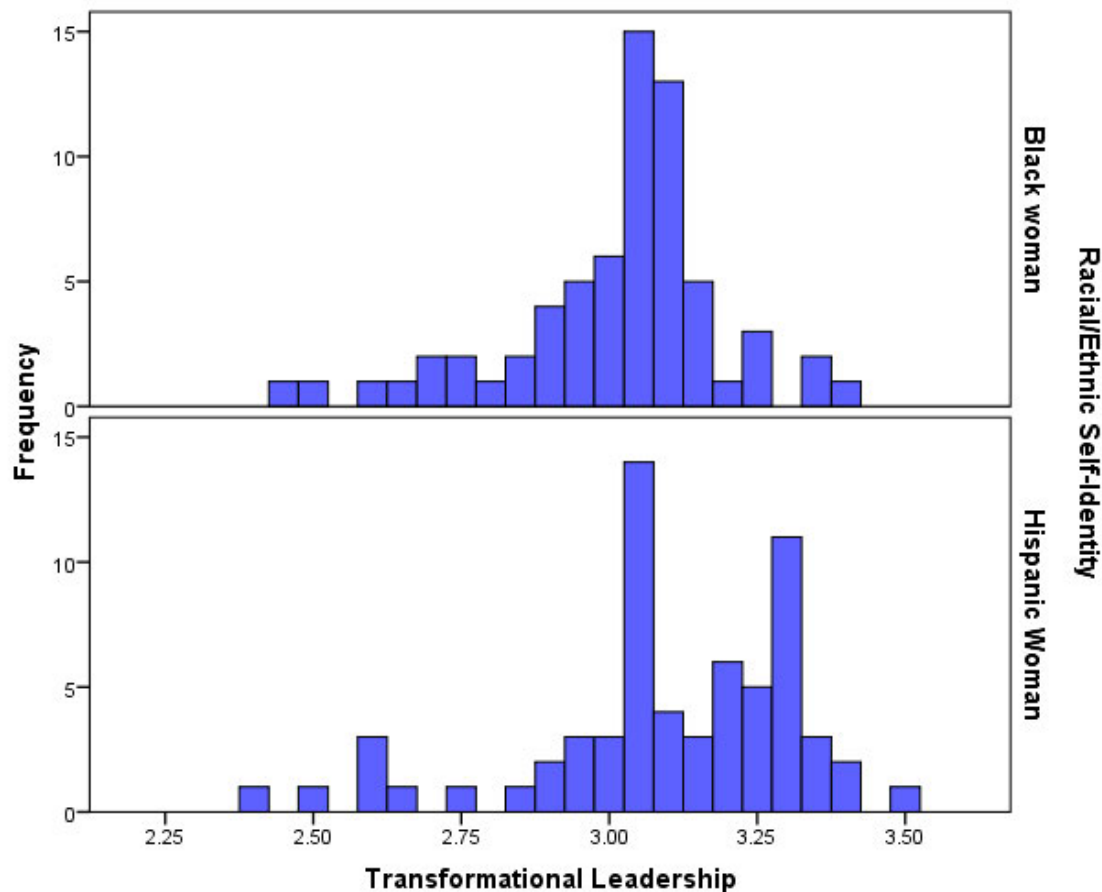
Assumption of Normality

The independent samples t-test requires the distributions of data for both samples to be approximately normally distributed (Laerd Statistics, 2018). This assumption was tested with the Shapiro-Wilk Test of Normality (Table 5) and histograms (Figures 1, 3, 5). Statistical outliers were determined by Box and Whisker Plots (Figures 2, 4, 6). The Shapiro-Wilk Test of Normality compares the distribution of data to a theoretical normal distribution. If there is a statistically significant difference ($p < .05$), then the distribution is not normal. The distributions were not normal for the data for each dependent variable and subgroup. The decision was made to continue screening for normality. Shapiro-Wilk Test results are presented in Table 5.

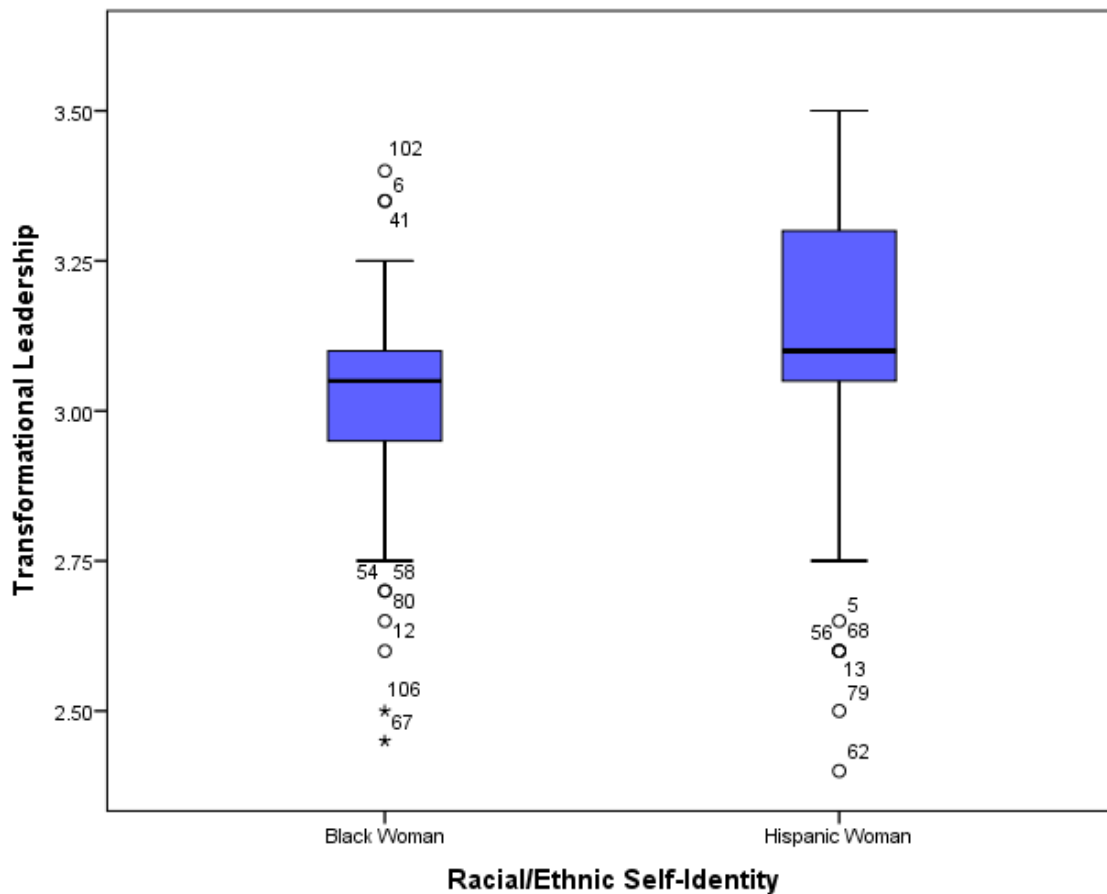
Table 5*Shapiro-Wilk Test of Normality Results*

Variable	Racial/Ethnic Self Identity	Shapiro-Wilk		
		Statistic	df	p
Transformational Leadership	Black Woman	.920	66	.000
	Hispanic/Latinx Woman	.908	65	.000
Transactional Leadership	Black Woman	.918	66	.000
	Hispanic/Latinx Woman	.915	65	.000
Passive/Avoidant Leadership	Black Woman	.893	66	.000
	Hispanic/Latinx Woman	.927	65	.001

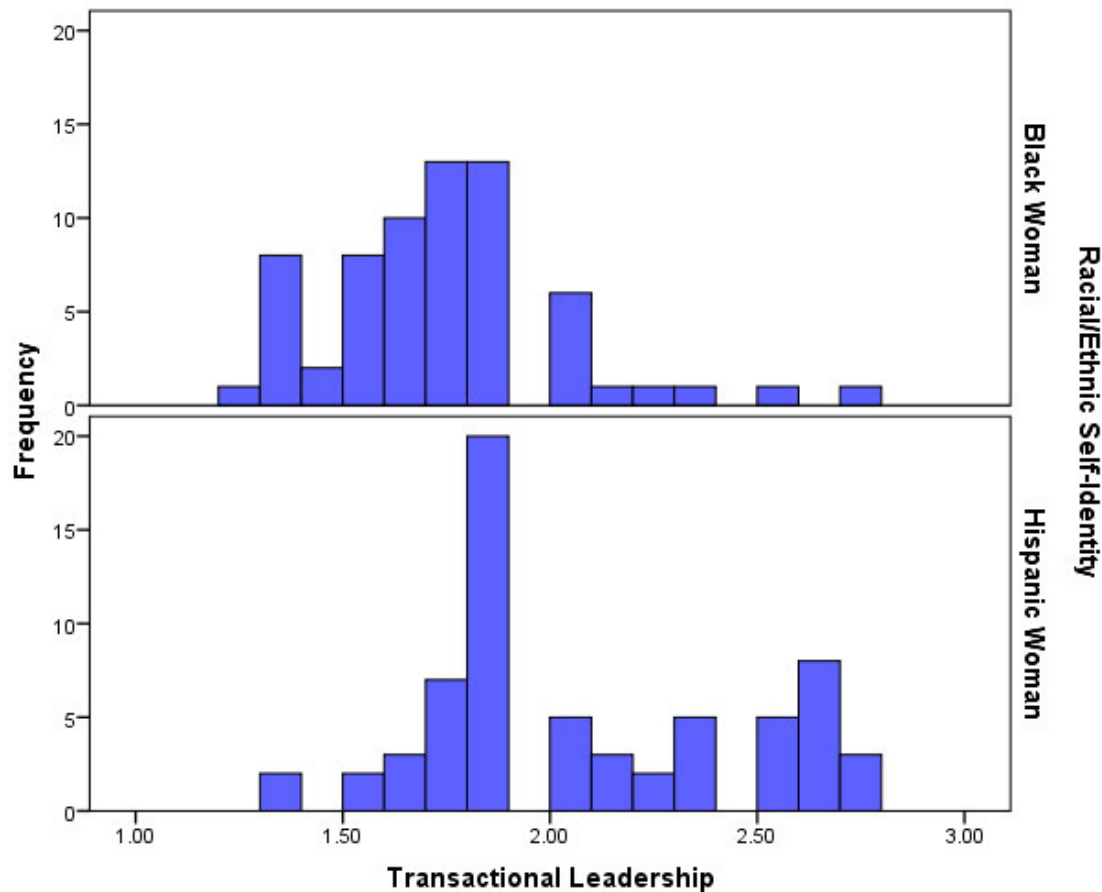
For transformational leadership, the tails of the distribution of scores pointed primarily to the left. The distributions had statistically significant negative skews for both Black ($p < .001$) and Hispanic/Latinx women ($p < .001$). In addition, the distribution of scores for Hispanic/Latinx women had two peaks, which indicates that it is a bimodal distribution. A bimodal distribution suggests that there are subgroup differences in transformational leadership among Hispanic/Latinx women. The histogram of transformational leadership by racial-ethnic self-identity is presented in Figure 1.

