HIGH-ACHIEVING WOMEN NEGOTIATING LEADERSHIP ROLES
IN ACADEMIC MEDICINE

A thesis presented
by
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to
The School of Education

In partial fulfillment of the requirements for the degree of
Doctor of Education
in the field of
Education

College of Professional Studies
Northeastern University
Boston, Massachusetts
May 2019
Abstract

For almost four decades, the number of women entering the field of academic medicine has increased, yet their numbers in leadership positions remain well below parity. The purpose of this qualitative interpretative phenomenological analysis (IPA) study was to explore the experiences of eight women scholars, administrators, and practitioners in academic medicine and their journeys toward advancement at an academic medical center located in the Northeast. This phenomenological study was designed to understand the barriers and opportunities that helped or hindered the participants who achieved leadership roles. The findings for this study describe a range of similarities and differences among the participants with regard to personal and professional support structures. Implications for practice described within this study can help academic medical institutions become more aware of their organizational cultures and make better informed decisions regarding gender differences and parity.

Key Words: barriers, gender differences, leadership, mentorship, organizational awareness, support
Acknowledgements

First, I must thank my family, Rich and my two children, Sean and Dorianne, who supported me when I needed to dedicate hours to my research. My parents instilled the value of hard work, and commitment does pay off; unfortunately, they will not see me graduate. My mother repeatedly supported me throughout the years by saying, you will finish whatever you set your mind to do.

I am lucky to work with a great team of people, especially, Tina, Paula, Terrie, and the others, who often asked about my thesis and the progress I was making. They are such good colleagues to work with and I appreciate their support.

I am immensely grateful to my first editor, Leslie Wirpsa, who unfortunately left this world way to soon. The last conversation with Leslie, she said to me, I will be at your graduation, sadly; she won’t, but she will be in spirit. I wholeheartedly miss her support and, in my heart, will never forget her wisdom and laugh. I have strong admiration for my second editor, Michael, who has provided such positive support. The constant uplifting comments really gave me the push to finish. At times, I felt that I would give up, but Michael’s words of praise have given me the strength to finish and really feel proud of the final thesis product.

I want to thank Dr. Ron Brown who originally provided some great insight during the first DTP process which led the road to begin the journey in completing this thesis. My advisor, Dr. Carolyn Bair, who from the beginning indicated that I would finish even it took longer than expected. Her academic insight and words of wisdom provided key points into completion of my thesis. My outside reader, Dr. Roxanne Cargill, who has provided such insight, gathered information to help me through this process and had such strong words of encouragement. My
second reader, Dr. Michael Dean has provided input and wisdom on review of my research study.

Thank you to my NEU warrior friends, a group of other students who have completed the doctorate program for providing such positive words and encouragement. Another shout out to Dr. Jeff Puhula, another NEU alumnus who gave me the contacts and support during the long road of completing the thesis. I also want to thank Dr. Dawn Oden Mackiewicz, another NEU alumna who provided guidance and review of my work.

I especially want to thank the high-level women whom I had the pleasure of interviewing for my research study. The level of enthusiasm that each participant felt in having their lived experiences shared and how they all felt that my topic was so important to study. This thesis will allow us to teach and give back to others.
# Table of Contents

Abstract ........................................................................................................................... 2

Acknowledgements ......................................................................................................... 3

Table of Contents ............................................................................................................. 5

Chapter 1: Overview of the Study .................................................................................. 8

  Statement of the Problem ............................................................................................... 9

  Research Question .......................................................................................................... 11

  Significance of the Research Problem .......................................................................... 12

  Conceptual Frameworks ................................................................................................. 17

Chapter 2: Review of the Literature .............................................................................. 25

  History and Context of Gender Discrimination in Academic Medical Institutions .... 26

  Organizational Culture Dynamics in Female Academic Medical Leadership .......... 32

  Gendered Dynamics in Female Academic Leadership .................................................. 38

  Summary ......................................................................................................................... 44

Chapter Three: Methods and Research Design .............................................................. 46

  Research Methodology ................................................................................................. 46

  Research Design ............................................................................................................ 48

  Research Tradition ........................................................................................................ 49

  Participant Selection ..................................................................................................... 51

  Procedures ...................................................................................................................... 53
Chapter 4: Report of Research Findings

Introduction

Research Question

Background of Participants

Review of Data Analysis Procedures and Themes Identified in the Process

Theme 1: Cultural shifts led to organizational awareness of gender differences and a need for parity.

Theme 2: Effective and supportive mentorship was essential to advancement within an academic medical setting.

Theme 3: The need for work-life balance impacted women’s careers in academic medical science.

Theme 4: Spousal support contributed toward women participant’s advancement into leadership positions.

Theme 5: Participants gave advice and recommendations regarding personal characteristics that contributed toward their success.

Conclusion

Chapter 5: Interpretations, Recommendations, and Conclusions

Introduction

Interpretation of Primary Findings

Implications for Practice and Recommendations
Considerations for Future Research ................................................................. 109

Conclusion ........................................................................................................... 110

Appendices ........................................................................................................... 112

Appendix A – Interview Protocols ................................................................. 112

Appendix B – List of Figures and Tables ....................................................... 115

References ........................................................................................................... 116
Chapter 1: Overview of the Study

Women have entered academic medicine in increased numbers over the past four decades (Carr, Gunn, Kaplan, Raj & Freund, 2015). In August 2009, the Group on Women in Medicine and Science (GWIMS) was founded by the Association of American Medical Colleges (AAMC) to address and highlight the importance of women’s academic assets and contributions to medical and science academia (Carr et al., 2015). However, despite significant strides by high-achieving women in medicine and science, females still have not held even middle and especially senior leadership positions at the same rate as their male peers (Ash, Carr, Goldstein, & Friedman, 2004; Jagsi, Griffith, Stewart, Sambuco, DeCastro, & Ubel, 2012).

A major factor contributing to gender gaps in advancement for women is that policies to support work-life balance integration differently affect women as compared to men (Welch, Wiehe, Palmer-Smith, & Dankoski, 2011). Women still disproportionately carry the responsibility of caring for the home and family, even in dual-income households where women are working professionals. This factor contributes to the fact that, in a higher education institution in academic medicine, attrition of women faculty with a family is higher than that of men (Carr et al., 1998; Welch et al., 2011). In a career in academic medicine, especially in the life sciences where research demands are high, long hours are the standard. Because of the struggle to juggle demands of home and family life with professional aspirations, many women faculty in academic medicine work part time or switch careers. In a career in research, the only way to advance is to produce stellar publications that result in grant funding. If faculty members in medical academia cannot produce these publications, their careers suffer in terms of promotion and advancement within their organization. Time for research and leadership in grant preparation is essential to success in the academic medical field.
As the number of women who enter careers in the medical academic field increases, competing demands between work life and family balance become more evident amongst female doctors and scholars and put pressures on the organizational culture and structure of institutions. Women face many challenges in balancing their multiple roles as a physician, scientist, mother, and wife or partner, and in challenging workplace promotional bias and discrimination (Tarek & El-Masry, 2015). Tarek and El-Masry (2015) surveyed 46 women—a combination of physicians and researchers—and identified that women in medical fields were often faced with professional decision-making that conflicted with career and family life (Tarek & El-Masry, 2015). Their research study revealed that 85% of women were more likely to slow down in their careers or modify their work schedules for the benefit of their spouse and children, compared to 35% of their male counterparts in similar roles (Tarek & El-Masry, 2015).

This research study investigated the multiple factors that contribute to the lack of advancement of women in academic medicine. This study was designed to provide key insights about women aspiring to obtain senior leadership positions in the field of academic medicine. It explored insights from individuals who currently serve in senior leadership roles. The study identified barriers that exist for women who have succeeded in organizational leadership roles.

**Statement of the Problem**

Despite major strides made by women overall in the field of academic medicine over the past four decades, the gap between women and men in leadership positions, particularly at the senior level, remains characterized by striking disparities (Carr et al., 2015). A study by Weinacker and Stapleton (2013) revealed that, in all medical specialties combined, women occupied only 22% of permanent division or division chief and associate or vice chair positions and held only 14% of permanent department chair jobs in the years 2011-2012 (Weinacker &
Stapleton, 2013). As for compensation, women in medical research at all academic ranks, PhDs and MDs alike, in 2007 received lower average salaries than their male peers (DesRoches et al., 2010). Women in academic medicine with a PhD earned $214,470 less over a 30-year span than a comparable male faculty member (DesRoches, Zinner, Rao, Iezzoni, & Campbell, 2010). A survey conducted in 2017 found that male primary care physicians made $229,000 annually, compared with $197,000 for women, which created a 16% gap in salary (Butkus, Serchen, Moryer, Bornstein, & Hingle, 2018). The gap in compensation was more pronounced for specialist. Men earned $345,000 annually while women earned $251,000, resulting in a 37% gap in compensation (Butkus, 2018). A longitudinal study completed in 2016 had compared faculty compensation at 24 medical schools in the United States and found that female physicians “earned 90 cents for every dollar made by their male counterparts, an annual difference of $20,000” (Butkus, 2018, p. 721)

Additionally, women lag behind men in producing scientific publications. Since the 1970s, women have had fewer first-and second-author publications in most significant peer reviewed journals than their male counterparts, which contributes to their slower pace in advancement (Byington & Lee, 2015). Women who are recruited in academic medical centers receive much less substantial start-up compensation packages than men. Indeed, for women with degrees of equal status to their male counterparts and who were from the same type of academic medical institutions, the median recruitment package was 67% greater for males than for female—at $980,000 for startup for men and $585,000 for women faculty (Byington & Lee, 2015).

Key barriers that impede women from advancing to the top include: unequal pay, long hours, and systemic seniority by males; inability to produce scientific publications and receive
prestigious funding from organizations, such as the National Institutes of Health (NIH); persistent inequality in sharing responsibilities for child care; and the challenges of juggling the work-life balance (Carr et al., 2015).

Acknowledging these personal and structural constraints, the purpose of this study was to explore the experiences of high-achieving women in academic medicine—scholars, administrators, and practitioners alike, in their journeys toward advancement at an academic medical center. This study examined the resources the participants brought to the process and the barriers and opportunities which helped or hindered them in achieving various levels of advancement in academic leadership roles. It helped to identify the resilience and resource-mobilization strategies they employed and the choices they made that led to their promotion. The study provided an understanding of the experiences of high-achieving women in senior leadership positions at an academic medical center moving into leadership roles in the current climate of gender disparity. The study also documented how these women addressed the complexities of organizational climate for women in academic medicine and examined the strategies they have used to advance and resolve the complications they faced along the way.

**Research Question**

**Primary Research Question:** How do senior academic women in the medical profession describe their experiences of negotiating and/or achieving senior leadership positions within an academic medical center located in the Northeastern United States?

**Sub Questions:**

- How do women leaders in the academic medical field describe the constraints and opportunities that affect their professional advancement?
• How do women who advance to leadership positions in academic medicine describe the strategies they use to transcend challenges, inequities, and structural/institutional factors impeding them, including work and life balance, to achieve success?

**Significance of the Research Problem**

The number of women students attending medical school has totaled or exceeded the number of males in many countries during the first decade of the 2000s (Van den Brink, 2011, p. 2033). However, despite these strides, women have not attained senior academic ranks of leadership at the hoped-for rate (Van den Brink, 2011, p. 2033). An explanation for the slow rate of attainment is that some women leave their faculty positions because of conflicts that arise between family commitments and career choices (Van den Brink, 2011). One other factor identified is an ingrained gender bias in the culture of medical academia, which can create either intentional or unintentional barriers for women’s persistence in advancement (Carnes et al., 2015). Women faculty members should not be overlooked for promotion because of engrained cultures of organizations, often referred to as the boy’s club mentality, which perpetuate the idea that women cannot simultaneously have a career and a family (Van den Brink, 2011).

Women are often passed over for leadership positions because of preconceptions that men are better suited for high level management, which results from men having the support of recruitment through homogenous male networks (Van den Brink, 2011, p. 2039). Moreover, male-defined networks sustain and perpetuate erroneous perceptions that women do not aspire to high-level careers in academic medicine and that women lack the extra level of commitment required to reach top positions—such as working full-time hours or dedicating weekends and holidays to professional duties (Van Den Brink, 2011). This compounds the dilemma for women
because, not only must they achieve academically and in practice, but their outsider status also requires them to simultaneously address structural barriers by becoming organizational agents of change to shift the academic medical culture to allow them greater access to leadership and work-life balance (Pololi & Jones, 2010). To be successful in implementing this change in culture, they need to be aware of the current institutional structure and climate and gain a deeper understanding of the culture in academic medicine (Pololi, Civian, Brennan, Dottolo, & Krupat, 2013; Pololi & Jones, 2010). Documenting this culture and providing resources for women to obtain this awareness through research could help women learn adaptive strategies and participate in change, which could support women in achieving fuller leadership potential and advancement in the medical field (Pololi & Jones, 2010; Pololi et al., 2013). Analyzing and interpreting the experiences of women in academic medicine through a gender reflective lens could provide clarity and drive crucial changes in practice within organizations to promote greater diversity in academic medical leadership and training (Pololi & Jones, 2010).

A shift in organizational climate has been identified as essential if women are to challenge gender stereotypes and obtain academic success within their work environments (Carnes et al., 2015). The AAMC and the National Academies of Science, Engineering, and Medicine (NASEM) have confirmed that gender bias takes place within these professions and academically in personal interactions, evaluative procedures, and ingrained departmental cultures, which systematically impede women from advancing in the fields of science, engineering, and medicine (Carnes et al., 2015). For behavior to change, interventions by members of organizational leadership teams may be needed. Through interventions and cross-organizational awareness, faculty members can begin to break through the habits and structural constraints of gender bias to recreate environments in ways that support and embrace women’s
career advancement in academic medicine, science, engineering, and leadership (Carnes et al., 2015). This shift requires institutions to transform at multiple levels, but is important to bear in mind that individual stakeholders within the organization who can drive the change must be involved (Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou, 2004; Nonaka, 1994; Rogers, 1995; Simmons, 2015). More research is needed to delineate the experiences of women faculty members and to understand the strategies that promote the leadership development of women; a first vital step is to document the impediments that arise as they balance their personal and professional lives as they simultaneously manage the exigencies of a high-powered profession and the challenging pursuit of gender-equal advancement (Simmons, 2015).

Women and men make career choices that confirm their own normative gender roles in society (Riska, 2011, p. 265). Women face a complexity of demands and conflicts in relation to work-life balance (Elston, 2009). Bias and the way it identifies organizational culture is a main cause for the stagnant or slow progress of women’s advancement into senior leadership positions, particularly when these were historically dominated by men (Heilman & Okimoto, 2007; Inesi & Cable, 2015; Riska, 2011). Statistics support these assertions: in 2011, 47% of new medical students, 44% of new full-time medical faculty hires, and 37% of full-time permanent medical faculty members were women; however, for the same year, only 14% of department chairs and 12% of deans were women (Mayer, Blair, Ko, Hayes, Chang, Caubet & Files, 2014). In short, more women are entering medical school, and the number of women medical school faculty members has increased. Yet, this is not comparably reflected in a closing of the gap of women obtaining senior leadership positions.

When women do aim to obtain these positions, they have less access to mentorship than their male counterparts because of the dominance of senior elite male faculty at the leadership
level. Simultaneously, despite promotion, women faculty members still receive less than equal pay and benefits in academic medicine. The hiring, available resources, and decisions regarding pay and advancement are still made predominantly by males (Byington & Lee, 2015; Valantine & Sandborg, 2013). Simultaneously, unconscious and implicit biases commonly lead to decisions of not hiring women, which can create deeper inequities for women moving forward in their careers in the academic medical setting (Staats, Capatosto, Wright, & Contractor, 2014). One way to correct these biases is to acknowledge that they exist, to assist organizations in providing more resources for mentoring and training for women, and for the development of female faculty within an organization. This dynamic carries over into research—women in the sciences generally remain at the level of basic research and do not advance in the same way as their male counterparts to more sophisticated studies. The cycle continues when they lack scientific publications and become less likely to apply for and receive NIH funding as principal investigators (Byington & Lee, 2015).