Figure 1*Transformational Leadership by Racial/Ethnic Self-Identity*

Next, the distributions of scores were examined for statistical outliers with stem and leaf and Box and Whisker Plots for transformational leadership (Figure 2). Outliers are identified in Box and Whisker plots when they fall outside the whiskers. They are determined mathematically when they fall above or below 1.5 times the interquartile range (IQR). The interquartile range is the difference between the first and the third quartile of scores. For Black women, the IQR = 0.15. The median = 3.05. There were nine outliers, six (≤ 2.70) and three (≥ 3.35). For Hispanic/Latinx women, the IQR = 0.27. The median = 3.10. There were six outliers (≤ 2.65). The Box and Whisker plot of transactional leadership by racial/ethnic self-identity is presented in Figure 2.

Figure 2*Box and Whisker Plot of Transformational Leadership by Racial/Ethnic Self-Identity*

For transactional leadership, the tail of the distribution of scores pointed primarily to the right for both Black and Hispanic/Latinx women. According to the Shapiro-Wilk Test of Normality, the distributions were both not normal for Black women ($p < .001$) and Hispanic/Latinx women ($p < .001$) (Figure 3). The histogram of transactional leadership by racial-ethnic self-identity is presented in Figure 3.

Figure 3*Transactional Leadership by Racial/Ethnic Self-Identity*

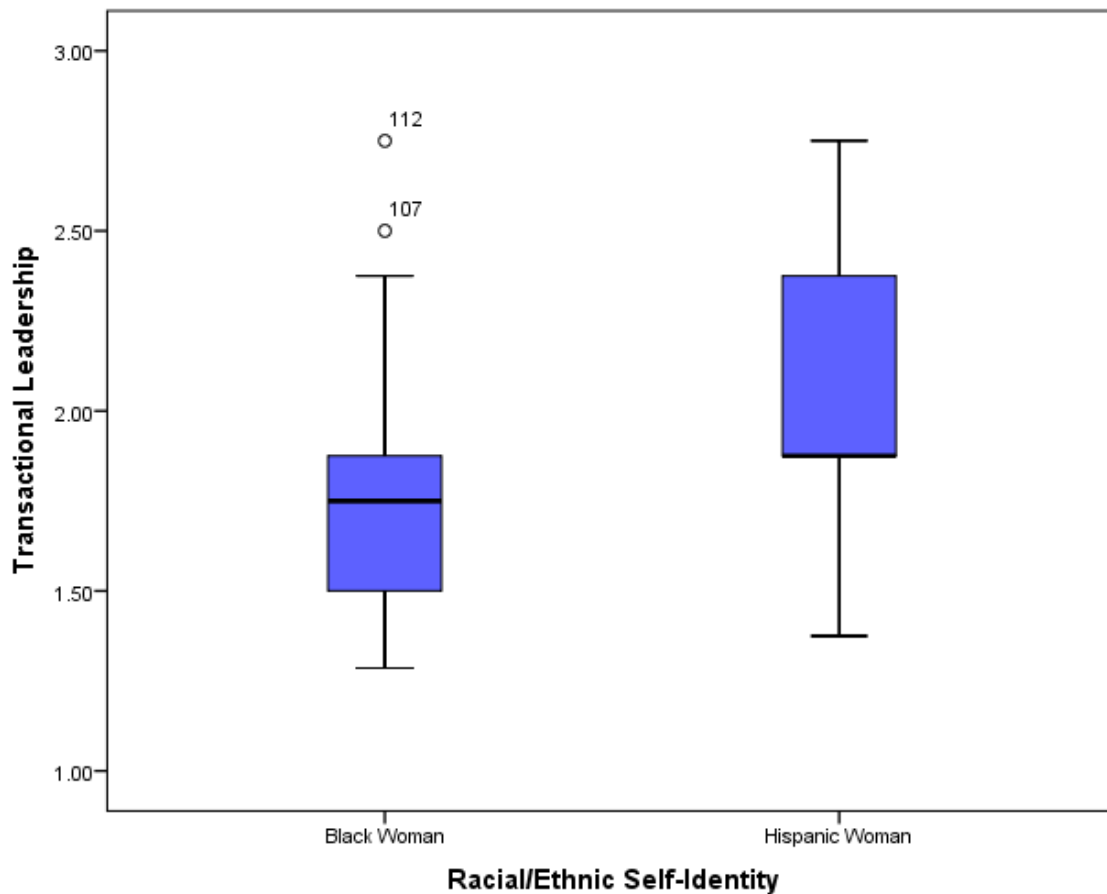
For Black women, the IQR = 0.38. The median = 1.75. There were two outliers (≥ 2.5).

For Hispanic/Latinx women, the IQR = 0.56. The median = 1.88. There were no outliers present.

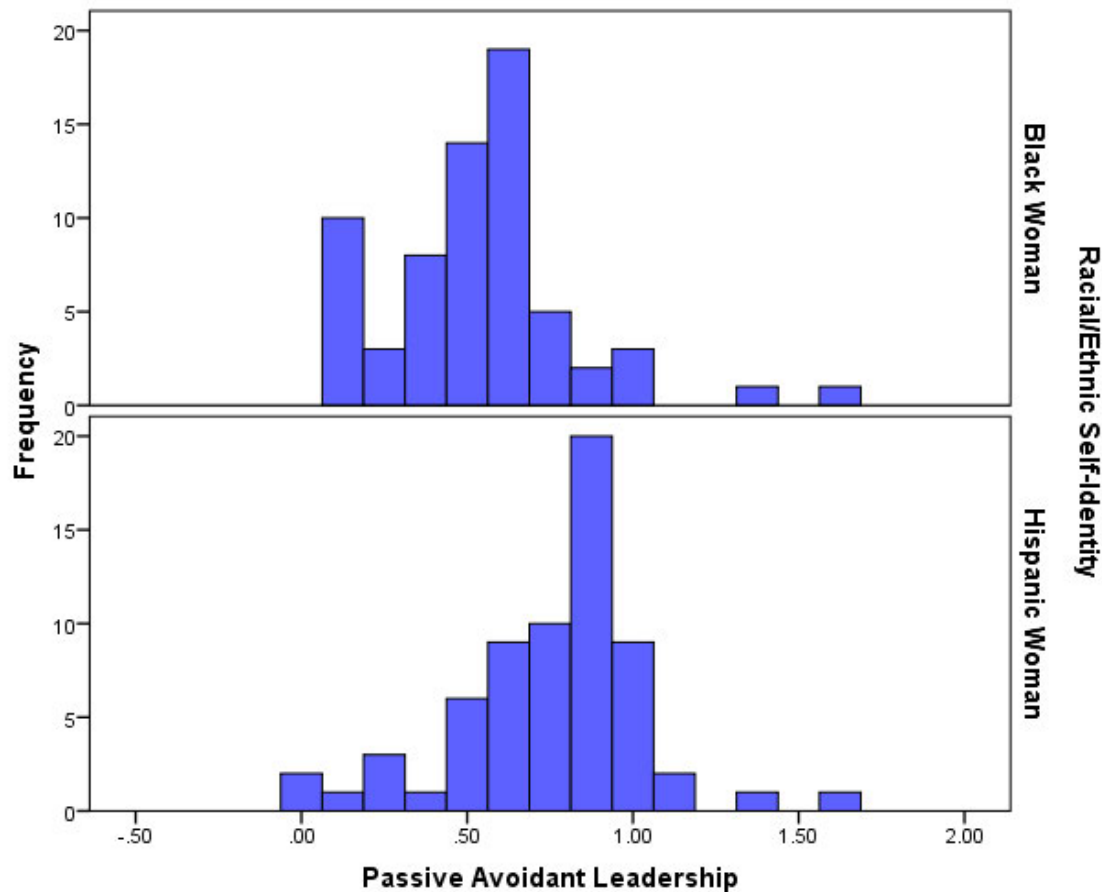
The Box and Whisker plot of transactional leadership by racial/ethnic self-identity is presented in Figure 4. Although the distributions were not normal and there were several statistical outliers, the analyses proceeded as planned. With large samples sizes, the independent samples t-test is an appropriate tool for results with departures from normality (Laerd Statistics, 2018).

Figure 4

Box and Whisker Plot of Transactional Leadership by Racial/Ethnic Self-Identity



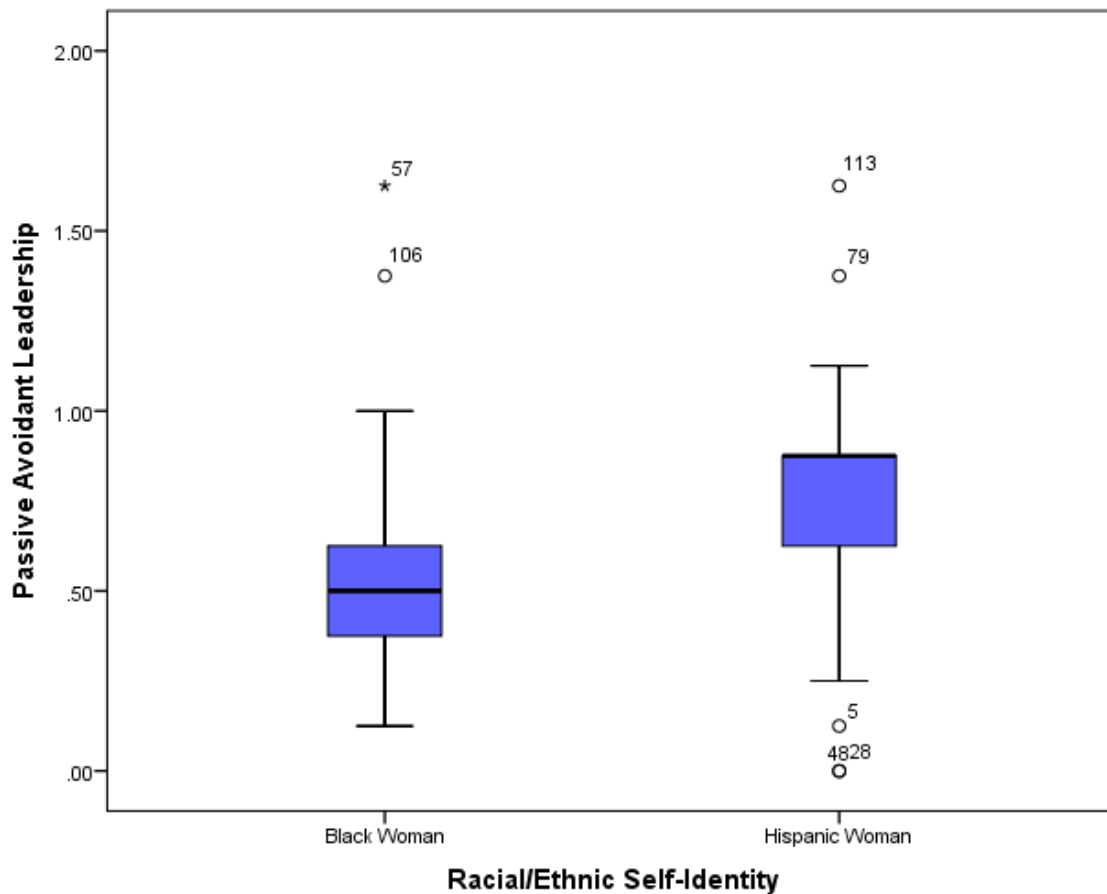
For passive/avoidant leadership, the tail of the distribution of scores pointed primarily to the right for Black women and primarily to the left for Hispanic/Latinx women. According to the Shapiro-Wilk Test of Normality, the distributions were both not normal for Black women ($p < .001$) and Hispanic/Latinx women ($p = .001$) as indicated in Table 4. The histogram of passive/avoidant leadership by racial-ethnic self-identity is presented in Figure 5.

Figure 5*Passive/Avoidant Leadership by Racial/Ethnic Self-Identity*

For Black women, the IQR = 0.25. The median = 0.50. There were two outliers (≥ 1.38). For Hispanic/Latinx women, the IQR = 0.25. The median = 0.88. There were five outliers, three (≤ 0.13) and two (≥ 1.38). The Box and Whisker plot of passive/avoidant leadership by racial/ethnic self-identity is presented in Figure 6. Although the distributions were not normal and there were several statistical outliers, the analyses proceeded as planned. With large samples sizes, the independent samples t-test is an appropriate tool for results with departures from normality (Laerd Statistics, 2018).

Figure 6

Box and Whisker Plot of Passive/Avoidant Leadership by Racial/Ethnic Self-Identity



Although the distributions were not normal and there were several statistical outliers present, the analyses proceeded as planned. With large sample sizes, the independent samples t-test is very robust against departures from normality (Laerd Statistics, 2018). The statistical outliers were retained because they were not the result of data entry errors but were accurately calculated values based on the participant responses. Nevertheless, the non-parametric Mann-Whitney U test was also conducted on the data, which confirmed the t-test results.

Homogeneity of Variances Assumption

The independent samples t-test assumes that the variances across the groups are approximately equal. This assumption was tested with Levene's Test for Equality of Variances. This assumption is violated when, as a result of the analysis, $p < .05$. For transformational leadership, the assumption was not violated, $p = .103$. For transactional leadership, the assumption was violated, $p < .001$. For passive/avoidant leadership, the assumption was not violated, $p = .891$. Levene's Test for Equality of Variances results are summarized in Table 6.

Table 6

Levene's Test for Equality of Variances

Variable	<i>F</i>	<i>p</i>
Transformational Leadership	2.70	.103
Transactional Leadership	12.76	.000
Passive/Avoidant Leadership	0.02	.891

In summary, it was determined that after screening the data for the homogeneity of variance assumption, the assumption was not violated for two distributions (transformational leadership and passive/avoidant leadership) but was violated for one distribution (transactional leadership). The analyses proceeded as planned because SPSS 23 for Windows makes an adjustment to the degrees of freedom to account for violations of this assumption. Group means, and t-test results are presented in Table 7.

Table 7*Group Means and T-Test Results*

	Racial/Ethnic Self-Identity	<i>N</i>	<i>M</i>	<i>SD</i>	<i>SEM</i>	<i>df</i>	<i>t</i>	<i>p</i>
Transformational Leadership	Black Woman	66	3.01	0.18	0.02	129	-2.32	.022*
	Hispanic/Latinx	65	3.10	0.23	0.03			
	Woman							
Transactional Leadership	Black Woman	66	1.74	0.28	0.03	118.40 ^a	-5.86	< .001***
	Hispanic/Latinx	65	2.07	0.38	0.05			
	Woman							
Passive/Avoidant Leadership	Black Woman	66	0.54	0.29	0.04	129	-4.40	< .001***
	Hispanic/Latinx	65	0.76	0.29	0.04			
	Woman							

Note. *** $p < .001$, * $p < .05$, two-tailed. A = Equal variances not assumed.

Research Question/Hypothesis Testing

Research Question 1/Hypothesis 1

Research Question 1 asked, “To what extent is there a statistically significant difference in transformational leadership style between Hispanic/Latinx and Black women administrators in academic medicine? Research Question 1 was tested with an independent samples t-test. The dependent variable was transformational leadership as measured by the MLQ 5X. The independent variable was female racial/ethnic self-identity with two levels, Black women and Hispanic/Latinx women. There was a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style, $t(129) = -2.32$, $p = .022$, two-tailed, equal variances assumed. Specifically, Hispanic/Latinx women ($M = 3.10$, $SD = 0.23$) were more transformational than Black women ($M = 3.01$, $SD = 0.23$). Cohen’s $d = 0.44$, observed power = .70. This is a small effect size.

H_{01} stated that there is no statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transformational

leadership style. There was a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style, $t(129) = -2.32, p = .022$, two-tailed, equal variances assumed. Therefore, the null hypothesis was rejected. Specifically, Hispanic/Latinx women ($M = 3.10, SD = 0.23$) displayed more transformational leadership traits than Black women ($M = 3.01, SD = 0.23$).

Research Question 2/Hypothesis 2

Research Question 2 asked, “To what extent is there a statistically significant difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style? Research Question 2 was tested with an independent samples t-test. The dependent variable was transactional leadership as measured by the MLQ 5X. The independent variable was female racial/ethnic self-identity with two levels, Black women and Hispanic/Latinx women. There was a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style, $t(118.40) = -5.86, p < .001$, two-tailed, equal variances not assumed. Specifically, Hispanic/Latinx women ($M = 2.07, SD = 0.38$) were more transactional than Black women ($M = 1.74, SD = 0.28$). Cohen’s $d = 0.99$, observed power = 1.00. This is a large effect size.

H2₀ stated that there is no statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style. There was a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style, $t(118.40) = -5.86, p < .001$, two-tailed, equal variances not assumed.

Specifically, Hispanic/Latinx women ($M = 2.07$, $SD = 0.38$) were more transactional than Black women ($M = 1.74$, $SD = 0.28$). Therefore, the null hypothesis was rejected.

Research Question 3/Hypothesis 3

Research Question 3 asked, “To what extent is there a statistically significant difference between Hispanic and Black women administrators in academic medicine in passive/avoidant leadership style?” Research Question 3 was tested with an independent samples t-test. The dependent variable was passive/avoidant leadership as measured by the MLQ 5X. The independent variable was female racial/ethnic self-identity with two levels, Black women and Hispanic women. There was a statistically significant difference between Hispanic and Black women administrators in academic medicine in passive/avoidant leadership style, $t(129) = -4.40$, $p < .001$, two-tailed, equal variances assumed. Specifically, Hispanic women ($M = 0.76$, $SD = 0.29$) were more passive/avoidant than Black women ($M = 0.54$, $SD = 0.29$). Cohen’s $d = 0.76$, observed power = .99. This is medium effect size.

H3₀ stated that there is no statistically significant difference between Hispanic and Black women administrators in academic medicine in passive/avoidant leadership style. There was a statistically significant difference between Hispanic and Black women administrators in academic medicine in passive/avoidant leadership style, $t(129) = -4.40$, $p < .001$, two-tailed, equal variances assumed. Specifically, Hispanic women ($M = 0.76$, $SD = 0.29$) were more passive/avoidant than Black women ($M = 0.54$, $SD = 0.29$). Therefore, the null hypothesis was rejected. Descriptive statistics for the Mann-Whitney U Tests are presented in Table 8.

Research Question 3 asked, “To what extent is there a statistically significant difference between Hispanic/Latinx and Black women administrators in academic medicine in passive/avoidant leadership styles?”

The non-parametric Mann-Whitney U test was also performed to test the null hypothesis to determine variances in the shape of the results and to confirm the *t*-test results (Figures 1, 3, 5). Descriptive statistics for the Mann-Whitney U Tests are presented in Table 8. The assumptions for Mann Whitney U are that there is one continuous dependent variable, one independent variable with two categorical, independent groups, and that there was independence of observations (Laerd Statistics, 2018). These assumptions were met.

Table 8

Descriptive Statistics for Mann-Whitney U Tests

	Racial/Ethnic Self-Identity	<i>n</i>	Mean Rank	Sum of Ranks
Transformational Leadership	Black Woman	66	56.80	3749.00
	Hispanic Woman	65	75.34	4897.00
	Total	131		
Transactional Leadership	Black Woman	66	48.80	3221.00
	Hispanic Woman	65	83.46	5425.00
	Total	131		
Passive Avoidant Leadership	Black Woman	66	49.86	3290.50
	Hispanic Woman	65	82.39	5355.50
	Total	131		

Test statistics for the Mann-Whitney U Tests are presented in Table 9.