Cultural barriers also prevent female advancement in academic medicine (Pololi, Krupat, Civian, Ash, & Breenan, 2012). For example, academic medical centers do not provide adequate support systems fostering encouraging environments for women faculty. Lack of recognition in work added to other factors, such as unequal pay and an absence of support for work-life and family balance, drives women to leave their academic medical careers (Alexander & Lang, 2008; Pololi et al., 2012). Women faculty members often do not have the ability to observe and learn from other women faculty members who have successfully achieved senior leadership roles within the academic medical center (Pololi et al., 2012). This in part is attributed to acute levels of competition and non-supportive dynamics within organizations that may drive women away from seeking mentorship from other women (Pololi et al., 2012). In a context where women
already face competition from male scholars, they may also be invested in undermining the success of other women (Pololi et al., 2012). Additionally, when female leaders succeed—and when they aim for work and life balance—they may not have the time or resources to support their junior counterparts (Pololi et al., 2012).

Consistent with the precept of non-conscious bias, self-promotion by women may invoke negativity among other women colleagues (Pololi et al., 2012). Female rivalry in male-dominated workplaces sets women up to compete intensely due to increased scrutiny and the scarcity of top leadership positions available (Johns, 2013; Marcus, 2016). Psychosocial factors along with the workplace culture together create female rivalry (Marcus, 2016). This negative response by women could be attributed to the dynamic that self-promotion in women instills, which is perceived as a negative response. Women are frequently taught early on to prevent or minimize both praise to themselves and the celebration of other women’s advancement and accomplishments (Pololi et al., 2012). In other words, it is frowned upon for women to be happy for other women when they advance, particularly in professional careers. Women have expressed that they feel less connected in forming cohesive relationships within the organization and to some extent observe less congruence between their own sense of value and the values of their organizations in these high-powered settings (Pololi et al., 2012). Combined, this environment is not conducive to female advancement into leadership positions in academic medicine or the medical humanities.

This study analyzed stereotypic-based biases as ingrained patterns of ideas and behaviors to recognize and name these practices and to promote changes in habits by all stakeholders—men and women alike. The study delved into the experiences of women in positions of senior leadership in the medical academic community to explore the factors that have allowed them to
obtain a level of success. It examined the barriers women have confronted and still impede or obstruct their advancement.

**Conceptual Frameworks**

The conceptual framework that guided this thesis incorporates feminist theory and draws on two models of analysis of discrimination in organizational structures from a systems level, using both a foundational theoretical model outlined by Gelfand, Nishii, Raver and Schneider (2007) and an elaboration of that model conceptualized eight years later by Stamarski and Son Hing (2015).

**Feminism and Theories of Women’s Advancement.** The feminist frameworks informing this study involve theories examining women’s challenges in rising to leadership positions professionally in academic settings. These outline complex intersections of why women still struggle with career mobility in comparison to their male counterparts; the frameworks also incorporate an analysis of: (a) lack of mentoring (no “good old boys” network); (b) institutional norms (lower compensation for women and slower career pathways); and (c) organizational climates (attitudinal and organizational culture biases), as outlined by Ballenger (2010, p. 1, 11). The feminist theoretical frameworks also explore the interactions among these factors to provide perspectives for analysis and critique (Ghaus-Kelly, 2014). The lack of women in leadership positions has led to a lack of available mentors, which further exacerbates women’s lack of advancement and limits the pool of high-achieving females available to help other women negotiate success (Ballenger, 2010). Feminist theories have provided theoretical background for many of the factors shaping women’s experiences towards professional advancement in medical and academic settings, in general, and the obstructions that prevent them from achieving success. In sum, women continue to begin their career with fewer
academic resources and tend to move further along through the ranks more slowly that their male counterparts (Zhuge, Kaufman, Simeone, Chen, & Velazquez, 2011, p. 638). Even after adjusting for number of scientific publications, funded grant support, tenure versus other career track, hours worked, and specialty, women remain considerably less likely than men to be promoted (Zhuge et al., 2011, p. 638). This conceptual framework combines the work of various scholars to map barriers previously identified in the research to provide a method for engaging in a discussion about how women in a medical academic climate have overcome barriers for emancipation and promotion (Ghaus-Kelly, 2014).

As Lester and Lukas (2008) outlined, organizational cultures shape and reinforce socially-appropriate roles for men and women. Women are often taught early on in their careers that traditional male attributes are expected in senior administrative leadership roles and that promotion depends on their ability to act like men (Ghaus-Kelly, 2014; Tedrow & Rhoads, 1999). However, when women satisfy all of the various responsibilities expected, including caring for family and being what is considered as good faculty citizens, they recognize that the reward system does not value all the citizenship roles they carry out, leaving them to feel unsatisfied (Acker & Feuerverger, 1996; Ghaus-Kelly, 2014). Lester and Lukas (2008) documented the experiences of high-achieving women in leadership roles in an academic medical center, particularly describing the importance of faculty members’ perceptions on barriers, including gender awareness and organizational culture and expectations, noting the key effects of discourses and social practices and how these relate to organizational climate within the organizational culture. Their study used these precepts to understand why advancement has remained unequally allocated between men and women and how greater equality can be achieved in medical academic organizations.
This feminist framework accepts that women who work in a highly male-dominated and hierarchical environment can experience a negative impact on their performance evaluations; however, it moves beyond this postulate to understand the components that help women overcome such cultural and structural barriers (Inesi & Cable, 2015). It adapts components of Gibson’s (2006, p.66) research interviewing nine women in academia to identify factors from supportive environments that benefitted women in achieving promotion, particularly those factors that helped women feel supported in taking time away from work to begin having a family. Drawing from the work of Lester and Lukas (2008) and Gibson (2006), this study examined how women who experienced gender disparities in organizational culture, which can lead to exclusion and isolation, either succumbed to or overcame negative factors that arose in a gendered organizational culture and structure.

Theories of Organizational Discrimination. As previously noted, these theories also draw on two models of analysis of gendered discrimination in organizational structures. The following is a diagram of the Gelfand et al. (2007) model, followed by a model by Starmanski and Son Hing (2015), the latter of which is based on the work of Gelfand et al. (2007). Starmanski and Son Hing’s (2015) elaboration is important to include because of their strong focus on human resources, an essential component of this study.
Figure 1. A model of discrimination at the level of the organization (Gelfand et al., 2007, p. 8)
Through their models, both sets of authors critiqued the central core of organizations’ discriminatory practices, which extended from hiring, to retention, to performance evaluations for promotion. As Gelfand et al. (2007) observed:

Perhaps the most widely publicized form of discrimination in organizations is the “glass ceiling,” which refers to the invisible barrier that blocks women and racial minorities from advancing to senior leadership positions in organizations (i.e., access discrimination). There is substantial evidence suggesting that women and racial minorities are underrepresented in upper management. (p. 8)
For example, according to a 2013 report from the U.S. Bureau of Labor Statistics, even though there have been increases, women comprised only 38.6% of “Officials and Managers,” in U.S. corporations even though they represented 57.7% of the workforce in 2012. (EEOC, 2013). In 2014, women accounted for 52% of all workers employed in management, professional, and related occupations, somewhat more than their share of total employment which was 47% (EEOC, 2015).

Leaders within organizations, men and women alike, who possess the power to hire commonly hold stereotypes and biases related to gender. These stereotypes and assumptions, reinforced by societal practices, represent unconscious discriminatory beliefs that support the idea that males are better in leadership roles within the organization; thus, discrimination within organizations is both embedded and complex (Gelfand et al., 2007). The different factors within an organization that contribute to discrimination include unconscious biases, lack of friendly work-life balance policies, and an absence of fair, transparent performance evaluation systems and strategies to diminish workplace discrimination in hiring and to support women and minorities in moving into leadership positions (Gelfand et al., 2007).

Figures 1 and 2 map barriers women tend to face within organizations while trying to seek advancement, which are applicable to the field of academic medicine. Stamarski and Son Hing (2015) revealed that within an organization, human resource departments and general institutional policies also contribute to these barriers by not offering work-life balance and family-friendly policies. The authors indicated that it is essential to women’s advancement to support fair policies on hiring, and work-life balance, and to avoid systemic gender biases within the workplace in order to move women into senior leadership positions.
For the purpose of this study, this researcher, similar to Stamarski and Son Hing (2015) adapted Gelfand’s (2007) model to fit women’s leadership discrimination in the academic medicine setting through the following model, adding the component of self-efficacy and cultural unconsciousness, which adds a component of organizational stereotypic behavior that is not commonly identified in relation to gender dynamics. The following model instructed this thesis theoretically and procedurally:

Figure 3. High Achieving Women in Academic Medicine (Karen Griffin, 2017)

Figure 3 identifies the slow trajectory of women in academia towards advancement in senior leadership positions. The core of the diagram represents organizational structure consisting of committees that determine recruitment, promotion and policies that commonly create barriers to women’s advancement. As an example, these include specifics such as representation for tenure. HR and promotion committees are often made up of primarily and
sometimes only long-time, senior males engrained within an organization. The lack of women represented on recruitment, promotion, and policy committees has been well documented (Bickel et al., 2002). This researcher’s model, as shown in Figure 3, reinforces Bickel et al.’s (2002) assertion:

Practices for academic societies and teaching hospitals, as well as medical schools, to assess for gender-related effects also include how committee assignments are distributed… women are under-appointed to the most powerful committees... how candidates for leadership positions get nominated, and how visiting professors are selected (p. 1051).

Women who want to succeed in leadership are trapped in a complex conundrum, the multiple and complex factors behind which the following literature review documents and analyzes in depth.
Chapter 2: Review of the Literature

This review of the literature outlines historical gender biases that women have faced in attaining upper-level leadership positions in academic medicine and the roots of this trend in science education. In addition, it addresses the ideational and practical barriers and challenges women confront when seeking equality within the workplace, and the factors that can contribute to women’s advancement in the complex, gendered, and competitive academic medical research, teaching, and leadership environment. The review examines the following three strands of scholarship documented in the literature: (a) History and Context of Discrimination of Women in Academic Medicine; (b) Organizational Culture Dynamics in Female Academic Leadership; (c) Gendered Dynamics in Academic Leadership.

The chapter also examines organizational culture and the dynamics of it on the relationships between women themselves that either undermine or support the advancement of female leaders. Women who remain engaged in leadership positions gain various awards (Bond, Homes, Byrne, Babchuck, & Kirton-Robbins, 2008); striking are both the small number of women obtaining these roles and the lack of support received even from female peers for their advancement and promotion. Imbedded biases favoring masculine leadership behaviors remain strong, despite a growing number of women occupying these leadership positions (Isaac, Griffin, & Carnes, 2010). Perceptions of women being, “soft” or, “easily” controlled are still pervasive, perpetuating the myth that women do not understand or belong in business and leadership environments (Isaac et al., 2010). Isaac et al. (2010) concluded that organizational culture powerfully affects the ways in which women are not considered to be professionally equal on the playing field when seeking advancement within organizational structures.
History and Context of Gender Discrimination in Academic Medical Institutions

Beginning in the 1970s, women began to enter academic medicine in increased numbers, a trend which continued during the four decades that followed. Yet, in 2015, women still comprised only approximately one-fifth of full-time senior faculty in the field, and across ranks, women have not attained senior positions in parity with men, which has been attributed to the “perceived wide range in gender climate, lack of equal representation in leadership by gender, lack of retention of women in academic medicine (the ‘leaky pipeline,’ disparity in pay, imbalance on work and family life responsibilities)” (Carr, Gunn, Kaplan, Raj, & Freund, 2015, p. 190). According to Monroe et al. (2015), in 2013, women made up of 16% of deans of United States Medical schools, and there were only small increases in the percent of women among department chairs and division directors or section chairs, at 15% and 24% respectively. These findings from prominent scholars studying gendered dynamics in this field are what Carr et al. (2015) defined as “the need for systematic review by medical schools and by accrediting organizations to achieve gender equity in academic medicine” (p. 190).

Monroe et al. (2015) outlined the cumulative disadvantages women face moving through the “labyrinth” trajectory towards leadership in academic medicine. Monroe et al. (2015, p. 838) described this as a “sticky floor” preventing their advance. This process was characterized by the following: less institutional support and adequate resources for research funding; lack of work-life balance policies; first appointment at lower ranks; slower rate for promotion; and, blatant gender discrimination (Monroe et al., 2015). Overall, participation of women in science in general has increased in part because of a push towards greater gender and cultural awareness of inequity, and, to an extent, through deliberate recruitment responding to discernment and
policy-making by institutions in academia around these issues (Carli, Alawa, Lee, Zhao, & Kim, 2015).

Women have historically faced negative perceptions and biases that have created obstacles for them as they seek to acquire top leadership positions within their organizations, a trend which is even more acute for female academic medical and science research faculty professionals (Eagly & Karau, 2002). In 1963, the Equal Pay Act (EPA) amended the Fair Labor Act of 1938 to include women and to address the disparities in compensation. The EPA attempted to equalize compensation for women who performed the same jobs as men and defined the parameters for people who do the same job with respect to skill, effort, and responsibility, and which are performed under similar working conditions (EPA, 2016; Simmons, 2015). Furthermore, the EPA described how employers should not have differing scales for compensation for their employees, especially with regard to gender. Yet, as the data revealed, even edging towards equality and equity in representation in leadership is still a struggle in the sciences, particularly in high-powered fields like academic medicine.

**Gender Inequality in Academic Medicine and STEM Education**

Researchers have tracked four decades of the entrance of women into academic medicine and have revealed that, while moderate improvements have occurred in the climate supporting the advancement of females in faculty and research positions in this “old boys club,” parity with men particularly in middle and senior leadership (faculty appointments, and research positions and funding alike) remains sorely lacking (Carr et al., 2015; AAMC, 2014; Cavallaro, Hansen, & Wenner, 2007). In 2014, as the AAMC (2014) documented in its 2013-2014 report titled “The State of Women in Academic Medicine: The Pipeline and Pathways to Leadership,” women comprised “only 38% of full-time faculty in the field in comparison to their male colleagues who
held 62% of those posts” (p 8). The report, which pulled data from 91% of the nation’s 129 accredited medical schools and which has been published annually since 1983. A breakdown by rank revealed that men dominated 79% (only 21% for women) of all full professorship positions; men occupied 66% (34% for women) of the associate professor ranks (both of these require tenure); and men claimed 56% of the assistant professor ( untenured) appointments (AAMC, 2014). Even more drastic, only 16% of deanships (84% for men), and a mere 15% (85 percent for men) of department chair appointments were held by women (AAMC, 2014).

Women who are physicians in pediatrics and psychiatry have occupied at least 50% of the field for the past 25 years, but the proportion of women in leadership positions has lingered at or below 10%, based on number of department chairs for over a decade (Carnes, Morrissey, & Geller, 2008). The departments in science and medicine with the lowest proportion of full-time female faculty included physiology (27%), biochemistry (28%), pharmacology (29%), orthopedic surgery (16%), surgery (22%), and radiology (28%) (AAMC, 2014). One of the factors feeding this trend is the skewed nature of tenure and full-professorship promotions, which for tenure remained static for women between the 2008-2009 academic year, as compared to 2013-2014. A full 70% of all assistant professors tenured in academic medicine were men; meanwhile, for 2013-2014, men represented 69% of all promotions to full professor, a slight decline of 2% from the 71% receiving this advancement in 2008-2009 (AAMC, 2014).

While the application and graduation gap for medical school is reported as less skewed, it still remains disparate and contributes to subsequent faculty appointment and leadership inequities. Indeed, for example, since its peak at 51% in 2003-2004, there has been a decline in women who apply to medical school. According to AAMC (2014) data collected in 2013-2014, 54% of medical school applicants were men and 46% were women. In 2013-2014, women
graduating from medical school were 47% of all students, while men were 53%; women comprised 46% of the resident pool, with men ranking at 54% (AAMC, 2014).

Women simultaneously remain highly underrepresented more generally in the field of science (Ceci, Williams, & Barnett, 2009). In the top 50 American universities, there is a disproportion of female full professorships (as it pertains to math and science) in these fields, ranging from 3% to 15% (Ceci et al., 2009, p. 218; National Science Board, 2016). The discouraging news, for example, in the field of chemistry, is that only 30% of women become PhDs. As Cavallaro et al. (2007) observed, “The further you go up the ladder of prestige and seniority, the less encouraging are the numbers” (p. 21). One possible reason for the unequal distribution and underrepresentation of women in the Science, Technology, Engineering, and Mathematics (STEM) areas could be strong socio-cultural factors which contribute to women opting out and deciding not to pursue advancement in these fields because of having children; research has revealed that this is often a choice that many men do not even think to make (Ceci et al., 2009, p. 251).