Table 9*Test Statistics for Mann-Whitney U Tests^a*

	Transformational Leadership	Transactional Leadership	Passive Avoidant Leadership
Mann-Whitney U	1538.00	1010.00	1079.50
Wilcoxon W	3749.00	3221.00	3290.50
Z	-2.82	-5.28	-4.96
Asymp. Sig. (2-tailed)	.005	.000	.000

a. Grouping Variable: Racial/Ethnic Self-Identity

Hypotheses and outcomes are summarized in Table 10.

Table 10*Hypothesis Summary and Outcomes*

Hypothesis	Significance	Effect Size	Outcome
H ₀₁ : There is no statistically significant difference between Hispanic and Black women administrators in academic medicine in transformational leadership style.	$p = .022$	$d = .44$ (Small)	Null Rejected.
H ₀₂ : There is no statistically significant difference between Hispanic and Black women administrators in academic medicine in transactional leadership style.	$p < .001$	$d = .99$ (Large)	Null Rejected.
H ₀₃ : There is no statistically significant difference between Hispanic and Black women administrators in academic medicine in passive/avoidant leadership style.	$p < .001$	$d = .76$ (Medium)	Null Rejected.

Summary

The purpose of this quasi-experimental quantitative study was to determine if a significant difference existed between the transformational, transactional, and passive/avoidant leadership styles of Black and Hispanic/Latinx women administrators in academic medicine to

gain a greater understanding of the differences between their leadership styles. Three research questions and associated hypotheses were formulated for investigation. It was determined that there was a statistically significant extent of difference between Hispanic/Latinx and Black women administrators in academic medicine in transformational leadership style.

Specifically, Hispanic/Latinx women were more transformational than Black women, which resulted in small effect size for the difference. Secondly, it was determined that there was a statistically significant difference between Hispanic/Latinx and Black women administrators in academic medicine in transactional leadership style. Hispanic/Latinx women were more transactional than Black women, which resulted in large effect size for the difference.

Lastly, it was determined that there was a statistically significant difference between Hispanic/Latinx and Black women administrators in academic medicine in passive/avoidant leadership style. Hispanic/Latinx women were more passive/avoidant than Black women. This resulted in a medium effect size difference. The Mann-Whitney U Test was also conducted on the data to validate the independent samples t-test results. The outcomes were similar in significance and directionality. Implications and recommendations will be discussed in Chapter 5.

Chapter 5: Discussion and Conclusions

The purpose of this quasi-experimental quantitative study was to determine if a significant difference existed between the transformational, transactional, and passive/avoidant leadership styles of Black and Hispanic/Latinx women administrators in academic medicine to gain a greater understanding of the differences between their leadership styles. Leadership style was measured by the MLQ Form 5X online via a secured site. Results from this study suggest that Hispanic/Latinx women perceive themselves as utilizing transformational, transactional, and passive/avoidant leadership styles more frequently than Black women.

Three research questions guided this study. The first question asked if there was a statistically significant difference between the leadership styles of Black and Hispanic/Latinx women administrators in transformational leadership style. Results indicated there was a statistically significant difference between the two groups whereby Hispanic/Latinx women were more transformational than Black women. This is small effect size, but the data were still relevant as it showed that both groups utilize transformational leadership techniques such as motivation and consideration with followers, although Hispanic/Latinx women use them slightly more often. The results also indicated a bimodal distribution within the scores of Hispanic/Latinx women, suggesting subgroup differences in transformation leadership in this group.

The second research question asked if there was a statistically significant difference in the transactional leadership style of the participants. A statistically significant difference was also determined between the two groups, with Hispanic/Latinx women acting more transactional than Black women. Results for this question indicated a large effect size, reflecting a tendency for Hispanic/Latinx women administrators to be transactional with followers, creating an exchange relationship that offers rewards for performance.

The results for the third research question determined a medium effect size. This question asked if there was a statistically significant difference in passive/avoidant leadership style among the two groups. For this question, the results showed that Hispanic/Latinx women acted passive/avoidant more frequently than Black women. These results indicate that Hispanic/Latinx women leaders are more likely to avoid active leadership in certain situations.

Additional information regarding findings, interpretations, and conclusions will be discussed within this chapter. The chapter will also present study limitations that may have impacted the results. Finally, the implications for leadership will be discussed.

Findings, Interpretations, and Conclusions

Data analysis of the results from Chapter 4 provides the foundation to analyze and interpret the research questions and hypotheses for this study. The theoretical framework of the full range of leadership theory described in Chapter 3 offers the context for conclusions drawn from the results. Findings for each research questions, the interpretations of the findings, and conclusions follow.

Findings

For Research Question 1, the independent *t*-test on transformational leadership showed a statistically significant difference between the two groups, whereby Hispanic/Latinx women were more transformational than Black women. This was a small but important effect size, and the null hypothesis was rejected. The data on transformational leadership also reflected a bimodal distribution within Hispanic/Latinx women.

Research Question 2 used the independent *t*-test to assess the difference between Black and Hispanic/Latinx women in transactional leadership. A statistically significant difference was

also determined between the two groups, with Hispanic/Latinx women acting more transactional than Black women. This reflected a large effect size, and the null hypothesis was rejected.

The results for Research Question 3 were based on an independent *t*-test as well and reflected a medium effect size. Results showed that Hispanic/Latinx women acted passive/avoidant more frequently than Black women. For passive/avoidant leadership, there was a medium effect size. The null hypothesis was also rejected.

Interpretations

The theoretical framework for this study was the full range of leadership. This theory places leadership along a continuum of transformational, transactional, and passive/avoidant leadership styles. Transformational leadership is perceived as a more effective leadership style, and using that style reflects positively on leaders, enhancing one's chances of promotion (Anderson & Sun, 2017). Women benefit from this perception, although not as much as men (Hentschel et al., 2018). Recent research in the full range of leadership theory has provided researchers with data supporting the premise that women are more likely to act as transformational leaders while men are more likely to act as transactional and passive/avoidant leaders (Silva & Mendis, 2017). Transformational leadership has also been studied in higher education and academic medicine, and similar to previous research, women demonstrated transformational leadership qualities more frequently than men (Giddens, 2017).

The overall results of Research Question 1 of this study align with research by Silva and Mendis (2017) that indicated women are more likely to use transformational leadership as their preferred leadership style. Transformational leadership is a style of leadership involving motivating followers via a system of charisma, inspirational motivation, individualized consideration, and intellectual stimulation (Anderson & Sun, 2017). This is an exchange

relationship based on internal rewards, and both Hispanic/Latinx and Black women administrators scored high in this assessment area. These results also support previous studies in academic administration that identified transformational leadership in top administrators, including in medical schools (Sanner-Stiehr & Kueny, 2017).

While the overall results of Research Question 1 aligned with research on transformational leadership styles of women as a whole (Silva & Mendis, 2017). The results of the current study showed a bimodal distribution indicating subgroup differences in transformational leadership among the Hispanic/Latinx women surveyed. Similar data were not found among Black women administrators. This data does not align with any previous studies (Abdalla et al., 2018).

Similarly, the results of Research Questions 2 and 3 do not align with previous studies that indicate women prefer transformational leadership solely and use it as their primary style (Silva & Mendis, 2017). Research Question 2 was focused on transformational leadership, and Research Question 3 was focused on passive/avoidant leadership. Transactional leadership is a style of leadership involving motivation through a process of contingent rewards (Bass, 1985). It is more externally focused than transformational leadership. Transactional leaders may be passive or active; either way, their focus is on rewarding desired behavior in followers. Passive/avoidant leadership is the absence of leadership, where leaders decline to intervene or act when needed (Bass, 1985). In each question, Hispanic/Latinx women were shown to exhibit the traits of both transactional and passive/avoidant leadership styles more frequently than Black women. These results do, however, support Saint-Mi'hel's (2018) hypothesis that while transformational leadership is increasingly becoming associated with women, some women are more androgynous in style, employing all three styles depending on the situation.

The results of the research questions extend the research on transformational, transactional, and passive/avoidant leadership styles to identify the styles of Hispanic/Latinx and Black women administrators in academic medicine. Further insight into subgroup differences in Hispanic/Latinx women were also identified. Research in this area has been lacking until now, and this current study provides initial insight into that area.

Conclusions

While researchers have studied transformational leadership in a variety of occupational settings, such as academic medicine, their focus was specifically on women as a group or on comparing women and men. Research on the leadership styles of minorities, particularly minority women in academic medicine, is lacking (Toledo et al., 2017). The results from this current study help fill this gap as the data indicates that both Black and Hispanic/Latinx women administrators in academic medicine are transformational while further delineating the differences between not only those two minority groups but also identifying potential differences with Hispanic/Latinx women as a group. Results of this study also extend the full range of leadership theory to include minority women specifically.

Limitations

Limitations are inherent in all research, and this study is no different. In this study, the following limitations are identified. First, this study used the self-rater form of the MLQ Form 5X, which relies on participant self-assessment. The MLQ Form 5X is, however, considered a valid and reliable survey instrument for self-evaluation (Carrara et al., 2018), with convincing convergent and discriminant validity. In this study, the survey instrument utilized aligned with the research questions and hypothesis and was used without changing any questions, thus providing internal validity and reliability.

Second, data collection for this study was performed via an online survey for a period of two months. The online survey offered convenience for myself and participants, yet it may have dissuaded some potential participants who would have preferred a paper document. Although potential participants were assured of confidentiality, some qualified participants may have opted not to participate for fear of potential consequences. The study was performed during the winter break and into the beginning of the spring term, potentially impacting participation due to job turnover or job demands. This type of self-assessment also poses the potential for response bias as participants report what they believe is the correct response or what the researcher wants to hear (Carrara et al., 2018).

Third, participants were recruited through my personal connections on social media which potentially limited the sample. The results may not reflect all Hispanic/Latinx and Black women administrators in academic medicine. Results also do not reflect any mixed-race/ethnicity women administrators as participants were required to self-identify as one race or ethnicity. Limiting participants to choosing one race/ethnicity is a delimitation that may have affected the self-identification of the participants and their group assignment. Study participants were not to be members of both groups to meet assumptions of statistical testing. If one self-identified as both, their results were excluded from the analysis.

Data collection and participation recruitment also bring up questions of external validity. The results of this study may not be generalized to medical schools outside of the United States. In addition, the results may not be generalized to men administrators in U.S. medical schools or other minority or non-minority women administrators in U.S. medical schools. Expanding the study to include all groups of women and/or men may overcome this limitation, as well as expanding outside the United States to include foreign medical schools.

Recommendations

Recommendations for future research and future practice are important as they support efforts to improve minority women's representation in academic medicine. Research should be conducted on minority women administrators in medical schools to gain a deeper understanding of the use of transformational leadership and its influence on job performance, and the recommendations here offer guidance in this area. In addition, understanding the leadership styles of these women may allow medical schools to create programs that support and build future leaders. The recommendations for future practice can guide schools and organizations in developing these programs.

Recommendations for Future Research

The findings and conclusions from this current study guide the recommendations for additional research. Understanding the leadership styles of minority women administrators in academic medicine can support efforts to increase representation at the top level of administration. The literature review in this study revealed the need for additional research regarding the transformational, transactional, and passive/avoidant styles of minority women administrators. Additional research should be conducted to expand the understanding of the leadership styles of minority women.

First, further research on the same groups should include follower evaluations to confirm the self-perceived leadership styles of Hispanic/Latinx and Black women administrators in academic medicine. The current study did not include 360-feedback from followers. This research could confirm the results of this study and provide valuable additional data. As part of this future research, specific attention should be focused on the bimodal results of Hispanic/Latinx women and transformational leadership. Understanding whether a third variable

may be influencing the subgroup differences in Hispanic/Latinx women will further narrow the gap in the literature on minority women's leadership styles.

Second, a qualitative study should be conducted to explore internal and external influences on leadership styles among minority women administrators in academic medicine. The current study relied exclusively on quantitative research methodology and did not include qualitative data. Internal influences such as work experience, age, educational background, and medical field should be studied. External influences, including organizational environment, organizational resources, and organizational culture, should also be studied to determine their potential impact on leadership style. This information may provide deeper insight into the leadership styles of these groups.

Recommendation for Future Practice

As a recommendation for future practice, medical schools in the United States should consider revising their leadership development programs. The new design should offer transformational leadership training to all their current administrators, particularly minority women. This type of training would benefit not only the administrators but the organizations themselves. The leadership development program should also include transformational leadership training when onboarding new administrators, particularly when promoting from within. Finally, medical schools should consider using the MLQ Form 5X to identify potential leaders of all genders and races/ethnicities within their leadership development programs as an assessment tool to identify leadership styles and provide training to future leaders.

Implications for Leadership

This study presents multiple implications for leadership. At the individual level, women of color can engage in personal development by focusing on their individual leadership styles.

Activities of this type can support their growth towards self-actualization and authenticity.

Minority women who gain an understanding of their own uniqueness can maximize their potential and contribute to organizational and societal success.

Families can also recognize the individual leadership styles of their daughters. They can act as stewards that guide young women into becoming principled leaders. Creating leaders is a long-term investment in society, particularly when building future leaders of color. Fostering an environment that encourages young women to take on leadership responsibilities early will reap future benefits as these young women enter the workforce experienced in leadership activities.

Within academic medicine, leaders can recognize the diversity of women leaders and potential women leaders. The "one size fits all" method of recruitment, training, and promotion is no longer appropriate. There are marked differences not only between different groups of women administrators in academic medicine but within the groups themselves, and training programs can be modified to reflect that knowledge. Training and promotion programs may be tailored to build leadership skills in the faculty ranks as well.

Policymakers at the organizational, local, state, and national levels can also acknowledge the critical differences among women when discussing any proposed policies that impact them, both as leaders and individuals. Policymakers need to move beyond generalizations about women as a group and recognize and accept the vast differences that exist within that group. Embracing various styles of leadership not only between minority groups of women but even within them, such as with Hispanic/Latinx women, opens the discussion on leadership styles to become more inclusive and supportive.

Conclusion

Key findings showed that while Black and Hispanic/Latinx women are more transformational than men as a group, there are statistically significant differences between Black and Hispanic/Latinx women administrators in academic medicine. Hispanic/Latinx women perceive themselves as slightly more transformational, statistically significantly more transactional, and moderately more passive/avoidant than Black women in their leadership styles. The results also indicated there are potential subgroup differences in transformational leadership among Hispanic/Latinx women administrators in academic medicine.

The results of this study expand on the full range of leadership theory by applying the concepts of transformational, transactional, and passive/avoidant leadership to a historically underserved group. This knowledge helps overcome long-standing assumptions about all women being similar in leadership style. The results of this study also provide valuable clues to the potential differences among Hispanic/Latinx women administrators in medical schools, encouraging further discussion on diversity.

Understanding the leadership styles of Black and Hispanic/Latinx women administrators in academic medicine, including the differences between the two groups, reinforces the need for diversity and equity training in medical schools. This study also suggests the need for tailored leadership training that embraces ethnic diversity. If medical schools hope to increase the number of minority women administrators, their leadership needs to recognize and value this diversity.

The implications of this research are clear. Women as a group are not uniform. Differences exist not only between ethnic groups but also within those groups themselves. While their leadership styles are important, the fact that the results show such clear differences may

inspire not only medical schools but leaders in other industries to become more open-minded and create a culture of acceptance that enhances organizational transformation.

References

- Abdalla, M., Shawky, A., Ragab, A., & Gouda, H. (2018). Transformational leadership role in creating an effective work-related context including: Leader-member exchange, followers' participation in decision-making process, and followers' resistance to change for successful performance. *The Business and Management Review*, 9(4), 95-107.
https://cberuk.com/cdn/conference_proceedings/2019-07-12-21-20-40-PM.pdf
- Abdulrazaq, A., Farea, M., & Muthanna Mohammed, Z. (2020). The relationship between transformational leadership style and employees performance. *International Journal of Creative and Innovative Research in All Studies*, 3(7), 16-22. <https://www.ijciras.com>
- Alamir, I., Ayoubi, R., Massoud, H., & Al Hallak, L. (2019). Transformational leadership, organizational justice and organizational success. *Leadership & Organization Development Journal*, 4(7), 749-763. <https://doi.org/10.1108/lodj-01-2019-0033>
- Alegbeleye, I., & Kaufman, E. (2020). Relationship between middle managers' transformational leadership and effective followership behaviors in organizations. *Journal of Leadership Studies*, 13(4), 6-19. <https://doi.org/10.1002/jls.21673>
- Allen, S., & Hartman, N. (2008). Leadership development: An exploration of sources of learning. *Advanced Management Journal*, 73(1), 10-62.
<https://doi.org/10.1108/dlo.2008.08122fad.003>
- Aloe, A., Becker, B., Duvendack, M., Valentine, J., Shemilt, I., & Waddington, H. (2017). Quasi-experimental study designs-paper 9: Collecting data from quasi-experimental studies. *Journal of Clinical Epidemiology*, 89, 77-83.
<http://doi.org/10.1016/j.jclinepi.2017.02.013>

Anderson, M. (2017). Transformational leadership in education: A review of existing literature.

International Social Science Review, 93(1), Article 4.

<http://digitalcommons.northgeorgia.edu/isr/vol93/iss1/4>

Anderson, M., & Sun, P. (2017). Reviewing leadership styles: Overlaps and the need for a new

"full-range" theory. *International Journal of Management Reviews*, 19, 76-96.

<https://doi.org/10.1111/ijmr.12082>

Antonakis, H., Avolio, B., & Sivasubramaniam, N. (2003). Context and leadership: An

examination of the nine-factor full-range leadership theory using the Multifactor

Leadership Questionnaire. *The Leadership Quarterly*, 14(3), 261-295.

[https://doi.org/10.1016/S1048-9843\(03\)00030-4](https://doi.org/10.1016/S1048-9843(03)00030-4)

Apoi, A., & Binti Abdul Latip, H. (2019). The impact of transformational leadership on

employee reactions towards individual work performance: A conceptual paper.

International Journal of Academic Research in Business & Social Sciences, 9(8), 47-60.

<https://doi.org/10.6007/ijarbss/v9-i8/6207>

Association of American Medical Colleges. (2020). *U.S. medical school faculty by rank and*

race/ethnicity, 2018. Association of American Medical Colleges. <https://www.aamc.org>

Avolio, B., Mhatre, K., Norman, S., & Lester, P. (2009). The moderating effect of gender on

leadership intervention impact: An exploratory review. *Journal of Leadership &*

Organizational Studies, 4, 325-341. <https://doi.org/10.1177/1548051809333194>

Barilla, D., Shah, H., & Rawson, R. (2019). Bold leadership is needed for transforming

healthcare. *Journal of Healthcare Leadership*, 11, 81-85.

<https://doi.org/10.2147/JHL.S200952>

Bass, B. (1985). *Leadership and performance beyond expectations*. The Free Press.

- Bass, B., & Avolio, B. (1997). *Full range leadership development: Manual for the Multifactor Leadership Questionnaire*. Mind Garden, Inc.
- Bass, B., & Bass, R. (2008). *Bass handbook of leadership: Theory, research, and management approaches* (4th ed.). The Free Press.
- Bass, B., & Riggio, R. (2009). *Transformational leadership* (2nd ed.). Lawrence Erlbaum Associates, Inc.
- Begum, N., Begum, S., Rustam, A., & Rustam, S. (2018). Gender perspectives of transformational leadership style and leadership effectiveness: A case study of Pakistan and Turkey. *The Dialogue*, 13, 211-224. <http://www.qurtuba.edu.pk/thedialogue/>
- Boamah, S., Laschinger, H., Wong, C., & Clarke, S. (2017). Effect of transformational leadership on job satisfaction and patient safety outcomes. *Nursing Outlook*, 66, 180-189. <https://doi.org/10.1016/j.outlook.2017.10.004>
- Bradd, P., Travaglia, J., & Haven, A. (2017). Leadership in allied health: A review of the literature. *Asia Pacific Journal of Health Management*, 12(1), 17-24. <https://doi.org/10.24083/apjhm.v12i1.103>
- Bradley-Baker, L. R., & Murphy, N. L. (2013). Leadership development of student pharmacists. *The American Journal of Pharmaceutical Education*, 77(10), 219-219. <https://ajpe.org/doi/full/10.5688/ajpe7710219>
- Bromley, H., & Kirschner-Bromley, V. (2007). Are you a transformational leader? *The Physician Executive*, 54-57. <https://www.physicianleaders.org/publications/journal>
- Brown, M., Brown, R., & Nandedkar, A. (2019). Transformational leadership theory and exploring the perceptions of diversity management in higher education. *Journal of*

Higher Education Theory and Practice, 19(7), 11-21.