Additionally, in regard to funding opportunities, historically, women scientists within the academic arena have received fewer grant dollars than their male counterparts to support their research, which negatively affects tenure and promotion (Mazure, Arons, & Vitali, 2001). The National Institute of Health (NIH) provides the greatest source of funding for research in the United States; however, the structure of the organization’s decision-makers is also skewed based on gender, with women at comprising only about 20% of its leadership (Mazure et al., 2001). These trends carry over into the international sphere. The American Institute of Physics published a global survey of 15,000 male and female physicists in February 2012. In almost all cultures, female scientists received less funding, laboratory space, research grants and
equipment. The researchers who participated concluded, “women physicists could be the majority in some hypothetical future yet still find their careers experience problems that stem from often unconscious bias” (Pollack, 2013, para. 56).

**Factors contributing to the gap.** Many factors contribute to the gender imparity in the field, particularly in leadership and research funding, persist, as documented by Carr et al. (2015) in a study that built on their 1995 survey research, which cited similar obstacles to women’s advancement faced decades ago:

The lack of programs for women, the stressful economic climate, lack of resources in academic medicine with the decrease in funding from the National Institutes of Health (NIH) and other federal programs and equating the number of women in senior positions as a proxy for a positive climate for all women were reported as factors that impeded progress for women in academic careers (p. 193).

These structural factors are compounded by broader societal factors. In this context, women in the field consistently identified “a disproportionate burden of family responsibilities and work-life balance on [their] career progression” (Carr et al., 2015, p. 191,193). This theme was previously documented by Carnes et al. (2008), who noted that the provision of additional sources of funding to alleviate the constraints of child care so that women have enough time to pursue their research and clinical aspirations in moving to the top is essential. Carnes et al. (2008) advocated that stakeholders must acknowledge that talented women might be lost to the field if these biased behaviors continue, and leaders must act systematically to reverse this trend. Indeed, Carr et al. (2015) later pointed to the pressing need structurally for “greater institutional oversight of advancement, compensation, and the overall gender climate for women” (p. 198) and suggested that the AAMC leadership and the Liaison
Committee on Medical Education (LCME), which accredits educational programs for medical schools throughout the United States and Canada, “should emphasize the importance of these issues and enforce this as an integral part of medical school accreditation” (p. 198).

These trends of imparity in academic medicine take root in and parallel the broader world of STEM education and career representation, which subsequently feeds the layers of inequity at the higher levels of leadership and senior scholarship in specialized fields of science. According to the Women’s Institute for Policy Research (WIPR), over 80% of college graduates in STEM fields are men; conversely, over 80 percent of graduates in family and consumer sciences, social sciences, legal studies, and education and health-related fields are women (Nelson, Froehner, & Gault, 2013, p. 6). The marked difference between what types of postsecondary, college degrees women and men complete creates gender gaps in pay in the national and global economies, as STEM fields pay higher wages when compared to fields in social sciences (Nelson et al., 2013). In addition, since a majority of graduates in STEM fields are male, they dominate the competitive pool fighting for high-level positions and garner wages higher than women (Nelson et al., 2013). The factor contributing to the more general STEM trends echo those in academic medicine: Women face the challenge of single parenthood and of handling family and domestic responsibilities much more frequently than men and are thus at an even greater disadvantage, due to the lack of resources to support child care at college campuses, making it harder especially for single mothers to complete their degrees while balancing school and child-raising responsibilities (Nelson et al., 2013).

There are multiple reasons why women are underrepresented in the STEM fields, including the reality that academically girls and boys, even at a young age, are treated differently in interests and aptitude, which extends to the level of high school science (Blickenstaff, 2005).
At the postsecondary level, women experience gender segregation in STEM fields because women are encouraged—implicitly and explicitly—to enter occupations traditionally defined as feminine disciplines, such as education and social work, which creates a subtle, gendered segregation in terms of educational and career pursuits and opportunities and female self-efficacy. Thus, college experiences commonly result in women entering lower paying fields than men who acquire training and degrees more frequently in STEM-related fields that yield high overall wages in related work occupations (Moughari, Gunn-Wright, & Gault, 2012). In general, men have greater advantages for advancement, networking, and placement in these fields professionally (Moughari, et al., 2012).

**Organizational Culture Dynamics in Female Academic Medical Leadership**

The presence of increased numbers of women in positions of power in general in society, albeit gradual growth, has created new attitudes and opportunities for advancement of female leaders in fields like academic medicine. However, the severe lack of women in high ranking and influential positions persists, which was explained by the term the “pipeline problem,” inferring that women with sufficient advanced education were not available for or could not meet the demands of leadership roles—external and institutional factors kept them clogged at in a certain juncture of their pursuit to leadership (Carli & Eagly, 2001, p. 631). This explanation has often been used to mask other factors that explain why women are still behind men in advancement in academic medicine. Additionally, leadership in this discipline has been traditionally understood as a masculine enterprise with special challenges and pitfalls for women. This section analyzes this dynamic from the perspective of organizational culture.

**Barriers to Leadership Roles.** As Jagsi, Guancial, and Worobey (2006) outlined, research studies have explored the basis for the gender gap in academic medicine and have
identified three important barriers resulting in the lag of advancement for women in academia, identified by department chairs—constraints of work-life balance, manifestations of prejudice in the healthcare environment, and lack of support and effective mentorship. In addition to these barriers, Carr et al. (2015, p. 190) subsequently listed five common themes persisting over the last several decades that impede women’s advancement in the field:

- A perceived wide spectrum in gender climate,
- Lack of parity in rank and leadership by gender,
- Lack of retention of women in academic medicine (the “leaky pipeline”),
- Lack of gender equity in compensation, and
- Disproportionate burden of family responsibilities and work-life balance on women's career progression.

These factors combine to create organizational climates and concrete structural environments that impede women’s success in attaining and retaining leadership positions.

**Organizational Climate.** A survey of U.S. and Canadian medical school deans suggested that the environments within organizations have improved; however, other studies have contradicted that assertion and maintain that the climate in academic medicine continues to be unsupportive of women (Carr et al., 2015). Indeed, male faculty members do not generally face the same disparities as females—less pay, stagnant promotions, and limited networking opportunities—which create and perpetuate a persistent and negative organizational culture for women. Carr et al. (2015), citing their previous work from data collected in 2000, reported a disparity of compensation amongst male and females and documented a difference then of $11,691 annually after adjustment of rank, specialty, work hours and published articles, and life sciences (Ash et al., 2004; Carr et al., 2015, p. 197). Fifteen years later, Carr et al. (2015)
asserted “equity in compensation has yet to be achieved” (p. 197). Indeed, disparities remained consistently skewed. As Carr et al. (2015) updated:

More recent work continues to find these gaps across such specialties, ophthalmology, emergency medicine, and life sciences. Recent work indicates that, even at the junior investigator level, male faculty make on average, $13,399 more than female faculty members, even after adjustment for specialty, rank, leadership, and amount of time of research (p. 197).

This contributes to a negative organizational climate.

Beyond compensation, other components of organizational climate that are biased against women in academic medicine who pursue a career in the field of science also negatively affects the degree to which women have access to the same level of grant funding and primary authorship for their research. For example, a prestigious NIH Director’s Pioneer Award revealed how subtle signals of bias or stereotyping can occur against women researchers during the solicitation process. During the selection process, NIH seeks researchers who are willing to take risks, and the standard norm is that this behavior is strongly associated with men (Carnes, Geller, Fine, Sheridan, & Handelsman, 2005). The National Institute of Health has since recognized that this type of gendered selection had to be addressed based as a result of public outcry against this type of practice (Carnes et al., 2005). The NIH has taken steps to remove the term “risk” from the solicitation and review standards (Carnes et al., 2008, p. 1455). In the research arena, women scientists remain behind their male counterparts in receiving regular NIH awards and grants; gender bias also makes renewals problematic for female applicants. Significantly, as illustration, only 25% of all Research Project Grant R01 (R01) applications submitted to the NIH and 23% of all funded grants awarded went to women scientists (Carnes, 2008, NIH, 2007). The R01 is the
NIH’s oldest grant for research and development in the health sciences. Meanwhile, only three (12.5%) of the institute’s first 24 prestigious Clinical and Translational Science Awards (CTSA) went to women (Carnes et al., 2008; NIH, 2007). The traditional explanation for the lack of women in physicians and scientists in academic leadership has rested on three main erroneous assertions: (a) women haven’t had enough experience in the field to obtain full development of leadership skills; (b) women do not aspire to move up to these top positions because of family and personal obligations; and (c) thus, women lack the necessary leadership skills (Carnes et al., 2008, p.1456).

**Exclusion from Networks Supporting Leadership Advancement.** In academia, social and professional isolation is a form of gender bias and affects women’s advancement. In order to succeed in academia, networking and communication are crucial to upward mobility. However, historically, women have lacked the level of support received by men and continue to face persistent barriers. Since the mid-1990s, important initiatives have developed to address these entrenched obstacles to women’s advancement in the sciences, including leadership and mentorship programs, by organizations such as the NSF, the NIH, the American Association for the Advancement of Science, the Association of Medical Colleges, the Association for Women in Science and efforts by individual academic institutions. Despite such movement forward, the exclusion of females from engagement and connection with senior-level male colleagues in networking and communication persists, not only making women feel isolated, but pragmatically marginalizing them from access to the environments in which key professional information, skills, and practices are learned, shared, and transmitted—particularly “system navigation, including contract negotiation, grant applications, and time management” (Center for Gender in Organizations [CGO], 2014, p. 2). Indeed, respondents queried in that survey supporting a study
on career progression and women of color in academic medicine from the Center in Gender Organization (2014) emphasized “ongoing exclusion from informal networks as a barrier to career progression” (p. 2). One female interviewed described the networking isolation as clearly operative and problematic:

I have peers, most of the time who are male, who turn out literally seven and eight publications—now they are not writing seven or eight papers by themselves…it’s just that they have that built-in network. I don’t think people intend to ostracize women…I think it’s just natural in terms of how their networks are formed. (CGO, 2014, p. 2)

The CGO (2014) report stressed the importance of building institutional capacity to monitor and evaluate faculty development and diversity policies, practices, and programs to bridge these gaps and to prevent discriminatory practices like undervaluing women’s contributions or holding them implicitly to higher performance rubrics than male counterparts. To achieve this, institutions may require the development of new conceptual frameworks, metrics, tools and interdisciplinary approaches, based on a critical gender perspective.

Perceptions based on skewed and gendered categorizations of skill sets also have a powerful impact on inclusion, which is important to advancement. Carli et al.’s (2015) research study indicated that women are perceived to have fewer of the characteristics needed to be successful in science leadership than men have. The study revealed that women face challenges in legitimizing themselves as researchers even to peers, an activity commonly seen as a ruggedly-independent practice, and a gendered perception persists that women thrive best when participating in and moving towards communal goals—indeed, they are depicted as actually preferring and choosing trajectories that fulfill this characteristic and as having less independent agency than men (Carli, et al., 2015). In this dualistic perception that reinforces gendered
binaries of power, men are seen, in contrast, to possess more of the agency characteristics needed for leadership in research than women possess (Carli et al., 2015). This masculine agency is stereotypically characterized as being naturally highly analytical, aggressive, and independent, whereas women are considered to be softer, warmer, and more helpful, and to have more empathy (Carli et al., 2015; Newport, 2001). Women must struggle then to not only manage more salient challenges regarding pay scales, promotions, work-life balance, and exclusion from networks of power, but they must consciously confront more sub-conscious dynamics of resistance and bias permeating the fabric of institutional organizational culture—which affect self-esteem and self-efficacy—to advance in careers in science, including academic medicine.

In summary, gendered perceptions have consistently affected women’s advancement within the workplace, in academic medicine and more broadly. Embedded biases toward masculine leadership are characteristic in most academic medical organizations despite a slowly growing number of women occupying leadership positions (Eagly & Karau, 2002; Isaac et al., 2010). Perceptions of women as being soft or incapable leaders in this field are widespread and perpetuate the myth that women do not understand the realm of high-powered leadership and business, for example (Isaac et al., 2010). The repercussions of this are stark. Eagly and Karau’s (2002) work revealed that gendered perceptions play a significant role in leading most people to actually prefer a male supervisor versus a female one based on their ideas and conditioning regarding the positions they felt women and men should hold. Thus, as Zhuge et al. (2011) found that “[W]omen are grossly underrepresented in positions of power and leadership in academic medicine” (p. 637).
Gendered Dynamics in Female Academic Leadership

Mentorship, Networks, and Research. One of the historical problems for female employees seeking to advance into leadership roles is a lack of support from other women. Female leaders who do not support other women within the workplace often judge their peers’ level of commitment to their career trajectory, and they commonly inaccurately critique their colleagues’ capacity for assertiveness and question and undermine their leadership style and abilities (Hochschild, 1989). In one study, female professors asserted a belief that male PhD students were more dedicated to their careers than female PhD students; however, a survey of the students found no difference in the reported levels of dedication between men and women (Hochschild, 1989). The findings described women as not encouraging or supporting other women to succeed and instead detracting from helping to increasing women’s ability to attain positions of power and leadership (Derks Van Laar, & Ellenmers, 2016). This dynamic sorely undermines effective women-to-women mentorship, a process that has been determined as crucial to women’s career success in high-powered professions.

Although they may not be explicitly aware of their biases, mentors commonly slight women in the life sciences in comparison to the ways in which men support and professionally nurture and cultivate assets and opportunities for their male counterparts, including writing letters of recommendation required for promotion or tenure (Welch et al., 2011). Letters of recommendation for women by men and women, one study found, were consistently shorter than those written for men; simultaneously, letters written for women often contained, “minimal assurance language” and frequently included “doubt raisers,” even though the achievements of the women were documented to be objectively just as strong as those of the men (Welch et al., 2011, p. 725). Such practices and overall ineffective or non-existent mentorship from senior
peers strongly puts women faculty members at a hiring and promotion disadvantage (Welch et al., 2011).

Another barrier that women in research careers faced is the slow pace of not being the first and senior author in scientific journals. In order to succeed in the field of life sciences as a faculty member, whether female or male, stellar publications in peer-reviewed journals are essential. When women fall behind in publishing because of constraints previously described, this has a severe, negative impact on their ability to garner funding. Organizations lose talented women when mentorship and guidance are not available at different career stages in academia, particularly in relation to navigating the research publication and funding arenas (Dever et al., 2008; Morley et al., 2013). Women in academia receive less mentoring and support than their male counterpart for research, which begins early in their careers and is sorely absent at crucial times where guidance is need for publication support that leads to advancement and promotion (Dever et al., 2008).

In general, successful mentorship increases work productivity, boosts self-esteem, and enhances overall professional development; however, ineffective mentoring can actually contribute to a decrease in women’s capacity to successfully seek, negotiate, and obtain promotions and to publish (Blood et al., 2012; Files, Blair, Mayer, & Ko, 2008). Particularly in the science and technical fields, a shortage of role models and mentors dedicated to research, publication, and procuring grants that are committed to supporting junior women exists, constituting a major obstacle for females aspiring to pursue leadership positions (Van den Brink, 2011). This means women in these fields, particularly junior faculty, are frequently not exposed to working with women who hold high-level leadership positions and to thus conceptualizing themselves as successful in roles like president, chair, or chief research officer. Focusing on
junior faculty and mentor networks in academic medicine, DeCastro, Sambuco, Ubel, Stewart, and Jagsi (2013) found that “many women academics believe in the benefits of having more than one mentor, and particularly at least one female mentor” (p. 13). However, the authors asserted, “the hierarchical structure of the traditional mentoring model may serve to perpetuate homogeneity and the continued marginalization of women faculty members” (DeCastro et al., 2013, p. 13).

Bringing in the variable of gender, researchers have documented both the complexities of cross-gender mentoring and the importance of multiple mentors for females, including access to various women leaders, to help females aspiring to senior positions have access to “role models of success…in areas such as workplace communication, boundary setting, negotiation and work life balance” (DeCastro et al., p. 10). In short, having the right mentor to lead them, who understands the particular needs of female professionals in the field and the intricacies of gendered socialization, can prove essential to women in academic medicine to overcome barriers to advancement (De Angelis, 2000; DeCastro et al., 2013; Nonnemaker, 2000). In sum, women and men are affected differently by dynamics within their organizations; it is debated that gendered attitudes and behavior are brought into, and often disrupt, essentially gender-neutral structures (Acker, 1990, p. 142).

**Retention and Attrition of Female Leaders.** Academic institutions that are committed to diversity commonly seek to determine why females leave their organizations. It is costly for the organization when any faculty member leaves, and an organization faces extensive consequences when diversity is compromised because of gendered attrition that may result in instability within departments (Aronoff, 2009). For example, faculty members often leave because of not being valued. Overall in the field of medicine, many MDs, and PhDs have less
initial motivation to join an academic institution; rather, a high number begin a private practice or join industry.

The exigencies of an academic career, particularly in fields like academic medicine, include working long and irregular hours, difficulty in managing the work-life balance, and pressure to work beyond a formally-stipulated schedule to advance on publications and to procure competitive funding for research (Garg, 2012; Johns, 2013). Particularly in the STEM fields, women and men commonly have spouses who also work in the life sciences. In this context, women often experience additional pressure because the demands of their family and their personal life combine to limit the time available for research (Cropsey et al., 2008; Speck et al., 2012). Females in this field frequently have full-time working spouses, and they commonly experience greater stress and pressure than their spouses in managing work-life balances to survive and succeed in academia (Garg, 2012).

Women, particularly those in the assistant professor stage of their academic careers, present higher risk factors in this area as they struggle to meet demanding publication and performance standards with the goal of becoming tenured, especially in the culture of academic medicine which Speck et al. (2012) explored. Particularly for female scholars with families, Speck et al. (2012) asserted that organizations in academic medicine can help address attrition amongst this population by providing women faculty members, who have been appointed in a rank of assistant professor, support for work-life policies that provide reduction in duties or paid leaves of absence during the years leading to promotion to tenure. Capitalizing by retaining talented women junior faculty members strengthens organizational culture and is usually cost-effective because it safeguards intellectual capital and alleviates high faculty turnover costs, maximizing the organizations’ return on investment and permitting academic medicine to attract
the best and sharpest of new generations of medical school faculty (CGO, 2014; Speck et al., 2012).

Statistically, a 2008 report by the Association of American Medical schools (AAMC) found the 10-year departure rate was 38% for all members and 43% for first-time assistant professors (Speck et al., 2012). The high rate of attrition, Speck et al. (2012) observed, has serious consequences for the maintenance of a high level of quality of research and productivity, the overall mission of academic medicine. The organizational culture components contributing to attrition of women from academic medicine include inflexible working schedules, exclusion and feeling isolated, stress and conflict with family responsibilities, and lower compensation when compared to male faculty (Speck et al., 2012). Other issues included not enough recognition for their work, excessive teaching duties and expectations for stellar evaluation for promotion, lack of formal mentoring and career development opportunities, and failure for chairs or deans to regularly provide input and guidance for academic progress (Cropsey et al., 2008). In a study by Cropsey et al. (2008) of 166 medical school faculty members over a four-year period, from 2001 through 2005, they found that the attrition of women was 9.1% as compared with 7.7% for men (Cropsey et al., 2008, p. 1112). The most common reasons for departure were lack of support from departmental leaders, insufficient career development opportunities and possibilities for advancement, low salary, and personal reasons (Cropsey et al., 2008).

**Work-Life Balance.** The issue of balancing a career and family life has been frequently cited as a major factor for women in terms of career development and advancement in their professions in medicine and the life sciences. Women often sacrifice a successful career in academia when raising a family. Academia has been described as a “carefree zone” which assumes that truly committed academics “have no commitments outside their work” (Morley et
Women are often viewed negatively within an organization because of not working additional hours while they are prioritizing family concerns. There is an underlying assumption that to succeed in the life and medical sciences, women need to put work over family. The moral dilemma that women face is whether to minimize family commitments or to achieve career success (Morley et al., 2013).

To raise a family while maintaining and seeking stability in a career in health care, talented qualified females with children commonly resort to temporary or part-time positions in the health care system, a factor that contributes negatively to women’s individual advancement and career success and to gender imbalances within institutions (Richter, Kostova, Harth, & Wegner, 2014). Females who are physicians often also delay having children much longer than their male counterparts, or they do not have children at all; this is true not only in the United States, but also globally (Richter et al., 2014).

**Tyranny of the Queen Bee.** In the 1970s, a phenomenon became common enough that the term “queen bee” emerged to describe a woman who succeeded in a leadership role, particularly in male-dominated industries, and who, as simple self-defense, “used her position to keep other female worker bees down” (Sandberg, 2013, p. 163). Queen bee behavior was not just a cause of gender bias but also a consequence of discrimination. While not specific to academic medicine, this perception does apply to the hierarchical dynamics in that field. The “queen bees” internalized the discriminatory status of women, and in order to feel worthwhile, they commonly prioritized associating professionally with men; while this brought rewards in advancement, they failed to support other women through mentorship and by providing networking resources (Sandberg, 2013).
Summary

Sandberg (2013) explained how women continue to outpace men in educational achievement, and yet they cease to make headway at the top of industries and academic and research fields such as academic medicine. The literature in this review revealed common themes as to why a slow pace exists for the advancement of women in leadership positions in academic medicine. However, organizations are moving towards reducing gender disparity and helping provide more flexible work schedules for women. The key is to continue to address the barriers and forge a pathway to eliminate them in order for women to be increasingly successful as leaders in academic medicine.

Scholars have identified and documented historical, consistent, and starkly gendered leadership imparities in the field of academic medicine and have asserted that organizations would benefit from providing women with mentoring, with structures and policies that reduce isolation, with faculty development that is specific to women, and with additional resources particularly to support work/family balance where needed. The literature reviewed also outlined biases that exist in working environments and leadership appointments that exclude women from consistent involvement in decisions about promotion and advancement and that fail to recognize differing career paths of men and women. To address the pervasive gendered imbalances, scholars and practitioners have advocated the systematic implementation of structural changes and the reformulation of policies to support women in their career advancement. Recruitment and retention of more women in medicine and life sciences, particularly for leadership trajectories, is also essential (Palepu & Herbert, 2002).

This literature review indicate that barriers still exist in the advancement of women in academic medicine, and it recognizes challenges that women face in having a successful,
committed career. The literature contain common themes on how to foster, engage, and advocate for women faculty in the sciences in general, but specifically in academic medicine.
Chapter Three: Methods and Research Design

The goal of this research study was to understand the experiences of four to eight high-achieving women in senior leadership positions at an academic medical center (faculty, research, and administrative) and to document their perceptions of the barriers they faced that have impacted their success and advancement in careers in medicine, academia, and science. This study analyzed the strategies successful, high-achieving women in academic medicine identified and utilized to attain top leadership positions when facing bias and gender imparities in the workplace.

**Primary Research Question:** How do senior academic women in the medical profession describe their experiences of negotiating and/or achieving senior leadership positions within an academic medical center located in the Northeastern United States?

**Sub Questions:**

- How do women leaders in the academic medical field describe the constraints and opportunities that affect their professional advancement?
- How do women who advance to leadership positions in academic medicine describe the strategies they use to transcend challenges, inequities, and structural/institutional factors impeding them, including work and life balance, to achieve success?

**Research Methodology**

The focus of this research study was to explore the experiences of high-achieving women who have strategically succeeded in advancing to top leadership positions in the highly-gendered environment of academic medicine. It explored their experiences through thoughtful analysis and interpretation of the stories the women told of living the phenomenon of advancement, and
through understanding the meaning the participants made of what they have undergone to become leaders in their field. Thus, this qualitative research study used an inductive approach, grounded in the constructivist-interpretivist paradigm. As Schwandt (1994) clarified:

The constructivist (or interpretivist) paradigm can be perceived as an alternative to the “received view” or positivist paradigm. In marked contrast to positivism’s naive realism (a single objective external reality), constructivism adheres to a relativist position that assumes multiple, apprehendable, and equally valid realities. (Schwandt, 1994 as cited in Ponterotto, 2005, p. 129)

The constructivist-interpretivist paradigm posits that reality is co-constructed in research through an exchange between the participant and the researcher, who come together for in-depth interviews to interactively document and interpret the meaning the participant makes of a certain phenomenon of their “lived experiences” (Ponterotto, 2005). It is thus the understanding of the lived experiences that matters—there is no, single, objective reality or knowable, ultimate truth, as in positivism (Schwandt, 1994). Rather, constructivists assert that individual minds create truths or reality—thus, there are multiple interpretations of reality (Hansen, 2004).

In social constructivism, the researcher and participants alike seek to understand the world around them by interpreting and making meaning of lived experiences (Creswell, 2013). It is the interactive communication between researcher and participant that leads to a collaborative construction of findings (Ponterotto, 2005) and that allows for the development of themes, meaning-making, and systematic presentation of results (Bogdan & Biklen, 2003).

The specific research approach chosen for this study was Interpretative Phenomenological Analysis (IPA), which fits within the constructivist-interpretivist paradigm because both are hermeneutical and accept that it is through deep reflection that an individual’s
reality comes to the surface. The researcher facilitated this process through in-depth interviews and by collaborating with the participants in the process of interpretation to uncover their reality and how they make meaning of the phenomenon (Ponterotto, 2005).

**Research Design**

A qualitative approach was proposed for this research study in order to gain understanding of the experiences of high-achieving women in leadership positions at an academic medical center. Through hearing the perspectives and voices of the participants, a qualitative research method allowed for depth of inquiry. The goal of the researcher was to study a group of individuals who lived the experience of a particular phenomenon—facing the challenge of advancing to leadership positions in the highly-competitive field of academic medicine (Creswell, 2012). The power of qualitative research is the inductive approach, which was used by the researcher (Maxwell, 2005).

At the simplest level, “Qualitative research involves any research that uses data that do not indicate ordinal values” (Nkwi, Nyamongo, & Ryan, 2001, p. 1). The objective of this research was to understand the experiences of women who obtained leadership roles in academic medicine and the strategies they used to achieve their goals. It allowed the researcher to understand their perceptions of the organizational climate—its strengths and challenges—that shaped the experiences of these women in leadership, senior faculty who hold research directorships and primary administrative roles; in short, it provided insights into the context in which the phenomenon occurred. The use of qualitative methods allows researchers to develop deep understandings of a particular experience or issue (a phenomenon) within a specific context to understand the logic of human behaviors and experiences. Qualitative researchers are
interested in understanding the meaning people have built—that is, how people make sense of their world and the experiences they have in the world (Merriam, 2009, p. 13).

**Research Tradition**

This research study focused on the experiences of high-achieving women in academic medicine who have strategically succeeded in advancement into top leadership positions including deans, directors, vice-chairs, and provosts. The goal was to record, interpret, and understand how participants made sense of those experiences. The researcher determined that an IPA approach was an appropriate strategy of inquiry to use to conduct the study. IPA is a method in qualitative research concerned with exploring and understanding the lived experiences of a specific group of people experiencing a specific phenomenon, through the perspectives of the participants, in interaction with the researcher, and to determine common focal points of IPA studies (Smith, 2004). The IPA design was used to document the perceptions and views of a specific group, in this case, four to eight high-achieving faculty, who are the research directors and senior administrative women in academic medicine; the specific phenomenon involved their trajectories to advancement into senior leadership positions in a highly-gendered and competitive environment (Smith, Flowers, & Larkin, 2009). As a methodology, rather than merely a means of analyzing data, IPA involves the detailed examination of participants’ real world experiences of a particular phenomenon, how they have made sense of these experiences, and the meanings they connect to them (Smith, 2004). It does not aim to provide an objective account of the phenomenon; rather, it recognizes that reality is constructed through people’s interpretations and sense-making (Smith & Osborn, 2008). Thus, it was an appropriate choice for the phenomena under study.
Phenomenology is both a philosophy and a family of research methods concerned with investigating and understanding human experience (Langdridge, 2007). The IPA design is connected to the core principles of phenomenology because it is concerned with the detailed study of a person’s lived experience, and because it seeks to allow participants to tell their own story in their own words, even though the researcher has a primary role in the process of interpreting (Smith et al., 2009). The researcher explored each individual participant’s world to gather real life experiences in academic medicine and to understand their pathway to a high-level leadership position.

The IPA design allowed the experiences of the individuals to arise through conversation (Smith et al., 2009). The researcher conducted interviews using semi-structured, open-ended questions. These open-ended questions allowed the participants to speak freely, openly, truthfully, and fully, and to complement or expand upon the questions asked naturally as they narrated their experiences. The participants were able to simultaneously relate what occurred and provided their understandings and interpretation of those accounts; the researcher gathered and presented the data in interaction with the participants, as well as by coding data and identifying and developing themes (Van Manen, 1990).

The strategy of inquiry for an IPA design permitted the researcher to address the overarching research question concerning the lived experiences of high achieving women faculty members who research directors and administrators in medicine at an academic medical center are. Several philosophical methods were used in this research study, including hermeneutical and transcendental phenomenology, to address how the researcher compiles, codes and interprets the empirical data.
This study documented the perceptions and views of a specific group, which is a common focal point of IPA studies (Smith et al., 2009). According to Smith and Osborn (2008), IPA is aimed at an exploration of how participants make sense of their personal or professional trajectories through a detailed examination of their experiences and perceptions. IPA is a dynamic process where the researcher takes an active role in an attempt to get an insider’s view. In this process, the participants are trying to make sense of their environment, and the researcher is attempting to best understand their experiences and accounts (Smith & Osborn, 2008).

The IPA design is consistent with phenomenological roots, as it is concerned with what something is like from the perspectives of the participants (Smith & Osborn, 2008). The IPA design has a theoretical responsibility to the participant as an intellectual, affective, and physical being, and the method assumes a chain of connection between people’s communication and their emotional states (Smith & Osborn, 2008). It fitted comfortably with the goals of this study to discover the viewpoints and perceptions of high-achieving women faculty in academia regarding the strategies they have adopted to succeed, the obstacles and encouragement they have encountered on their paths, and their objectives and career aspirations in pursuing advancement within the academic medical center.

**Participant Selection**

The participant selection aligned directly with IPA guidelines as outlined by Smith et al. (2009). Individuals who share the common experience of being high-achieving women who have negotiated the path to senior leadership positions in an academic medical center were chosen. This allowed the researcher to uncover, as Natanson (1973) (as cited in Lopez & Willis, 2004) observed the, “universal essences” or the, “eidetic structures” that are, “common to all persons [women] who have the experience” (p. 727) of pursuing and achieving the status of
leadership in a high-powered, highly-gendered institution. The IPA design directs the researcher to choose participants who can speak in depth about their experiences to provide detailed information regarding the phenomenon; therefore, the samples chosen for this approach are usually small to permit the researcher to thoroughly engage with the participants, to document and interpret their lived experiences (Reid, Flowers, & Larkin, 2005). Indeed, Smith et al. (2009) indicated that a small sample size is adequate due to the idiographic nature of IPA and that a sampling even as small as three to six participants is appropriate for this approach. The subsequent sections describe the site where the study took place and the characteristics of the participants who were recruited.

**The Research Site.** The site chosen for this study is a state-supported, public medical school/medical center located in the Northeastern United States. This site was ideal to explore the phenomenon that is the focus of this study—documenting the experiences of women who have faced structural challenges in a high-powered, strongly-competitive, gendered environment: the institution chosen hosts a diverse pool of MDs and PhDs, both physicians and research faculty, from different academic and professional ranks. Specifically, this study explored how women negotiated the complexities of leadership positions in this high-status academic medical center.

**Sample Size and Characteristics of the Participants.** For this qualitative IPA research study, eight female, senior faculty members were selected through purposive sampling from the academic medical center. They held advanced MD and or PhD degrees, and they had been in senior leadership positions for more than two years. It was important that the participants were in a leadership position for a minimum of two years to ensure that they had an opportunity to reflect not only on their experiences acquiring their status, but also on the dynamics involved in
being leaders. The participants held diverse levels of academic rank and exercised distinctive roles within the medical center including chiefs, vice provosts, deans and scientific directors.