<https://doi.org/10.33423/jhetp.v19i7.2527>

Burkinshaw, P., & White, K. (2017). Fixing the women or fixing universities: Women in HE leadership. *Administrative Sciences*, 7(30), 2-14. <https://doi.org/10.3390/admsci7030030>

Burns, J. (1978). *Leadership*. Harper & Row, Inc.

By, R. (2021). Leadership: In pursuit of purpose. *Journal of Change Management*, 1-16.

<https://doi.org/10.1080/14697017.2021.1861698>

Carleton, E., Barling, J., & Trivisonno, M. (2018). Leaders' trait mindfulness and transformational leadership: The mediating roles of leaders' positive affect and leadership self-efficacy. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, 50, 185-194. <https://dx.doi.org/10.1037/cbs0000103>

Carr, P., Raj, A., Kaplan, S., Terrin, N., Breeze, J., & Freund, K. (2018). Gender differences in academic medicine: Retention, rank, and leadership comparisons from the National Faculty Survey. *Academic Medicine*, 93(11), 1694-1699.

<https://doi.org/10.1097/IACM.00000000000002146>

Carrara, G., Bernardes, A., Balsanelli, A., Camelo, S., Gabriel, C., & Zanetti, A. (2018). Use of instruments to evaluate leadership in nursing and health sciences. *Revista Gaucha de Enfermagem*, 38(3), e0060. <https://doi.org/10.1590/1983-1447.2017.03.2016-0060>

Coe, C., Piggott, C., Davis, A., Hall, M., Goodell, K., Joo, P., & South-Paul, J.E. (2020). Leadership pathways in academic family medicine: Focus on underrepresented minorities and women. *Family Medicine*, 52(2), 104-111.

<https://doi.org/10.22454/fammed.2020.545847>

- Cope, D. (2014). Measurements in quantitative research: How to select and report on research instruments. *Oncology Nursing Forum*, 41(4), 431-433.
<https://doi.org/10.1188/14.ONF.431-433>
- Crede, M., Jong, J., & Harms, P. (2019). The generalizability of transformational leadership across cultures: A meta-analysis. *Journal of Managerial Psychology*, 83, 1-36.
<http://doi.org/10.1108/JMP-11-2018-0506>
- Creswell, J. (2009). *Research design: Qualitative, quantitative, and mixed-method approaches* (3rd ed.). Sage Publications.
- Day, L., & Benner, P. (2002). Ethics, ethical comportment, and etiquette. *American Journal of Critical Care*, 11(1), 76-79.
<https://aacnjournals.org/ajconline/article/11/1/76/21859/ethics-ethical-comportment-and-etiquette>
- DeVoy, P. (2021). An exploration of global leadership behavior and job satisfaction in healthcare information management. *Perspectives in Health Information Management* 18(Spring), 1-13. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8120670/>
- Diaz, N., Mathew Joseph, N., & Michael, J. (2019). Transformational leadership in nursing: Aspiring leaders development program for Indian American nurses. *Nurse Leader*, 17(5), 432-439. <https://doi.org/10.1016/j.mnl.2018.12.015>
- Diaz-Funez, P., Salvador-Ferrer, C., Garcia-Tortosa, N., & Manas-Rodriguez, M. (2021). Are job demands necessary in the influence of a transformational leader? The moderating effect of role conflict. *International Journal of Environmental Research and Public Health*, 18(7), 3630. <https://doi.org/10.3390/ijerph18073630>

- Dickerman, J., Sanchez, J., Portela-Martinez, M., & Roldan, E. (2018). Leadership and academic medicine: Preparing medical students and residents to be effective leaders for the 21st century. *MedEdPORTAL*, 14, 10677. https://doi.org/10.15766/mep_2374-8265.10677
- Eagly, A. (2005). Achieving relational authenticity in leadership: Does gender matter? *The Leadership Quarterly*, 16, 459-474. <https://doi.org/10.1016/j.leaqua.2005.03.007>
- Eagly, A., & Carli, L. (2007). *Through the labyrinth: The truth about how women become leaders*. Harvard Business School Press.
- Eagly, A., Johannesen-Schmidt, M., & van Engen, M. (2003). Transformational, transactional, and passive/avoidant leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin*, 129(4), 569-591. <https://doi.org/10.1037/0033-2909.129.4.569>
- Echevarria, I., & Patterson, B. K. (2017). Predictors of transformational leadership of nurse managers. *Journal of Nursing Management*, 25, 167-175. <https://doi.org/10.1111/jonm.12452>
- Gandolfi, F., & Stone, S. (2018). Leadership, leadership styles, and servant leadership. *Journal of Management Research*, 18(4), 261-269. <https://www.indianjournals.com/ijor.aspx?target=ijor:jmr&volume=18&issue=4&article=005>
- Gandolfi, F., Stone, S., & Deno, F. (2017). Servant leadership: An ancient style with 21st century relevance. *Review of International Comparative Management*, 18(4), 350-361. <https://www.cceol.com/search/article-detail?id=662224>
- Gebremariam, G., & Mulu, Y. (2018). Re-examining the validity of the full-range leadership models. *Bahir Dar Journal of Education*, 18(1), 74-97. <https://journals.bdu.edu.et/index.php/bje/article/view/50>

- Giddens, J. (2017). Transformational leadership: What every nursing dean should know. *Journal of Professional Nursing*, 34, 117-121. <https://doi.org/10.1016/j.profnurs.2017.10.004>
- Girod, S., Fassiotto, M., Grewal, D., Ku, M., Sriram, N., Nosek, B., & Valentine, H. (2016). Reducing implicit gender leadership bias in academic medicine with an educational intervention. *Academic Medicine*, 91(8), 1143-1150. <https://doi.org/10.1097/IACM.0000000000001099>
- Gobaw, M. K. (2017). Women's role and their styles of leadership. *International Journal of Educational Administration and Policy Studies*, 9(3), 28-34. <https://doi.org/10.5897/IJEAPS2015.0415>
- Gomez-Garcia, M., Matosas-Lopez, L., & Ruiz-Palmero, J. (2020). Social networks use patterns among university youth: The validity and reliability of an updated measurement instrument. *Sustainability*, 12, 3503. <https://doi.org/10.3390/su12093503>
- Guevarra, R., Montoya, J., Carmody-Bubb, M., & Wheeler, C. (2020). Physician leadership style predicts advanced practice provider job satisfaction. *Leadership in Health Sciences (1751-1879)*, 33(1), 56-72. <http://doi.org/10.1108/LHS-06-2019-0032>
- Harris, J., & Mayo, P. (2018). Taking a case study approach to assessing alternative leadership models in health care. *British Journal of Nursing*, 27(11), 608-613. <https://doi.org/10.12968/bjon.2018.27.11.608>
- Hasan, H. (2020). Leadership in a school context: How leadership styles are associated with leadership outcomes. *International Journal of Financial, Accounting, and Mamgement*, 2(2), 159-170. <https://doi.org/10.35912/ijfam.v2i2.236>

- Hawkes, A., Biggs, A., & Hegerty, E. (2017). Work engagement: Investigating the role of transformational leadership, job resources, and recovery. *Journal of Psychology, 151*, 509-531. <https://doi.org/10.1080/00223980.2017.1372339>
- Heise, L.; Greene, M.E.; Oppen, N.; Stavropoulou, M.; Harper, C.; Nascimento, M.; Zewdie, D. (2019). Gender inequality and restrictive gender norms: Framing the challenges to health. *Lancet, 393*, 2440-54. [https://doi.org/10.1016/s0140-6736\(19\)30652-x](https://doi.org/10.1016/s0140-6736(19)30652-x)
- Hentschel, T., Braun, S., Peus, C., & Frey, D. (2018). The communality-bonus effect for male transformational leaders - leadership style, gender, and promotability. *European Journal of Work and Organizational Psychology, 27*(1), 112-125. <https://doi.org/10.1080/1359432X.2017.1402759>
- Hersey, P., & Blanchard, K. (2014). *The Hersey and Blanchard situational leadership theory*. Mind Tools Inc. http://www.mindtools.com/pages/article/newLDR_44.htm
- Hildenbrand, K., Sacramento, C., & Binnewies, C. (2018). Transformational leadership and burnout: The role of thriving and followers' openness to experience. *Journal of Occupational Health Psychology, 23*(1), 31-43. <https://doi.org/10.1037/ocp0000051>
- Issac, C., & Griffin, L. (2014). Women chairs in academic medicine: Engendering strategic intuition. *Journal of Health Organization and Management, 29*(4), 498-514. <https://doi.org/10.1108/JHOM-08-2013-0174>
- Jogulu, U., & Wood, G. (2006). The role of leadership theory in raising the profile of women in management. *Equal Opportunities International, 25*(4), 236-250. <http://hdl.handle.net/10536/DRO/DU:30020892>
- Johnson, S., Murphy, S., Zewdie, S., & Reichard, R. (2008). The strong, sensitive type: Effects of gender stereotypes and leadership prototypes on the evaluation of male and female

- leaders. *Organizational Behavior and Human Decision Process*, 106, 39-60.
<https://doi.org/10.1016/j.obhdp.2007.12.002>
- Jones, E., & Jones, R. (2017). Leadership style and career success of women leaders in nonprofit organizations. *Advancing Women in Leadership*, 37, 37-48. <http://www.awlj.org>
- Kalaitzi, S., Czabanowska, K., Fowler-Davi, S., & Brand, H. (2017). Women leadership barriers in healthcare, academia and business. *Equality, Diversity and Inclusion: An International Journal*, 36(5), 457-474. <https://doi.org/10.1108/IDI-03-2017-0058>
- Kaplan, S., Raj, A., Carr, P. T., Breeze, J., & Freund, K. (2018). Race/ethnicity and success in academic medicine: Findings from a longitudinal multi-institutional study. *Academic Medicine*, 93(4), 616-622. <https://doi.org/10.1097/ACM.0000000000001968>
- Kouzes, J., & Posner, B. (2007). *The leadership challenge* (4th ed.). Jossey-Bass.
- Kwan, P. (2020). Is transformational leadership theory passe? Revisiting the integrative effect of instructional leadership and transformational leadership on student outcomes. *Educational Administration Quarterly*, 56(2), 321-349.
<https://doi.org/10.1177/0013161X19861137>
- Kwapisz, A., Brown, F., Bryant, S., Chupka, R., & Profota, T. (2019). The relative importance of transformational leadership and contingent reward on satisfaction with supervision in nonprofit and for-profit organizations. *Journal of International & Interdisciplinary Business Research*, 6(4). Retrieved from <https://cholars.fhsu.edu/jiibr/vol6/iss1/4>
- Laerd Statistics. (2018). Independent t-test using SPSS Statistics. Laerd Statistics.
<https://statistics.laerd.com/spss-tutorials/independent-t-test-using-spss-statistics.php>
- Larson, A., Kan, C., & Silver, J. (2019). Representation of women physician deans in U.S. medical schools. *Journal of Women's Health*, 28(5), 600-607.
<https://doi.org/10.1089/jwh.2018.7448>