In alignment with IPA methodology, the sample is small; as Hefferon and Gil-Rodriguez (2011) advocated: “Less is more in IPA: fewer participants examined at a greater depth is always preferable to a broader, shallow and simply descriptive analysis of many individuals” (p. 756). This purposeful sampling was strategic and directed the selection of participants to fit the study’s objectives (Maxwell, Kelley, & Rausch, 2008; Patton, 1990) and represented the “places and people” (Creswell, 2012, p. 205) to best explore the phenomena. During the first stage of recruitment, the researcher confirmed the requisite number of women, and did not need to use snowball sampling, where members in the network suggest other individuals they know to be contacted.

**Procedures**

**Recruitment and Access.** The researcher requested permission to conduct the study from the dean of the medical school and complied with all IRB requirements from the institution and Northeastern University’s Internal Review Board (IRB). Recruitment included four steps:

1. The researcher sent an email to all female, senior faculty members who held their leadership positions as described above (such as chiefs, vice provosts, deans and scientific directors), inviting them to participate in the study. That email provided detailed information outlining the purpose of the study, the expectations regarding participation, how participation would enhance the study, the conditions of confidentiality (the use of a pseudonym chosen by the participant), and the researchers’ contact information. It also requested the contact information for those interested in the study (telephone number primarily).
2. For positive responses, the researcher followed up within 48-72 hours with a phone call or a brief face-to-face meeting. In accordance with the NEU IRB regulations that require an oral conversation take place before asking a participant to sign an informed consent document, the researcher orally explained the study and answered all questions the potential participants had. For face-to-face meetings, the researcher reviewed the informed consent form, answered questions, and asked the participant to sign it. For correspondence via phone or video conferencing, the researcher sent the consent form via email, read through it on the phone, answered questions, and asked the participant to sign it and bring it to their first or next meeting. The researcher and the participant established a time and place for the first formal interview. Eight participants agreed to take part in the study and were given a brief question and answer session via email or on the phone to gain preliminary biographical data to assure diversity and to confirm their level of experience to inform selection. The goal of this study was not to reach saturation; rather it was to collect rich information about the central research questions.

3. Prior to the first interview, the researcher sent each participant a preliminary set of open-ended interview questions for review. During the interview, they also discussed member checking, and the researcher contacted each interviewee as soon as the interview transcript was available in order to allow for review and amendment of the interview materials.

4. Each participant was provided a $20 gift card upon completion of the interviews as a token of appreciation for their participation.

Data Collection. The most common approach to data collection in an IPA study is one-on-one, open-ended, semi-structured interviews which permit a dialogue to occur between the
researcher and participant and to create space for the participant to think, communicate, and be listened to (Smith, et al., 2009). The semi-structured nature of the interviews facilitates a degree of flexibility which makes room in the conversation for themes to evolve and emerge (Smith, 2004). The questions were directly informed by the central research question and indirectly addressed the theoretical framework. This method is appropriate for an IPA study because the goal was to collect data that are rich and detailed, capturing both the sequences of—and the feelings and reflections surrounding—the participants’ lived experiences related to the specific phenomena being researched (Kvale & Brinkmann, 2009; Smith et al., 2009). In short, the goal was to encourage the participants to share their experiences in an open, honest, and reflective way so they may articulate their ideas and concerns with significant insight (Smith et al., 2009).

Trust was of utmost importance; therefore, before beginning the first interview, the researcher presented confidentiality agreements (consent forms) necessary for gathering informed consent and building trust with participants (Appendix B). Discussing confidentiality at the outset was necessary for acquiring informed consent and building trust with respondents; Crow, Wiles, Heath, and Charles (2006) and Kaiser (2009) stressed the importance of reiterating the commitment to confidentiality through all phases of the study. The researcher reviewed the purpose and goals of the study and explained that confidentiality and anonymity would extend after the study was completed, assuring that the participant’s name and identity would never be revealed. Each participant was assigned a pseudonym; these were kept in an encrypted, password-protected file to which only the researcher (student) and her principal investigator (dissertation chair) have access. The researcher explained the recording procedure and the commitment to destroy all audio materials after transcriptions were complete. The researcher collected basic biographical and demographic data from the participant before addressing the
semi-structured interview questions; conducted the interviews in a location of the participant’s choice at the institution or at another location; and strove to accommodate other preferences participants might have, to assure privacy, a safe environment, and full confidentiality (Smith et al., 2009).

The researcher was the only interviewer for this research study. The interviews were audio recorded through digital software on a laptop and an Apple iPhone or Apple iPad to ensure there was a backup copy in case of technical issues. The researcher chose these devices because they are protected and password safe. It was anticipated that the interviews would last between 60 and 90 minutes with the option of arranging a second interview session if both the researcher and the participant were in agreement that this would be useful. After the initial interview, the researcher estimated when transcripts would be available and indicated to the participant that they would have full opportunity to review the raw transcripts to ensure accuracy and to amend or correct the text. The researcher asked the women if they had additional questions and graciously thanked them for their participation in the study.

Data Analysis. The IPA study design should be interactive (the researcher and the participant co-construct meanings and interpretations), iterative (the same cycle of analysis is repeated with each participant), idiographic (it focuses on the individual’s in-depth experiences rather than seeking general laws and generalizations), and inductive (which allows the phenomena and the coded data to be constantly redefined) (Smith, 2004; Smith et al., 2009). Embracing these tenets of a qualitative IPA data analysis, the researcher reviewed and reread the transcribed interviews multiple times, remaining reflective throughout the process, allowing for member checking to assure accuracy and interaction, and, “begin with particular examples and only slowly [work] up to more general categorization or claims” (Smith & Osborn, 2008, p. 67).
The analysis was grounded in the double hermeneutic, in that, while the researcher had accurately and meticulously analyzed from the source documents and from how the participant made meaning of her experiences, “how the analyst thinks the participant is thinking” (Smith et al., 2009, p. 80) influenced the process. Data analysis occurred in the following three general stages as outlined by Pietkiewicz and Smith (2012):

**Multiple reading and making notes.** This stage involved becoming fully immersed in the data by reading the transcripts several times and making notes, staying close to the text. The notes in this stage included content, observations of language and tone of voice, and personal reflections based on the researcher’s positionality to consistently be aware of bias. Preliminary interpretations and possible themes were also compiled. The researcher also re-read, reviewed, and incorporated any notations she made during the interview process.

**Transforming notes into emergent codes.** Focusing primarily on the notes (reflections of the source material), the researcher subsequently crafted codes to “formulate a concise phrase at a slightly higher level of abstraction which may refer to a more psychological conceptualization…still grounded in the particular detail of the participant’s account” (Pietkiewicz & Smith, 2012, p. 7). The codes consisted of short words or phrases that were, “symbolically designative and summative, essence capturing, and/ or evocative” (Bloomberg & Volpe, 2012, p. 142). The researcher noted the codes in the margins of the transcripts on either hard or electronic copy.

**Seeking relationships and clustering themes.** This was where the researcher made connections between the various codes, and, in the second stage, assembled themes. Clusters based on conceptual similarities were then created and given descriptive labels
to determine super-ordinate (broad) and sub-ordinate (more specific) themes. Line
numbers were used (on either hard or electronic copy) to keep track of information that
could be coded and further analyzed, which resulted in the development of super-ordinate
and sub-ordinate themes. Beyond mapping similarities, the researcher noted and coded
consistent differences between the themes that emerged from the participant transcripts,
because important insights were developed from the dissimilar ways people observe and
interpret a shared phenomenon (Bloomberg & Volpe, 2012).

**Data Storage.** Complying with ethical academic research standards requires assuring
full confidentiality, which means both protecting participants’ identities (by using pseudonyms
and encryption) and keeping data securely stored—in this case in a locked file cabinet in a
locked office at the researcher’s home. This study used lengthy voice-recorded interviews as the
central data source; a professional service, Rev.com provided confidential transcription services,
and recorded materials were transcribed showing pseudonyms only.

The recordings and transcriptions were encrypted with passwords and stored on the
student researcher’s home computer; encrypted backups were on a flash drive or external hard
drive, which were also be kept at the researcher’s home. Transcripts, coding files, and data
entered into the software program and other electronic documents to which the researcher had
access related to the study, were password protected and stored on the researcher’s hard drive
with flash drive backup. No materials were stored on cloud services, such as Dropbox or Google
Docs. The researcher took hard copy notes and made journal entries using pseudonyms only,
and these notes were either directly in the researcher’s possession when they were being used or
locked in a cabinet in her home, until they were transferred to electronic files where they were
also password protected. After transcription to electronic versions, all original materials—voice
recordings, any hard copy transcripts, notes, and journal entries—were destroyed. Informed consent forms, per IRB requirements, were kept in a locked cabinet and will be for three years and then destroyed. The only individual other than the researcher who will have information regarding how to access the data will be the principal investigator (the student investigator’s dissertation chair).

**Trustworthiness.** Trustworthiness included the researcher taking every measure possible to ensure and safeguard accurate, credible, and reliable collection and analysis of data and to report findings with bias bracketed to the extent possible (Lincoln & Guba, 1985). Essential to trustworthiness in this study were: credibility, transferability, dependability, and confirmability. These components, which frequently overlap and support one another to provide robust trustworthiness, are described below.

**Credibility.** The participants in this research study reviewed their transcribed interviews, and the researcher asked each participant to confirm, correct, or amend the transcripts, either in written form or through another face-to-face or online interview, or on the phone. This process is known as member checking, and it aims to get as close as possible to an authentic account of the participant’s descriptions of their lived experiences—and thus to the phenomenon under study (Creswell, 2013). According to Merriam (2009), “participants should be able to recognize their experience” (p. 217) in the researcher’s interpretation. Credibility also involves verifying the data by reviewing the transcripts multiple times to code, analyze, and establish themes and categories, and presenting the data in such a way that the study coheres as a credible narrative. Patton (1990) defined this process as one where qualitative researchers return to their data, “over and over again to see if the constructs, categories, explanations, and interpretations make sense” (p. 339).
Transferability. Transferability involves the extent to which a study’s results can be used to help scholars and practitioners understand different contexts (Barnes et al., 2012). In qualitative research overall, and specifically in IPA studies, transferability is commonly limited because of small sample sizes. According to Bloomberg and Volpe (2012):

Transferability in a research study is about how well the study has made it possible for readers to decide whether similar processes will be at work in their own environment and understanding in depth how they occur at the research site. (p. 113)

Scholars of qualitative methodological approaches recommend that one key technique that can help researchers obtain the highest degree of transferability possible, despite limitations, is the use of thick description, which involves rich, deep, dense, and detailed accounts of the experiences of the participants being interviewed (Shenton, 2004; Ponterotto, 2006). In IPA, the use of extensive, direct, word-for-word quotes from participant interviews helps bolster transferability. Thick, rich description provides enough detail so that other scholars or practitioners can relate to aspects that their situation or setting may have in common with the study and can consider applying what is documented and learned to their own contexts (Creswell & Miller, 2000).

Dependability. Dependability complements and enriches credibility and involves concrete procedures to assure that other researchers, if they desire, could repeat the study and/or assess the rigor and validity of the methodological process. The most essential tool for dependability is to provide concise and complete explanations on how data are collected and examined, which is known as the “audit trail,” or a step-by-step log that documents participant selection (the process and the reasons behind it); a detailed explanation of data collection and analysis; the interpretive coding process; and data reporting techniques (Bloomberg & Volpe,
For this study, a detailed and consistent research log was kept of all activities involved in participant choice; data collection and analysis; the chronology of the process; procedures regarding recording and transcription; thematic development; data presentation techniques; and any other procedures involved in carrying out and completing the study.

**Confirmability.** Confirmability is essential in qualitative research, and it is particularly powerful in IPA studies because the researcher is commonly close to the participants, immersing herself in-depth in their experiences. Qualitative analysis and IPA recognize that knowledge is co-constructed, and meanings and interpretations are built through the researcher-participant interactions; however, the researcher brings her own background and experiences to the research process. In this setting, the researcher must make sure that her analyses, interpretations, and presentation of the data are as true to the participants’ experiences as possible and are not framed or misrepresented by the researcher’s biases or normative goals (Shenton, 2004).

Two techniques were useful in assuring confirmability. First, the researcher identified and reported her own biases, or her positionality, acknowledged these, and made the strongest attempt possible to bracket them (Creswell, 2007). In the case of this study, the researcher’s bias and background in relation to the setting and the participants have been presented in the positionality statement section. The second technique, which assists the researcher in repeatedly checking, re-checking, and re-bracketing bias, involved maintaining a reflective journal throughout the entire research process. Journaling—and referring constantly to journal notes during collection, analysis, coding, and presentation phases—provided a self-awareness and rigor that helped the researcher remain aware of feelings, judgments, and preconceptions that might have prevented her from accurately or thoroughly providing an account of the participants’
experiences, characterized by the highest standard of veracity. Through this process, combined with reflections documented in the positionality statement, trustworthiness was enhanced.

**Positionality Statement**

As a young woman who was raised in an Italian patriarchal family, my father made it very clear that he believed women should only aspire to become, at most, secretaries and to then fulfill the role of stay-at-home mothers. My mother raised me and my three brothers by providing a safe and loving home, but she had little decision-making power regarding whether her children pursued a college degree. She tried unsuccessfully to have my father support me in attending a four-year college; we both lost the fight. I had little choice, given the era and the cultural underpinnings, so I opted basically to be silent and to not disrespect my parents. Hence, I did not initially pursue my dream of going to college to seek a career in higher education. As a result, I attended Burdett, which at the time was a secretarial school that provided a specialty in medical administration. After graduating from secretarial school in 1980, I began my career as a medical secretary in a renowned academic medical center, which enlightened me about the struggles of women in that profession. First hand, I witnessed that women faculty members in the fields of medicine and life sciences, and in corresponding administrative roles, progressed much more slowly in achieving rank, in comparison to their male counterparts. They received only a fraction of grant funding, and thus they were not able to conduct research and publish on par with the men. One reason was because in the 1980s, there was no family leave or onsite child care provided for women faculty and staff. They did not have the structural resources available to balance family life with professional obligations.

During my 25-year career negotiating different administrative roles in an academic medical center, gender bias was rampant and contributed to my being consistently passed over
for advancement into a higher-level administrative role. For example, in 1984, a high-level administrative role was brought to my attention, and I decided to apply for the job. At the time, I had a conversation with a male physician involved in the selection process who stated: “Since you just got married, you probably will have children and quit your job; therefore, I can’t hire you for that position.” This affected my self-esteem and self-efficacy. I did not quit—instead, I remained a secretary for the next 15 years, and I had that family. Indeed, in 1984, I got married and had two children within four years. But I simultaneously realized that a college education was essential to my career advancement within my organization. I still faced the obstacle that my husband, then, generally had the same idea as my father—that college was not something I needed. We negotiated that impasse, and I pursued my BA in Business Management, graduating in 2000. I then obtained my MA in Education in 2003, still holding onto and bolstering my dreams of working in educational leadership.

Simultaneously, I observed the dynamics of my immediate work environment, particularly noting that women faculty, in general, were largely unable to achieve tenure; they did not have the resources to serve on prestigious committees and boards, or to secure funding to retain a level of research that would allow them promotion. In my role as a secretary, I screened recruitment packages for faculty going up for tenure. The ratio of promotion was five men to one woman. I began to wonder about the factors and policies that might contribute to changing this imbalance.

This led to my interest in pursuing my EdD at Northeastern University, examining organizational culture and personal experiences of senior medical academic women for my dissertation topic. I also simultaneously achieved advancement in my own career with a
promotion to Administrative Director in the Center of Human Genetic Research at a prestigious hospital.

I am passionately interested in understanding circumstances and experiences that have helped high-achieving women succeed in current leadership roles in the academic medical center that is the site for this study, particularly what strategies they have employed to overcome structural barriers—personal and professional—to obtain advancement. As a director, understanding and engaging with highly successful, achieving women faculty members has inspired me to focus my EdD scholarship on research in gender dynamics and leadership in higher education, specializing in medical administration. I realized early in the program at Northeastern University that to glean knowledge and insights from women who have succeeded would require me to combine theory and practice, and to integrate my personal experiences into this study in a strong and meaningful way. I was sincerely committed to conducting an objective study that employed a reflexive methodological approach to combine theory, my own history of practice, and the stories of the lives of women in leadership in academic medicine, to identify strategies and barriers that both promote and inhibit their success.
Chapter 4: Report of Research Findings

Introduction

This study focused on the experiences of high-achieving women in academic medicine who have strategically succeeded in advancement into top leadership positions, including deans, directors, vice-chairs, and provosts. This qualitative study, an interpretative phenomenological analysis (IPA), gathered participants’ lived experiences throughout their careers and at their current academic institution. Its goal was to record, analyze, interpret, and understand how participants made sense of those experiences. The researcher conducted one round of semi-structured interviews with eight purposefully-selected participants, each currently serving in a leadership role at their respective academic medical center. The site chosen for the study is a state-supported, public medical school and medical center located in the Northeastern United States. The interview questions were influenced by the feminist frameworks that are theories examining women’s challenges in rising to leadership positions professionally in academic settings. These outline the complex intersections of why women still struggle with career mobility in comparison to their male counterparts. The interview questions were designed to address the primary research question and sub questions described in this section.

The interviews lasted approximately 60 minutes in length. Each of the eight participants was asked a series of background questions related to their professional experiences, their career path toward a leadership position and the influences along that path. They were also asked semi-structured questions related to their pathways to leadership, leadership styles, support structures within the organization, obstacles they had to overcome to achieve success, and their experiences in academic medicine. The questions used during the interview sessions can be found in Appendix A and Appendix B.
Five of the participants were professors and three were associate professors who have high-level leadership positions within their respective academic medical center. The women in the study had varied life experiences in their career pathways in academic medicine. Each participant was enthusiastic to participate in this study, and it was interesting to observe that the eight participants were eager to talk about how they became successful in achieving high level positions in academia.

During the semi-structured interviews, participants reflected on why it was important to have a career in academic medicine. When asked specific, open-ended questions, the responses varied among the high-level women with regard to leadership. The participants discussed their career trajectories. Some outlined their experiences chronologically, and others responded to the questions in a more open-ended, unstructured way. The interview transcripts were reviewed by all participants and there were no changes by seven of the participants. One participant changed some of her answers to the questions because she felt she was negative. Overall, the eight participants were happy with their answers.

Research Question

The theoretical framework for this study was feminist theory involving women’s challenges in rising to leadership positions professionally in academic settings. Acknowledging these personal and structural constraints, the purpose of this proposed study was to explore the lived experiences of high-achieving women in academic medicine—scholars, administrators, and practitioners alike—in their journeys toward advancement at an academic medical center. Participants employed their personal resources to overcome barriers to opportunity, which helped them to achieve academic leadership roles in reputable institutions. The focus of the study was
the trajectories the eight female participants underwent to reach high level academic positions.

The following research question and sub questions were central to the research process.

**Primary Research Question:** How do senior academic women in the medical profession describe their experiences of negotiating and/or achieving senior leadership positions within an academic medical center located in the Northeastern United States?

**Sub questions:**

- How do women leaders in the academic medical field describe the constraints and opportunities that affect their professional advancement?
- How do women who advance to leadership positions in academic medicine describe the strategies they use to transcend challenges, inequities, and structural/institutional factors impeding them, including work and life balance, to achieve success?

The primary aim of this research was to identify participants’ resilience and resource-mobilization strategies, as well as the choices made leading toward promotion within their organization. These questions also resulted in an understanding of the experiences of high-achieving women in senior leadership positions at an academic medical center engaged with the current climate of gender disparity. Their responses to the open-ended questions revealed how they addressed the complexities of organizational climate as women in academic medicine. The findings show the complications they faced and continued to encounter, and how these complications were met with effective strategies to overcome gender bias and other factors that led to gender disparity.
Background of Participants

The eight female, senior faculty members from the academic medical center had advanced MD and or PhD degrees. Five were Professors, and three were Associate Professors; all of them held high-level leadership positions within the organization and had been in senior leadership positions for more than two years. They held diverse levels of academic rank and exercised distinctive roles within the medical center, including chiefs, vice provosts, deans and scientific directors. Four of them served in senior administrative leadership positions, which were instrumental in the strategic direction of higher education and administration within the university.

Table 1

Pseudonyms and Demographic Data

<table>
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<tr>
<th>Participant Pseudonym</th>
<th>Leadership Position</th>
<th>Academic Department</th>
<th>Years in Education</th>
<th>Degree</th>
<th>Selected Publications</th>
<th>Marriage/Children*</th>
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<td>MD</td>
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</table>

*All Participants were married and had children.
**First participant.** Abby received her PhD over 20 years ago from a midwestern college. She is an Associate Professor at a northeastern academic medical center and directs her own laboratory with a focus on studies that provide a better understanding of fundamental aspects of T cell immunity in infants and young children. She is a recognized authority in global health research. Abby has authored 62 peer-reviewed journal articles.

**Second participant.** Amanda, who originally enrolled in college to be a singer on Broadway, decided to go into medicine and specialize in surgery. She served two years in the military during her residency and served an additional two years as a clinician on an aircraft carrier. She is an associate professor in surgery and is an assistant dean in a northeastern medical school. She leads as a program director for the general surgery residency and provides other opportunities for education. She has been at her current institution for over 17 years after her surgical residency training. Amanda has been an author on nine selected peer-reviewed research articles.

**Third participant.** Early on, while deciding a career in academic medicine, Leslie stated a desire to investigate clinical and research paths in the field of infectious diseases. Her undergraduate degree was at a prestigious ivy league school in the northeast. Her research focus is on diseases that affect children in the area of organ transplant. She graduated with her MD degree from her current academic medical center located in the northeast. She is a clinical chief at her current academic medical center, where she continues to oversee clinical trials. She has more than twelve peer-reviewed articles in scientific and clinical academic journals.

**Fourth participant.** Louise is a vice provost at a northeastern academic medical center. Prior to joining her current academic medical center, she was an associate dean at a New England university. After graduating from medical school, she opened a clinic with the help of a
colleague, because she saw that there was no easy access to medical care in a Midwestern community. She has received several awards for faculty development in academic medicine and has 23 research publications in peer-reviewed journals.

**Fifth participant.** Joyce entered medical school in the late 1970s at a prestigious Northeastern university. During her post-graduate years, she was a chief medical resident at a Midwestern medical center for two years in the early 80s. In her current role, she has been a clinical chief of a laboratory performing clinical research in microbiology and immunology. She has 21 research publications in peer reviewed journals.

**Sixth participant.** Kelsey received her undergraduate degree overseas in the British Isles and her PhD from an international university. In the United States, she became an assistant professor over 15 years ago at her current academic medical center. She has several National Institutes of Health (NIH) and foundation grants. Kelsey has more than 200 peer-reviewed publications in scientific journals. She is currently a professor of medicine and the director of a laboratory focused on a specialized research program.

**Seventh participant.** Julie received her PhD in psychology at a Northeastern college and is a board-certified clinical psychologist. She has two master’s degrees, one in education and the other in psychology. Her research awards focus on overall health and wellbeing. She has been involved in mentoring and teaching medical students through group instruction and direct supervision. She has over 270 publications in peer-reviewed scientific journals. She has an endowed chair and has received several awards.

**Eighth participant.** Susan received her MD at a state school in California. She is currently a senior associate dean and clinical associate professor. Her areas of research are in the fields of transplant and immunodeficiency disease. She has over 14 articles in peer-reviewed
scientific journals. Susan has been an editorial board member of a prestigious new England journal since 2005.

The experiences revealed through interviews with these eight participants covered their family backgrounds, professional lives, their educational histories, and their experiences moving up the ladder within academia. Participants described positive experiences and key insights on how they moved into leadership roles. They are successful women in leadership roles who continue to grow their own careers while nurturing others through their own.

**Review of Data Analysis Procedures and Themes Identified in the Process**

The eight participants in the study shared their experiences on their trajectory to high-level academic positions. Interviews of these eight participants covered their family background, professional life, education and their experiences moving up the ladder within academia. Their shared experiences provided insight that described multiple factors contributing to their career advancement. Some of the participants shared positive experiences and key insights on how to move into leadership roles. Some of the participants also provided clear examples of areas of difficulty for women in academic medicine who are seeking leadership positions. During the semi-structured interviews, the participants also reflected on why it was important to have a career in academic medicine.

Transcripts containing the data from the interviews with participants were analyzed as described in Chapter 3. The data detailed the perspectives of the participants, who revealed their lived experiences with regard to the central research questions of the study.

The super-ordinate themes that emerged from the hermeneutic analysis of data are: (1) Cultural shifts led to organizational awareness of gender differences and a need for parity.; (2) Effective and supportive mentorship was essential to advancement within an academic medical
setting; (3) The need for work-life balance impacted women’s careers in academic medical science; (4) Spousal support contributed toward women participant’s advancement into leadership positions; and (5) Participants gave advice and recommendations regarding personal characteristics that contributed toward their success. Subsequent subordinate themes also emerged from the analysis of the data and are described in Table 6.

Table 2

Super-Ordinate Themes and Subordinate Themes

<table>
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<th>Super-Ordinate Themes</th>
<th>Subordinate Themes</th>
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| Cultural shifts led to organizational awareness of gender differences and a need for parity. | • Conscious Bias  
• Unconscious Bias  
• Gender Disparities |  |
| Effective and supportive mentorship was essential to advancement within an academic medical setting. | • Leadership Experiences  
• Career Advancement |  |
| The need for work-life balance impacted women’s careers in academic medical science. | • Social Pressure to Conform |  |
| Spousal support contributed to women participant’s advancement into leadership positions. | • Child Care  
• Home Finances, Maintenance, and Organization  
• Family Structure and Support Networks |  |
| Participants gave advice and recommendations regarding personal characteristics that contributed toward their success. | • Leadership Skills  
• Leadership Development |  |

Theme 1: Cultural shifts led to organizational awareness of gender differences and a need for parity.

In reviewing the numbers for women’s promotions and career advancement, Louise indicated that women are still behind. She described that, when looking at recruitment at her
current academic center, tenure track positions and the percentage of tenured female faculty members were not equal to the percentage for men. Louise commented on her current university and how they were making progress in the number of women who were chairs, and her university had better than the national average. Louise stated, “It’s still low. It’s like 20 percent.” Louise explained, “If you look at the school, without considering the clinical system, I would say that we’re doing a really good job.” She acknowledged a need for growth and support in this area, while recognizing that her organization is striving to raise their numbers through understanding the needs and supporting the women already in place.

Amanda spoke about being supported by her school because the people in leadership positions were aware of the overall needs of the school and the professional positions to be filled by experienced and knowledgeable employees. She explained:

I also think that the people here that I have encountered at the academic medical center, which is a lot of people, people here are good at self-identifying what their needs are. Most of the people in my leadership circle would be very comfortable being introspective and identifying a need that they had and going out then and finding the person to fill that need.

Organizational awareness was a key factor for women to become recognized and not passed over for promotions or high visibility or high responsibility positions. Amanda attributed much of this to one person. The success of other women within her organization were the direct result of one person, who was an advocate for everyone, but especially women. She explained:

I’ll tell you who was a great example of that was a female supervisor/mentor, who was in a position before I was. She would go out of her way to make sure that she identified women who were skilled and supported them, mentored them into whatever they have
become. For me for this new position, she was critical to me feeling like I was ready to take on.

Susan also indicated that the dean of her department strove to understand the needs of the Dean’s department, which included supporting women in leadership roles. She said, “I think the Dean does a good job,” then explained how his participation in one of her strategic planning working groups helped him understand her needs as an educator. His level of support was fiscally tied to the budget. Gaining this kind of support allowed her to have access to the tools necessary to be successful in her role with the academic medical center. Over time, as she settled into the organization, Susan recognized how senior leaders throughout the academic medical center were very supportive of women in leadership roles.

Kelsey said that when she was placed on search committees, the organization was committed to gender balance on those committees. She stated, “I think the higher the level men here, many of them are progressive and recognize the importance of having women around.” She went on to explain how her current supervisor had been “phenomenal” because he was kind of selfless, and would put me forward for things, sometimes at his own expense.” His support took on a type of mentor-mentee role, where he would recommend her for talks at conferences and seminars. She also explained how he made her a point of contact for professional inquiries, an expert in within the department. This had a very positive effect on her, and she said, “So I think my Chief is great.”

Joyce also had a similar experience as Kelsey with regard to a single person being an advocate and instrumental to her career. However, Joyce’s advocates were different people at different stages of her career. She explained, “The Vice Chair at my current academic medical center helped me get to be an associate professor. Then, the Chair of my department said, ‘It’s
time to make you full Professor.’ I think my current institution, the medical school and faculty
council tried harder than other places to be fair to women.” Then, she continued to explain how
the organization does this. “They examine salaries, and they do, what do you call it? Equity
adjustments. They’re actually good at that.” The reason for this, according to Joyce is that she
believes that her organization is more involved with the dynamic between patients and the
community, much more so than other medical schools she had had experience with. She
explained, “I think the climate here is quite supportive.” She understood how important
organizational culture and individual by-in to it had a major impact on women in leadership
positions.

Leslie explained how individuals within the organization were instrumental in supporting
her career when she had experienced a difficult time as a clinician. Regarding a critical transfer
from one department to another, she stated:

I have had people who have helped me in crisis. My program director was completely
supportive, helpful… was wonderful during the crisis period. He and my chair were
overall helpful during that crisis period, signed all the papers, got the details done, the
department change, all the administrative stuff done. Overall, the transfer from the old
department, the new Chair did complete the process that needed to be completed.
Clinicians can spend many years on a specific study or have many studies going at the same
time. Any move from one department to another can disrupt their career, which was the situation
for Leslie and caused a major crisis for her.

Leslie received the support from administrators who understood what she needed to
escape a toxic culture led primarily by one senior level clinician. She explained, “The irony
during this difficult period in transition from the old department, whether to stay in both clinical and research, the culture was lacking… and certainly no women came to me. No women.”

**Conscious bias and unconscious bias.** Some of the participants understood that conscious and unconscious bias were attributed to both genders. These were complex psychological underpinnings of their behavior, especially when on selection committees. Louise expressed how women faced both conscious and unconscious biases while striving to advance their careers, especially in the medical field. Many of these biases were apparent during grant reviews and within search committees. She stated, “On the search committee it is all men and they have a couple of women in the pipeline. And, do you know what they say at a search committee? And when they recruit? They say, ‘We want the best athlete.’” This reference is in regard to wanting to hire a top performer, regardless of needs for diversity or gender parity. Their conscious bias, according to Louise appears to be a limiting factor within their hiring practices.

However, according to Louise, these biases should not be solely attributed to men. She witnessed women and admitted that she had carried the same performance-based bias when selecting candidates. She stated:

Women have unconscious bias too. I know I do, and I know that women do. So, we sit on search committees and the best athlete has the best pedigree, and the biases that are all along that affect the pedigree…and sometimes the best candidate, so you know the best pedigree, doesn’t make the best chair, the best leader.

Julie stated that women need to figure out how to find solutions through being assertive without complaining or sounding derisive. She explained, “You really need to speak up, both literally and figuratively. If there's something that you believe in, you need to say it. You need to
sit at the table. You need to have a voice.” She indicated that women were not conscious of their bias of being less assertive than their male piers. According to Julie, they needed to recognize this behavior and overcome it if they wanted to advance their careers. She stated, “Women are just as smart as men and many women are very strong, and you need to be strong.” As a leader, she has worked with women who were early in their career and often told them to be more assertive or else their concerns and opinions would go unnoticed.

**Gender disparities.** The majority of the participants described how there was no clear pathway on how tenure decisions were being made. This appeared to be attributed to men and their bias in favor of men being in leadership positions. Abby, who was up for tenure, was told that her male colleague who was up for tenure at the same time was granted tenure with fewer publications and less grant funding. Abby, at the time, was well funded with National Institutes of Health (NIH); however, because of her toxic relationship with her former supervisor, who was also her mentor, she was told that she was no longer eligible to be considered for tenure. She explained, “He said to me, “Well, you won’t be getting tenure. But I’d be happy to hire you as a non-tenured faculty member.” She attributed his choices to a bias, rather than to other possibilities, which could have been a bias of her own. Her bias could have been toward his actions, blaming his choices on gender, when they could have been more in line with other possibilities, such as his professional network or their interpersonal relationship.