- Latten, S., & Perez, J. (2019). Leadership theories and United States demographic shifts: Responsiveness in the workplace. *Journal of Research Initiatives*, 5(1), 1-11.
<https://www.digitalcommons.uncfsu.edu/jri>
- Laureani, A., & Antony, J. (2017). Leadership characteristics for Lean Six Sigma. *Total Quality Management & Business Excellence*, 28, 405-426.
<https://doi.org/10.1080/14783363.2015.1090291>
- Lee, J., Lee, H., Kim, S., Choi, M., Ko, S., Bae, J., & Kim, S. (2020). Debriefing methods and learning outcomes in simulation nursing education: A systematic review and meta-analysis. *Nurse Education Today*, 104345, 1-12.
<https://doi.org/10.1016/j.nedt.2020.104345>
- Lewiss, R., Silver, J., Bernstein, C., Mills, A., Overholser, B., & Spector, N. (2020). Is academic medicine making mid-career women physicians invisible? *Journal of Women's Health*, 29(2), 187-194. <https://doi.org/10.1089/jwh.2019.7732>
- Madera, J., Hebl, M., & Martin, R. (2009). Gender and letters of recommendation for academia: Agentic and communal differences. *Journal of Applied Psychology*, 95(6), 1591-1599.
<https://doi.org/10.1027/a0016539>
- Madsen, S., & Andrade, M. (2018). Unconscious gender bias: Implications for women's leadership development. *Journal of Leadership Studies*, 12(1), 62-67.
<http://doi.org/1002/jls21566>
- Malik, W., Juved, M., & Hassan, S. (2017). Influence of transformational leadership components on job satisfaction and organizational commitment. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 11(1), 147-166. <https://www.econstor.eu/handle/10419/188286>

- McFarland, J.; Hussar, B.; de Brey, C.; Snyder, T.; Wang, X.; Wilkison-Flicker, S.; Gebrekristos, S.; Zhang, J.; Rathbun, A.; Barmer, A.; Mann, F.B.; Hinz, S.; Nachazel, T.; Smith, W.; Ossolinski, M. (2017). *The condition of education 2017*. National Center for Educational Statistics, U.S. Department of Education.
<https://nces.ed.gov/pubresearch/pubsinfo.asp?pubid=2017144>
- Mirayani, R., Williana Kusumaningsih, S., & Mustikasiwi, A. (2019). Transformational, authentic, and authoritarian types of leadership: Which one is the most influential in staffs' performance (A study on performance in a religious school setting). *Dinasti International Journal of Education Management and Social Science*, 1(2), 172-182.
<https://doi.org/10.31933/dijemss.v1i2.68>
- Mohammadkhani, F., & Gholamzadeh, D. (2016). The influence of leadership styles on the women's glass ceiling beliefs. *Journal of Advanced Management Science*, 4(4), 276-282.
<http://doi.org/10.12720/joams.4.4.276-282>
- Mutahar, A., AlDoaies, B., & Abdulaziz, A. (2017). TQM in healthcare: Transformation, challenges, impact and measurement. *International Advanced Research Journal in Science, Engineering and Technology*, 4(5), 105-113.
<http://doi.org/10.17148/IARJSET.2017.4520>
- Nelson, W., Dubinsky, I., & Poland, B. (2020). An innovative model for healthcare leadership education. *Healthcare Quarterly (Toronto, Ont.)*, 22(4), 55-58.
<https://doi.org/10.12927/hcq.2020.26083>
- Neuman, W. (2006). *Social research methods: Qualitative and quantitative approaches*. Pearson International.

- Nguyen, T., Mia, L., Winata, L., & Chong, V. (2016). Effect of transformational-leadership style and management control system on managerial performance. *Journal of Business Research*, 70, 1-12. <http://dx.doi.org/10.1016/j.jbusres.2016.08.018>
- Nicolaou, N., & Kentas, G. (2017). Total quality management implementation failure reasons in healthcare sector. *Journal of Health Sciences*, 5, 110-113. <https://doi.org/10.17265/2328-7136/2017.02.007>
- Northouse, P. (2010). *Leadership theory and practice* (5th ed.). Sage Publications.
- Nusbaum, L., Douglas, B., Damus, K., Paasche-Orlow, M., & Estrella-Luna, N. (2017). Communicating risks and benefits in informed consent for research: A qualitative study. *Global Qualitative Nursing Research*, 4, 1-13. <http://doi.org/10.1172/233393617732017>
- Onwuegbuzie, A., & Collins, K. (2007). A typology of mixed method sampling designs in social science research. *The Qualitative Report*, 12(2), 281-316. <https://doi.org/10.46743/2160-3715/2007.1638>
- Poole Jr., K., & Brownlee, D. (2020). Exploring the current state of racial and ethnic minorities in healthcare leadership. *Physician Leadership Journal*, 7(5), 40-43. <https://www.physicianleaders.org/publications/journal>
- Rawashdeh, A., Salameh Almasarweh, M., Basher Alhyasat, E., & Al-Rawashdeh, F. (2020). Examining the effect of transformational leadership to organizational performance through quality innovation: A developing country perspective. *International Journal for Quality Research*, 15(1), 353-368. <https://doi.org/10.24874/IJQR15.01-20>
- Robinson, T., Janssen, A., Harnett, P., Museth, K., Provan, P., Hills, D., & Shaw, T. (2017). Embedding continuous quality improvement processes in multidisciplinary teams in

- cancer care: Exploring the boundaries between quality and implementation science. *Australian Health Review*, 41, 291-296. <https://doi.org/10.1071/AH16052>
- Rochon, P., Davidoff, F., & Levinson, W. (2016). Women in academic medicine leadership: Has anything changed in 25 years? *Academic Medicine*, 91(8), 1-5. <https://doi.org/10.1097/acm.0000000000001281>
- Rodriguez, T., Ditmyer, M., & Valachovic, R. (2016). Profile of department chairs in U.S. and Canadian dental schools: Demographics, requirements for success, and professional development needs. *Journal of Dental Education*, 80(3), 365-374. <https://doi.org/10.1002/j.0022-0337.2016.80.3.tb06093.x>
- Roth, V., Theriault, A., Clement, C., & Worthington, J. (2016). Women physicians as healthcare leaders: A qualitative study. *Journal of Health Organization and Management*, 30(4), 648-665. <https://doi.org/10.110/JHOM-2014-0164>
- Rowold, J., & Heinitz, K. (2007). Transformational and charismatic leadership: Assessing the convergent, divergent and criterion validity of the MLQ and the CKS. *Leadership Quarterly*, 18(2), 121-133. <https://sciencedirect.com/science/article/pii/S1048984307000045>
- Sacavem, A., Martinez, L., Vieira Da Cunha, J., Abreu, A., & Johnson, K. (2017). Charismatic leadership: A study on delivery styles, mood, and performance. *Journal of Leadership Studies*, 11(3), 21-38. <https://doi.org/10.1002/jls.21519>
- Saint-Michel, S. (2018). Leader gender stereotypes and transformational leadership: Does leader sex make a difference? *M@n@gement* 2018, 21(3), 944-966. <https://www.cairn-int.info/journal-management-2018-3-page-944.htm>
- Salkind, N. (2010). *Encyclopedia of research design*. SAGE Publications.

- Samil, C. (2016). Causal Empiricism in Quantitative Research. *The Journal of Politics*, 78(3), 941-955. <http://dx.doi.org/10.1086/686690>
- Sanner-Stiehr, E., & Kueny, C. (2017). From the top-down: Transformational leadership considerations for health care organizations. *Journal of Hospital Administration*, 6(4), 1-9. <https://doi.org/10.5430/jha.v6n4p1>
- Sharif, K. (2018). Transformational leadership behaviours of women in a socially dynamic environment. *International Journal of Organizational Analysis*, 4, 1191-1217. <https://doi.org/10.1108/IJOA-12-2018-1611>
- Silva, D. S., & Mendis, B. (2017). Male vs. female leaders: Analysis of transformational, transactional & passive/avoidant women leadership styles. *European Journal of Business Management*, 9(9), 19-26. <https://core.ac.uk/download/pdf/234627788.pdf>
- Sivarat, N., Thamma, P., & Kenaphoom, S. (2021). Full range leadership concepts. *Ilkogretim Online*, 20(3), 131-139. <https://doi.org/10.17051/ilkonline.2021.03.147>
- Soklaridis, S., Kuper, A., Whitehead, C., Ferguson, G., Taylor, V., & Zahn, C. (2017). Gender bias in hospital leadership: A qualitative study on the experiences of women CEOs. *Journal of Health Organization and Management*, 31(2), 253-268. <http://doi.org/10.1108/JHOM-12-2016-0243>
- Storberg-Walker, J., & Madsen, S. (2017). *The women and leadership theory think tank report 2015*. George Washington University. <https://www.uvu.edu/uwlp/docs/wlthinktankreport2015.pdf>
- Strukan, E., Nikolic, M., & Sefic, S. (2017). Impact of transformational leadership on business performance. *Tehnicki Vjesnik*, 24(2), 435-444. <https://doi.org/10.17559/TV-2015624082830>