Early on in her career in academic medicine, Louise said she understood how to work toward change with regard to gender disparity. She commented:

In seeing these disparities, differences in culture from rural American and then in attending [leading university] and in seeing these different cultures, it made me become
more assertive. Not saying aggressive, but assertive in speaking up and for what I thought was right. Conscious of her own bias toward passive behavior among peers, Louise learned how to be more assertive over time. Through her experiences, she understood how to address other leaders within different departments of her academic medical center.

**Theme 2: Effective and supportive mentorship was essential to advancement within an academic medical setting.**

Some of the participants had a mentor who made a positive impact by providing support in helping them navigate the world of leadership in academia. Four of the participants had a male as their mentor. Three of the participants had a female mentor, and the remaining participant did not have a mentor. Some of the negative experiences with their mentors were due to personality issues that snowballed into toxic relationships, beset with conflict and animosity.

**Effective leadership.** Louise indicated that she wanted more to be done for the promotion of positive and effective mentorship. Surveys and professional feedback were being compiled by the academic medical center, which indicated a greater need for changes to occur for a more complete mentoring experience for women. She stated:

A mentoring survey went out a few years back during my current role, by a senior woman, Professor of Medicine; and one of the results was that there was a difference between the mentoring that women were receiving versus mentoring the men were receiving. There is a way to go for providing mentoring for women. At the current university, mentoring is included in the education aspects, which counts toward promotion.
Louise described how mentoring had been expanded by her organization to facilitate women’s mentoring needs because it was important to the dean of her department to create gender parity. She stated:

More needs to be done. In my role now, the medical school does a good job to increase, expand, deepen the skills, enhance mentoring skills for women. We have established more programs; however, it sometimes gets lost in taking the time to formalize these programs… There are barriers everywhere. At this academic university, the Dean is very supportive of women.

Joyce described her mentor, who was a female cardiologist at a prestigious ivy league school in the northeast, who often took women medical school students to lunch. She explained the importance of networking with each other, and they met at an exclusively female club, which provided an environment of camaraderie. She described a situation in which a woman oncologist had children at the institution where she was a third-year resident. She stated:

This leader returned to work two days after delivering her second child. [She] and I worked together to start a women’s group. In this group, we would have women to attend luncheons and bring their children. The faculty and all the women residents got together, because we felt we were still a minority, we had no kind of push through and had only each other. Women are accused of not sticking together. During these luncheons we bonded and discussed issues.

Effective leadership and professional networks, according to Joyce, were the only way women could gain any mentorship opportunities.

Amanda stated that more mentoring was needed, not only at her current institution, but in academic medicine in general. She explained how the mentor-mentee relationship was a process
of self-identification, pairing people who needed support with a mentor in their field. This was no longer happening properly, as she described, “About six or seven years ago, when I was a program director, residents complained they didn’t feel they had faculty mentors. In response to their concerns, a mandatory mentoring program was implemented.” The organization’s leadership team recognized a need for a regulated program to be in place in order to promote career advancement.

**Career advancement.** Leslie provided an anecdote of how her mentor-mentee relationship nearly destroyed her career and how she transitioned out of it, learning more about herself in process. Moreover, she indicated that there were female biases, both conscious and subconscious, working against her at every stage of the relationship. She described this relationship as her greatest challenge.

Eight years ago, she explained that she had to “divorce her research mentor” in order to leave a very toxic situation. She expressed her feeling of being powerless during this experience, because of being in the same academic medical center; and this person had great power, way more power than she had. Interestingly, she attributed this power to her mentor’s gender, because of the following statement, “She, being a woman.” Leslie described it as a culture of acceptance and inaction against this toxic individual.

For Leslie, the mentor had a negative impact on her career because other women colleagues stayed away during this difficult time for her. In looking back during this dark period, she stated that she learned quickly and became quite educated on how academic institutions worked. She wondered if there had been other colleagues available for mentorship, if more of a safety net had existed, if she had a colleague who could have provided advice to
navigate within the system on how to survive the negativity, then she might have advanced her career faster.

When she re-started her career, people within the institution left Leslie alone. Leslie stated, “Certainly, no women came to me. No women and I mean, nobody came to me to help me rebuild.” Leslie knew that others did not become involved to help because of fear it might harm their careers as well. She described it as scratching and muscling her way to the surface herself to rebuild her career.

The irony in having another woman chief who helped her change departments became an obstacle, too. Leslie explained that she:

Became easily confused and did not know how to help move her career forward under her leadership. The Department Chair who was a male helped her navigate within the department and became quite supportive, however. The female chief would say, “This is too confusing. So, you know, like you’re too confusing, I can’t understand what you are doing.”

It was a period of change and chaos but also an extraordinary learning experience. Overall, in looking back during her experience in having the negative woman mentor, her career blossomed. The support from the Chair and ironically another woman chair helped her receive the support she needed. From this experience, she learned the meaning of how to function in a difficult situation. Later, after the crisis of moving, she learned that other people within her institution described her mentor as an “anti-mentor.”

Abby shared an experience similar to what Leslie went through. She had a female mentor who was also her advisor for her NIH award. In having this grant, her mentor provided training, and they worked together for over 10 years in a mentor-mentee relationship, but when it
became more of an equal collaboration, her mentor became passive-aggressive. Abby stated that when she transitioned to doing her own research, the relationship changed, and her mentor may have felt professionally threatened, which distanced them in their relationship. When Abby didn’t fall in line behind her mentor, she described her mentor as “toxic.” She also described her as an anti-mentor. This anti-mentor had yelled at Abby, which made her feel threatened through intimidation and through saying negative things to her and to others about her.

Susan had a different experience and stated, “Truth be told, I had never felt that gender was an obstacle, because of strong female role models.” Susan’s first mentor was female. Her mentor gave her the kickstart to what she needed to do. Susan explained how her female mentor nurtured her and provided her insight to obtain a fellowship program director position.

Amanda described how she was less supported by women and had even experienced “hazing” from other women, especially in the operating room by nurses, scrub techs, or the female attendants. She stated, “It is really hard for subordinate women to get the support they need from their female peers.” She said that it is much easier at high levels to receive support. In her current position, she said that she was supported and mentored by the leader, who had been in the position before her. This individual identified women who were talented and mentored many of them. That mentor, she indicated, supported her and made her feel that she was ready to take on a higher-level position. However, Amanda’s most significant mentor was a man. He had mentored her both in her professional and personal life. She indicated that he was one of the reasons why she was so successful.
Theme 3: The need for work-life balance impacted women’s careers in academic medical science.

Some of the participants started a family during their residency; and, due to the fluctuation of schedules, indicated that the struggle to juggle work-life balance was extremely difficult. Other participants stated that they were told to drop to a part-time schedule in order to raise their children. Leslie recalled hearing comments about someone becoming pregnant or needing to leave at a certain time for family obligations. She gave examples of passive-aggressive behavior from her colleagues, such as, “Oh, we couldn’t schedule this meeting because so-and-so needs to leave early.”

Having a career in science, Kelsey expressed how there were lots of opportunities for networking with other women; however, she often wished these types of networking events occurred during business hours. Because of her family, she stated, “I’m balancing the home life stuff, I’m not really able to stay, do the drinks and the dinners.” She also traveled a lot for work and stated, “When I am here, I want to be home.” From her experience, Kelsey explained:

It isn’t a 9 to 5 job. It’s hard in this career. In being a high-level, productive scientist, there is high pressure to perform and produce. As a tenured Professor, you are asked to serve on faculty search committees, and the Dean requires everyone to attend. Often, these meetings were held at 8 a.m., and Kelsey had young children. Her husband often questioned why these meetings were held at that time, especially since they have children who go to school.

Being a scientist meant that Kelsey was constantly writing grants and publishing papers, all of which were crucial to remain competitive. The decline in research dollars over the last few
years had increased the competition; therefore, more late nights or working on weekends affected her work-life balance.

Julie described how everything had its time and place. She stated, “Could I have done it with more balance? I think so. Just would have had to be a little bit different.” Julie’s career started a little later because she had kids before she went back to school. She expressed how this was difficult for women today. She wanted to have kids and figured out how to make it work. Reflecting upon the past, she explained, “It used to be easier to have kids and work because it wasn’t something, at least in my time.” In her opinion, she stated that attitudes about working long hours have changed to be less socially acceptable by peers and family members.

Leslie held a different perspective:

I think the intentions are really good, and I don't think that was the case 10 years ago. So, I think awareness is better, inclination is better, intention is better. You can't get anywhere without those things. But we lack solutions. That was brought to the surface with the physician survey, the physician engagement surveys a couple years ago. She understood that institutional awareness of physicians’ need for balance went neglected for many years. To create cultural change, the institution implemented a physician engagement committee to address their concerns and build a more fulfilling professional atmosphere.

Social pressure to conform. As women entered leadership roles in academic medicine, they felt the pressure to conform to outside opinions from peers and family members regarding work-life balance. For Amanda, the term work-life balance was a misnomer that misled one to think that there could be balance and equality in their professional and personal lives. She explained it as “work-life integration, because there is no balance.” She explained how this was attributable to her profession and stated, “As physicians, I would say that it’s with very rare
exception that a woman will have a totally equal partnership with her spouse.” Her statement described how physicians spend more time working than happens in other professions. They also have other demands regarding their time, either mentoring, speaking at events, or writing, which is outside patient care or research. These demands upon their time pull them away from their family, consequently creating inconsistency with their sense of being a wife and mother.

In deciding to have a family of her own, Joyce stated that there needed to be support from her spouse and money for child care services and a housekeeper. She often counseled her female physicians prior to having a baby and explained:

After you have a baby you have to get good help. You have to pay as much as it takes. You have to have them make salads, set the table, maybe do the baby laundry. You have to have somebody clean your house. If you need it twice a week, you get twice a week, but you don't skimp because you have to go to work.

She understood the stress of maintaining a home. Time spent on chores at home would be better served at work or resting and enjoying the family.

**Theme 4: Spousal support contributed toward women participant’s advancement into leadership positions.**

Participants in the study expressed the belief that having a supportive partner at home was crucial in order to balance their work and family responsibilities. Each of the participants was married and had children. The added responsibility of motherhood increased their duties at home. Joyce explained, “You have to give everything up for your kids. There's kids and job. You can't do anything. There's only a set amount of time, so life ends up being job and kids.” She stated her belief that family was a priority, and other personal fulfillment activity, such as travel, had to be set aside, all due to long hours working and caring for children.
Childcare and taking care of the home. Since faculty salaries are paid by revenue value units (RVU), if a faculty member can’t make their RVUs, their salary goes down. As a clinical chief, Joyce supported women to be part-time while raising children, which cost the division money but made her faculty happier. Joyce and her husband made the decision for him to go into private practice, a decision that would help her pursue her career as a clinician and researcher at an academic medical center.

So, my husband picked up the kids every day except Wednesday when he was on call, until I was done with my fellowship. Then I was part-time, so I could drop them off at 10 AM at daycare so I could get in. And he would still take them to their doctors and dentist because he didn't have to drive to work. He was in the same town for work as they were for daycare and school.

She continued to explain how having a spouse who shared or took a major role in household duties made it much easier for her to focus on her career.

Susan stressed that having a great spouse, who took care of their home and children, was invaluable: “The only way, I will tell you that I can do my job is because I have a stay-at-home husband, and he takes care of our three kids and my aging dad.” In trying to have work-life balance, Susan said she would carve time out on Sundays, and she always had Sunday dinners with her kids. Susan explained that her job was stimulating and exciting; and, because of her support from her husband, she was able to meet deadlines and support her students, who would eventually become doctors and who would take care of patients, which is meaningful. Having a career in administrative medicine allowed some flexibility. Susan indicated that she was grateful for this, because there were times when she needed a little bit of flexibility to be “mom” and to
“work.” Her husband, a stay-at-home dad, did most of the child care, about which she stated, “and it would be impossible to do what I do without him.”

Louise, a professor, had two children and expressed how tough it was juggling her career and her family. She said, “I don’t feel that I have done it all that well. I continuously worked hard. I was like other women who were offered part-time (positions) and paid part-time. Yet I still worked full-time hours. I knew it and saw it.” Louise continued, “I can’t have it all. In my past and current roles, I advise women to negotiate part-time because women get paid part-time but work full-time.” She described how she had experienced the need to fulfill the expectations of a full-time role, regardless of her part-time status and lower compensation. She also saw this happening with her colleagues, then chose to go full-time for the rest of her career.

**Family structure and support networks.** Leslie indicated that there were often assumptions about female physicians who had children. She often heard remarks, such as, “That person’s not going to be available because they have to leave early.” These typically held an undertone of annoyance. It was interesting to hear those comments about someone who was expecting a child or someone needing to leave early at a certain time of family obligations. She experienced negative attitudes coming from her peers.

Joyce described when she was in a midwestern academic center where a senior male colleague, “Introduced me to a woman who is a member of the Young Turks, which is a clinical society for investigation. It usually takes men six years to become full-fledged members, however for women, it is delayed by a few years, especially if you have children and stay at home.” Joyce described the complexity of overcoming gender bias, as well as a bias against physicians with a family, when accepting new members into a professional society.
Amanda, not her spouse, focused much of her time on all the children’s activities. Her husband, who was supportive, preferred only doing their son’s activities. Amanda described how there was no good mechanism for women to work part-time in such a rigorous medical discipline as surgery. In her discipline, she must be available since certain specific patients are assigned to her. She recognized it was quite common for other disciplines to allow women to work part-time, but, in hers, it was not the case. She stated that more is needed for society to recognize this pattern and that it wasn’t good for society to have situations where a parent is precluded from participating in their children’s lives. “It isn’t healthy,” she said.

Kelsey, like the others, expressed that another very important thing is having a good partner who can share the household and parenting duties, so they don’t “fall to the wayside.” Kelsey stated, “Again, I don't think everybody is that lucky.” She stated that she was very lucky to have a spouse who provided equal support at home yet had witnessed other relationships fail to overcome the stress and commitments of modern professional life. She also admitted to not knowing that she was lucky, having taken it for granted until much later in her marriage.

Abby stated that her life-partner is somebody who was supportive of her career. She stated, “It’s not just being a scientist. It’s any career. Anything that takes away from paying attention to it or taking care of the kids, if you choose to have kids.” She explained that it was important to have that kind of support in order to raise healthy children and have a nurturing environment.

**Theme 5: Participants gave advice and recommendations regarding personal characteristics that contributed toward their success.**

Participants recognized a shift away from the past organizational culture that was male dominated and full of bias. The academic medical center slowly transitioned along with societal
structures, where women took on more leadership roles, leading to changes in personal characteristics, as well as training and development to build upon those traits. Abby described how past cultural practices were passed on from mentor to mentee, and those mentees acquired negative personality traits in order to survive the male-dominated field. She stated, “I just heard stories about that's how he was and maybe she was trained that way, like you have to be tough. It's like what I heard women had to do in my mother’s generation if they wanted a leadership role.” Men were tough and unforgiving, lacking emotion during stressful situations, yet women carried all these of these same traits, therefore they were psychologically unable to be good leaders. She described how “As a woman, you had to be tougher than a man, so they wouldn’t think you’re weak.” Women needed to be more aggressive and dominant if they were to survive. She also described how some these negative traits were no longer accepted by her professional community. She gave an example of one woman, who was successful in her career, but had been trained by an aggressive male mentor and “not many people liked her, and I can’t find any of her past mentees that speak highly of her or have become independent scientists.” It is possible that the negativity was trained from mentor to mentee, or the mentee had already been predisposed toward being aggressive. Regardless of either explanation, the cultural changes within the organization focused on less rigidity, a move toward a more compassionate and collaborative environment.

For one participant, Louise, the top leadership positions at the academic medical center needed vision and they needed to have more empathy for their peers and employees. She explained:
It's remarkable that the top education position is someone who is not a professor yet.

What does it mean to be the best athlete? I think you know, again, it's someone who has a vision to see that there are lots of qualities that are important in that position.

The leadership skills described above depend upon personality traits developed prior to entering a leadership role. Leslie also confirmed vision as a necessary leadership skill, because a good leader has the ability “of putting the right people in the right place to do the right things.”

Future leaders needed to have a well-developed sense of empathy, Louise explained: “I think one of the keys to be a successful leader is to be able to see what the people, who are working in the institution, are going through on a daily basis.” This statement describes knowing the daily routines, tasks, and resources being used, as well as understanding their employees’ needs for them to be able to perform at their best.