- Susilo, D. (2018). Transformational leadership: A style of motivating employees. *Management and Economics Journal (MEC-J)*, 3, 124-132. <https://doi.org/10.18860/mec-j.v0i1.5222>
- Theofanidis, D., & Fountouki, A. (2019). Limitations and delimitations in the research process. *Perioperative Nursing (GORNA)*, 7(3), 155-162. <https://doi.org/10.5281/zenodo.2552022>
- Thompson, G., & Glaso, L. (2018). Situational leadership theory: A test from a leader-follower congruence approach. *Leadership & Organization Development Journal*.
<https://doi.org/10.1108/LODJ-01-2018-0050>
- Toledo, P., Duce, L., Adams, J., Ro, V., Thompson, K., & Wong, C. (2017). Diversity in the American society of anesthesiologists leadership. *Anesthesia & Analgesia*, 124(5), 1611-1616. <https://doi.org/10.1213/ANE.0000000000001837>
- Vogt, P. (2007). *Quantitative research methods for professionals*. Pearson Education, Inc.
- Weller, I., Sub, J., Evanschitzky, H., & Von Wangenheim, F. (2019). Transformational leadership, high-performance work system consensus, and customer satisfaction. *Journal of Management*, 46(8), 1469-1497. <https://doi.org/10.1177/0149206318817605>
- Wheat, C., & Hill, L. (2016). Leadership identities, styles, and practices of women university administrators and presidents. *Research in the Schools*, 23, 1-16.
<http://www.msra.org/publications-rits.html>
- Wong, A. M. (2018). What's the fuss? Gender and academic leadership. *Journal of Health Organization and Management*, 32(6), 779-792. www.emeraldinsight.com/1477-7266.htm
- Woods, L., Wetle, T., & Sharkey, K. (2018). Why aren't more women in academic medicine reaching the top? *Rhode Island Medical Journal* (2013), 101(3), 19-21.
<https://pubmed.ncbi.nlm.nih.gov/29608630/>

Zineldin, M. (2017). Transformational leadership behavior, emotions, and outcomes: Health psychology perspective in the workplace. *Journal of Workplace Behavioral Health*, 32, 14-25. <https://doi.org/10.1080/15555240.2016.1273782>

Appendix A**MLQ Form 5X**

4. I provide others with assistance in exchange for their efforts

☐ 0 = Not at all

☐ 1 = Once in a while

☐ 2 = Sometimes

☐ 3 = Fairly often

☐ 4 = Frequently, if not always

5. I re-examine critical assumptions to question whether they are appropriate

☐ 0 = Not at all

☐ 1 = Once in a while

☐ 2 = Sometimes

☐ 3 = Fairly often

☐ 4 = Frequently, if not always

6. I fail to interfere until problems become serious

☐ 0 = Not at all

☐ 1 = Once in a while

☐ 2 = Sometimes

☐ 3 = Fairly often

☐ 4 = Frequently, if not always

For use by Laura De La Cruz only. Received from Mind Garden, Inc. on February 18, 2021



www.mindgarden.com

To Whom It May Concern,

The above-named person has made a license purchase from Mind Garden, Inc. and has permission to administer the following copyrighted instrument up to that quantity purchased:

Multifactor Leadership Questionnaire

The three sample items only from this instrument as specified below may be included in your thesis or dissertation. Any other use must receive prior written permission from Mind Garden. The entire instrument may not be included or reproduced at any time in any other published material. Please understand that disclosing more than we have authorized will compromise the integrity and value of the test.

Citation of the instrument must include the applicable copyright statement listed below.

Sample Items:

As a leader

- I talk optimistically about the future.
- I spend time teaching and coaching.
- I avoid making decisions.

The person I am rating....

- Talks optimistically about the future.
- Spends time teaching and coaching.
- Avoids making decisions

Copyright © 1995 by Bernard Bass & Bruce J. Avolio. All rights reserved in all media.
Published by Mind Garden, Inc. www.mindgarden.com

Sincerely,



Robert Most
Mind Garden, Inc.
www.mindgarden.com

© 1995 Bruce Avolio and Bernard Bass. All rights reserved in all media.
Published by Mind Garden, Inc., www.mindgarden.com

Appendix B

Participant Email

Dear Prospective Survey Participant,

I am a doctoral student from American College of Education and I'm conducting a research student as part of my doctoral degree requirements. My study is entitled "Leadership Styles of Minority Women Administrators in Academic Medicine: A Quantitative Study." This is a letter of invitation to participate in this research study. The purpose of this student is to determine if a statistically significant difference exists between the leadership styles of Black and Hispanic/Latinx administrators in U.S. medical schools.

By agreeing to participate in the study, you will be giving your consent for the researcher to include your responses in her data analysis. Your participation in this research study is strictly voluntary, and you may choose not to participate without fear of penalty or any negative consequences. You will be able to withdraw from the survey at any time and all survey responses will be deleted, including the informed consent agreement.

A link to the informed consent agreement will appear on the first screen page of the survey and is attached to this email for your review as well. A link to the study explanation is also provided on the first page of the survey. There will be no individually identifiable information, remarks, comments or other identification of you as an individual participant. Survey Monkey will not be collecting IP addresses either.

If you wish, you may request a copy of the results of this research study by emailing the researcher at: [REDACTED]

The survey uses the MLQ Form 5X created by Bass to assess leadership styles along the Transformational/Transactional/Passive-Avoidant continuum. The survey will last no more than 15 minutes. Your participation will contribute to the current literature on the subject of leadership styles of minority women. No compensation will be offered for your participation.

If you would like to know more information about this study, an informational letter can be obtained by sending a request to [REDACTED]

If you decide to participate after reading this, you can access the survey from the following link:

<https://tinyurl.com/yckexsdv>

Thank you for your consideration,
Laura De La Cruz

Appendix C**American College of Education IRB Letter**

October 21, 2021

To : Laura De La Cruz
Sue Adragna, Dissertation Committee Chair

From : Institutional Review Board
American College of Education

Re: IRB Approval

"Leadership Styles of Minority Women Administrators in Academic Medicine: A Quantitative Study"

The American College of Education IRB has reviewed your application, proposal, and any related materials. We have determined that your research provides sufficient protection of human subjects.

Your research is therefore approved to proceed. The expiration date for this IRB approval is one year from the date of review completion, October 21, 2022. If you would like to continue your research beyond this point, including data collection and/or analysis of private data, you must submit a renewal request to the IRB.

Our best to you as you continue your studies.

Sincerely,

Tiffany Hamlett
Chair, Institutional Review Board

Appendix D

Introductory Letter

DeLaCruzStudyExplanationandInformedConsent .docx

File Edit View Insert Format Tools Help Last edit was made on January 25 by Gail Fuller

100% Normal text Times New... 12 B I U A

← SUMMARY +

OUTLINE

Headings you add to the document will appear here.

Laura De La Cruz is conducting questionnaire research as part of her doctoral research at American College of Education. The proposed study seeks to analyze the leadership styles of minority women in leadership positions in academic medicine. If you have any questions, the researcher can be reached via email at [REDACTED] or by phone at [REDACTED]

The questionnaire should take approximately 15 minutes. The questionnaire, the MLQ Form 5X, will ask you to answer questions regarding your leadership style. Additional questions regarding ethnicity and position are included as they are part of the research. Although not required, if you wish to receive an email copy of the results, please send a request to the email address above.

Your responses will be kept strictly confidential. Only summary data will be published. Other than possibly receiving an email copy of the final research results, there is neither direct benefit to be gained from participating nor any known direct risks or discomfort. If you choose to participate in this project, please answer all questions as honestly as possible to assure accurate results and sign and return the following consent form.

Thank you.

Laura De La Cruz

Appendix E

Consent Form

Informed Consent Form
Leadership Styles of Minority Women Administrators in Academic Medicine:
A Quantitative Study

Please read this consent form carefully and ask as many questions as you like before you decide whether you want to participate in this research study. You are free to ask questions at any time before, during or after your participation in this research.

Project Information:

- Project title: Leadership Styles of Minority Women Administrators in Academic Medicine: A Quantitative Study
- Researcher name: Laura De La Cruz
- Contact information: [REDACTED]
- American College of Education

Introduction: I am Laura De La Cruz, and I am a student at American College of Education. I am conducting research under the guidance and supervision of Dr. Sue Adragna, Dissertation Chair. I will give you some information about the project and invite you to be part of this research. Before you decide, you can talk to anyone you feel comfortable with about the research. This consent form may contain words that you do not understand. Please ask me to stop as we go through the information and I will explain. If you have questions later, you can ask them then.

Purpose of the Research: The proposed study seeks to analyze the leadership styles of minority women in leadership positions in academic medicine.

Brief Description of Methodology: This research will involve your participation in a brief online survey that will take approximately 15 minutes.

Participant Selection: You are being invited to take part in this research because your demographic characteristics and administrative position in a U.S. medical school can contribute to our understanding of the leadership styles of minority women in leadership in academic medicine.

Voluntary Participation: Your participation in this research is entirely voluntary. It is your choice whether or not to participate. You may withdraw from participation at any time.

Procedures: We are asking you to help us learn more about the leadership styles of minority women in leadership positions in academic medicine. We are inviting you to take part in this research project. If you accept, you will be asked to complete an online survey that will take approximately 15 minutes to complete. The survey will ask demographic information, information on your current position at your medical school, and questions about your leadership styles.

1 2 3 4 5 6 7

Duration: The research takes place over 2 months. During that time, you will be asked to complete the 15-minute survey.

Risks: There are no known direct risks or discomfort associated with this study. However, you may withdraw at any time and you may choose not to answer any question that you feel uncomfortable in answering.

Benefits: While there will be no direct financial benefit to you, your participation is likely to help us find out more about the leadership styles of minority women in academic medicine.

Reimbursements: Other than possibly receiving an email copy of the final research results, there is neither direct benefit to be gained from participating.

Confidentiality: I will not share information about you or your organization or anything you say to anyone outside the research team. The information that we collect will be kept on an encrypted computer. Any information about you will have a number on it instead of your name. Only I will know what your number is, and I will secure that information.

Sharing the Results: Each participant will receive a summary of the research findings if they desire. I hope to publish the results so that other interested people may learn from the research.

Right to Refuse or Withdraw: Your participation in this research is entirely voluntary. It is your choice whether or not to participate. You may withdraw from participation at any time.

Who to Contact: If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact [REDACTED] or [REDACTED]. This research plan has been reviewed and approved by the Institutional Review Board of American College of Education. This is a committee whose role is to make sure that research participants are protected from harm. If you wish to ask questions of this group, email IRB@ace.edu.

Certificate of Consent: I have read the information about this study, or it has been read to me. I have had the opportunity to ask questions about the study, and any questions have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Name: _____XXXXXXXXXX_____

Signature: _____

Date: _____January 25, 2022_____

Appendix F

Power Analysis