Along with empathy and vision, another personality trait, persistence, was seen as a primary reason for success. Persistence overcame gender bias within the organization, as well as throughout their education. Leslie had described a major crisis during the early years of her career that presented a major challenge. She had to overcome a toxic relationship with an anti-mentor. Had she not persisted while finding the support of others, she expressed how she would not have been as successful as she was.

Susan described her personality as being persistent through problem solving, and explained:

I would have to say the primary driver is I've always been a problem solver. I'm not someone who likes to just kind of sit back and whenever something was presented as a challenge, just basically take it. Not in an argumentative way, but in a proactive wanting to help kind of way. As a leader and as somebody who is trying to get things done.
These leaders found ways to overcome their challenges through strong feelings of persistence, because they believed in what they were doing, helping people and training the next generation of clinicians.

**Leaderships skills and development.** Participants expressed the need for more leadership development for women within the academic medical center. The organization understood that there was a need for more women in leadership roles, yet there were not enough candidates due to a lack of training. However, many of the participants described how their leadership career had “blossomed,” as it had for Leslie, when they received training and mentorship. Leslie explained, “I have a different level of confidence. And that success, the good things that came out of that were my leadership style. And I’ve had some leadership career development, done some things in that area, and those have all been helpful.” Leadership development shaped her career, gave her a sense of renewed confidence, especially when taking on new, more advanced leadership roles. Support from the institution came in many forms, but leadership development substantially affected career advancement.

The participants valued certain leadership traits over others, which were mostly gained through their own personal experiences. Amanda described several traits that a good leader should learn and implement. She explained, “I have many words, but I hope that the one word that I guess the top word would be fair. I guess that would be the most important one.” A fair leader, according to Amanda, was one with good judgement, situational analysis, and professional acumen. Amarda also described how leaders who do not allow for autonomy and independence are toxic for the environment. She explained, “I do not like working for a micro manager, and I do not micro manage. I hate it. I think it stifles creativity. It stifles innovation. It's just bad, and so I don't.” In her opinion, good leaders allow their employees and peers more
She stated, “That also means that if you don't have someone in the right place doing the right thing, that it can bite you.” Many of the participants explained how they had experienced different types of situations that allowed them to learn from their mistakes. Leslie’s example described how leadership development can help inexperienced leaders manage situations and employees, setting them up for success while avoiding failure.

According to several participants, leadership skills are nurtured over time through training and mentorship. The mentor-mentee relationship connects inexperienced professionals with people who have a wide range of situational experience. Therefore, mentors play a major role in the development of future leaders, as described by Abby:

My post-doc mentor also said that as a leader you should try to play to people’s strengths. People are good at various things, so make them feel valued for what they're good at. They can always do better, but don't slam them all the time, because nobody likes that. Nobody likes to feel devalued.

This example echoes Amanda’s statement earlier in this subsection about being a fair leader. It also ties in with leadership development of autonomy, showing how to be more confident in employee productivity through understanding their roles on a team and within the organization. According to the participants, mentorship played a major role in the development of positive leadership skills that led to their success.

**Conclusion**

This chapter summarized the findings of an interpretative phenomenological analysis that sought to understand the lived experiences and perceptions of female academic professionals and how they make meaning of their continued success in leadership roles at academic medical
centers. The study included eight participants, who took part in individual, semi-structured interviews that lasted approximately an hour each. Background on each participant was provided, followed by information on coding and categories. From these data, the emergent and super-ordinate themes were identified and are listed in Table 2 of this chapter. Following this summary, the five common themes were presented and discussed in detail, which described the characteristics most critical for the women who became successful in leadership roles at an academic medical center.

The following Chapter 5 will provide an analysis and interpretation of the five primary findings and subthemes of this study. After a brief review of the problem and purpose of this study, and a presentation of the research questions, each superordinate and subordinate theme will be interpreted in relationship to the theoretic framework, as well as the literature reviewed in Chapter 2. The analysis of each theme will also be used to address the research questions. Following the analysis of the findings, the chapter will discuss implications for current practice and guidance for future research. Lastly, the chapter will close with a discussion of the conclusions regarding the entire study, reaching beyond the direct scope of the study, and providing possible insights into this area of research.
Chapter 5: Interpretations, Recommendations, and Conclusions

Introduction

This interpretative phenomenological analysis (IPA) research study focused on the lived experiences of eight high-achieving women in academic medicine. During their careers, each of these participants advanced into top leadership positions as deans, directors, clinical chiefs, vice-chairs, and provosts. Through individual semi-structured interviews, participants provided the primary raw data to address the overarching research question for this study:

- How do senior academic women in the medical profession describe their experiences of negotiating and/or achieving senior leadership positions within an academic medical center located in the Northeastern United States?

In-depth interviewing also provided comprehensive data to address the sub-questions to the primary overarching research question in this study:

- How do women leaders in the academic medical field describe the constraints and opportunities that affect their professional advancement?
- How do women who advance to leadership positions in academic medicine describe the strategies they use to transcend challenges, inequities, and structural/institutional factors impeding them, including work and life balance, to achieve success?

Together, these questions were used to design the study and to create the interview protocol and open-ended questions used for the interviews with participants. Following the gathering of data, IPA analysis took place and identified five super-ordinate themes that are described below in Table 3.
Table 3

Super-ordinate themes and subordinate themes

<table>
<thead>
<tr>
<th>Super-Ordinate Themes</th>
<th>Subordinate Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural shifts led to organizational awareness of gender differences and a need for parity.</td>
<td>• Conscious Bias&lt;br&gt;• Unconscious Bias&lt;br&gt;• Gender Disparities</td>
</tr>
<tr>
<td>Effective and supportive mentorship was essential to advancement within an academic medical setting.</td>
<td>• Leadership Experiences&lt;br&gt;• Career Advancement</td>
</tr>
<tr>
<td>The need for work-life balance impacted women’s careers in academic medical science.</td>
<td>• Social Pressure to Conform</td>
</tr>
<tr>
<td>Spousal support contributed to women participant’s advancement into leadership positions.</td>
<td>• Child Care&lt;br&gt;• Home Finances, Maintenance, and Organization&lt;br&gt;• Family Structure and Support Networks</td>
</tr>
<tr>
<td>Participants gave advice and recommendations regarding personal characteristics that contributed toward their success.</td>
<td>• Leadership Skills&lt;br&gt;• Leadership Development</td>
</tr>
</tbody>
</table>

This chapter explores the key findings from the analysis of the semi-structured interview data relative to the conceptual framework of feminist theory and to the research literature contained in Chapter 2. Feminist theory informed this study with an examination of women’s challenges while rising toward professional leadership positions in academic settings. Feminist theory also described a model of cultural biases and discrimination at the organizational level, providing evidence for why women continue to struggle with career mobility in comparison to their male counterparts. Through the lens of feminist theory, the primary findings of this study
both agree with and contradict many of the findings discussed in the empirical literature explored in Chapter 2.

After the discussion of the findings relative to the theoretical framework and the literature, this chapter describes the implications of women’s career development affecting individuals and organizations. These implications led to a list of recommendations that align with the findings and with current feminist theory. Following the implications and recommendations is a section on considerations for future research. Finally, the chapter concludes with a summary of this IPA study and its significance for current practice, as well as future research.

**Interpretation of Primary Findings**

Five super-ordinate themes emerged from the analysis of semi-structured interviews of eight participants who held leadership positions in an academic medical center. Those themes are discussed in the subsequent sections of this chapter.

**Organizational awareness and support are necessary for women’s career advancement.** This study revealed no single clear pathway on how promotions or tenure decisions were made. Decisions regarding promotions, mentoring, and gender equality were based on informal structures, which led to poorly-informed choices and slower movement toward gender parity. One of the reasons for this was that decision makers were men, who controlled the promotion and tenure decisions and were subject to conscious and unconscious bias. However, there were indications of organizational awareness and support that were in nascent stages of development. The institution was aware of gender inequality and was actively providing support to bring about parity in leadership positions.
Lester and Lukas (2008) described organizational cultures and how they shape and reinforce socially-appropriate roles for men and women. Isaac et al. (2010) concluded that organizational culture powerfully affects the ways in which women are not considered to be professionally equal when seeking advancement within organizational structures. Women were often taught early on in their careers that traditional male attributes were expected in senior administrative leadership roles and that promotion depended upon their ability to act like men (Ghaus-Kelly, 2014; Tedrow & Rhoads, 1999). In this study, perceived successful behaviors were gendered. Feminist theories have provided a background for many of the factors shaping women’s experiences toward professional advancement, particularly in the academic medical climate (Ghaus-Kelly, 2014).

Women within the institution’s leadership continued to lag in overall numbers at the academic medical center, especially for tenure-track positions where the percentage of tenured female faculty members is disproportionate to the percentage of male faculty members. Decisions regarding tenure positions were arbitrary and culturally political. Leadership positions were regularly determined by a single individual, who did not understand or was not interested in gender parity. This barrier existed within an organization that maintained a higher than average level of awareness and support for advancing women’s leadership careers. This finding reflects the status among other similar organizations. One major academic medical organization, the National Institute of Health, has only 20% of its leadership positions comprised of women (Mazure et al., 2001). However, in this study, continued support for women in a higher capacity developed positive change to help overcome these historically difficult obstacles, allowing the number of women in leadership positions to slowly grow at an increasing rate. The contributions
toward equality were small and incremental, yet often hindered by male-dominated attitudes and cultural biases.

This research study revealed that committees controlling employment and promotion had a majority-male presence and were open to implicit and explicit biases, which had a significant effect on women obtaining leadership roles. There were women on the committees and their participation contributed greatly toward organizational needs; however, there were never enough women on these committees to sway decisions regarding parity. Therefore, the trajectory was slower for women than for men toward advancement into senior leadership positions because the key decision makers were primarily males serving on committees that determined promotion and hiring policies, which created barriers for women’s advancement.

Also found was that women’s opinions and experience were considered lesser than those of male peers, who exhibited more aggressive behavior. Women were often seen as passive leaders and as incapable of the demands that would be placed on them. This view of women being passive and not able to assert their opinions is in alignment with a negative cultural perception of women being easily controlled, because they tend to be less aggressive than male peers, therefore perpetrating the myth that women do not belong in business and leadership environments (Isaac et al, 2010). Findings in this study are in alignment with the empirical literature that describes how male-dominated committees do impact women’s attainment of leadership roles due to their implicit and explicit biases; gender parity for decisions pertaining to leadership advancement will counteract many of these biases (Isaac et al, 2010).

Awareness was substantial enough to begin a cultural change within the medical institution in this study. As it related to promotions and tenure decisions, women leaders were supported by the decision makers, who were predominantly male. Male leaders recognized how
the academic medical profession has changed from a predominantly male-dominated field toward greater parity. Through greater awareness, the institution understood how to change a highly male-dominated and hierarchical environment in order to reduce or eliminate implicit and explicit biases against placing and supporting women in leadership roles.

**Internal or external mentorship is essential to career advancement.** In this study, mentoring was necessary for the success and continued success of women seeking leadership positions. This aligns with the research literature that indicated how a successful mentor-mentee relationship increased work productivity, boosted self-esteem, and enhanced professional development (Blood et al., 2012). Mentor-mentee relationships were critical in helping women advance in their careers, regardless of the mentor’s gender. According to Zhuge et al. (2001), women typically begin their career with fewer academic resources and tend to progress through the ranks more slowly than men (Zhuge et al. (2001, p. 637). Those women tend to be more reactive and less proactive with regard to their careers. Mentors, in this study, advised their female mentees during major events that required adept and strategic decisions. This informed the female mentees about their career trajectory, which allowed them to become more proactive and less reactive.

Male leaders paired with female mentees were adequate in career advising; however, a mentor’s role covers more than simple counseling about professional options within the organizations and beyond. The mentor-mentee relationship resides on a more personal level, encompassing every aspect of their lives, because it affects them and their career goals. From this finding, it was important to have a female mentor because male mentors were unable to fully understand or empathize with women’s positions in society and at home. Further, when women rise to leadership positions, once they get into their leadership positions, they often are trying to
develop their career pathway and do not have time to mentor other women under their leadership in how to achieve a leadership role. The lack of women in leadership positions has led to lack of available mentors, which further exacerbates women’s lack of advancement and limits the pool of high-achieving females available to help other women negotiate success (Ballenger, 2010, p. 13). This study revealed that the women in leadership positions were less able to support future generations of women and increase the rate of forward movement toward parity.

Another roadblock toward women’s gaining or providing mentorship was found in women-to-women interactions. When one of the female mentees was mentored by a woman, the mentor-mentee relationship soured in this study. The literature supports a consistent precept of non-conscious bias that self-promotion by women may invoke negativity among other women colleagues (Pololi et al., 2012). The effect of a negative relationship left the mentee in this study feeling isolated and unsupported professionally and personally in her interpersonal professional relationships. This occurred when the mentee achieved professional success and a leadership position that was equal to that of her mentor. The relationship changed from supportive to competitive and was then described as “toxic.” Also noted in the literature, female rivalry in male-dominated workplaces sets women up to compete intensely due to increased scrutiny and the scarcity of top leadership positions available (Johns, 2013; Marcus, 2016). Ineffective mentoring can contribute to a decrease in women’s capacity to successfully seek, negotiate, and obtain promotions and to publish (Blood et al., 2012; Files, Blair, Mayer, & Ko, 2008). This is consistent with feminist theories that describe the obstructions preventing women from achieving success (Zhuge et al., 2011).

This study also revealed that having a strong, positive relationship between a female mentor and female mentee nurtured and provided guidance for the woman seeking a leadership
position. The female mentor understood the personal and professional needs of their female mentee, especially when considering taking on a higher-level position within the organization. Therefore, the mentor-mentee relationship was primarily based upon a healthy relationship, where the mentor took an active interest in guiding the mentee toward success. When women were mentored by other women or by men, they felt supported and positively instructed toward a successful career path.

**Individuals need to understand how careers in science affect work-life balance.**

Women and men within academic-medical professions spend numerous hours preparing grant proposals that fund their laboratories, pay their employees, and cover their overall salary. Competition for grant money has increased over the years, causing them to work longer hours in a week to complete much-needed research. It also allowed them to write more articles for publication. However, women who have a career in science, especially female first-time principal investigators, have received a median grant amount of $126,615, almost 24% less than first-time male investigators who received a median of $165,721 grant dollars (Diego et al., 2019, p. 898; Mazure, Arons, & Vitali, 2001). This study revealed that there was an imbalance within women leaders’ professional and personal lives, wherein women leaders made many familial sacrifices to pursue their careers because they needed to be more productive than their male peers to be recognized as leaders.

According to feminist theory, women remain less likely than men to be promoted when adjusting for hours worked, publications, funded support, and career track within specialty (Zhuge et al., 2011). The National Institutes of Health is one of the biggest providers of research dollars to academic medical centers (Mazure et al., 2001), and, as discussed in the first finding, is directed by an overwhelmingly-male majority. With less funding available for women, the
amount of stress experienced increased, which affected work-life balance. Another effect of decreasing research funding is that a career in medical research may no longer be financially attractive or feasible, especially for women. Therefore, a choice has to be made between family and career, to decrease the amount of clinical research or increase it, both of which had a substantial effect on career goals. Strong socio-cultural factors contributed to women opting out of the academic-medical profession because they had to make a choice to have a family or not. This is a choice that many men often do not even think to make (Ceci, 2009, p. 251). This perceived obstacle toward a successful career required women, who wanted leadership positions, to simultaneously address structural barriers and become organizational agents of change. This contributed to the shift in academic medical culture, which will eventually allow greater access to leadership and work-life balance (Pololi & Jones, 2010). In this study, more awareness was needed regarding work-life balance, especially among the male leadership team, wherein males did not have any family obligations. The male leaders lacked a direct understanding of the female leadership experience, which led to misinformed expectations.

Physicians and clinical research scientists spend more time working than many other professions because of the demands regarding their time outside of patient care or research, such as mentoring, speaking at events, or writing. In this study, women conforming to preconceived notions of work-life balance were based on historically-subjective opinions and biases. Demands on their time pull them away from family obligations and consequently become inconsistent with their sense of being a wife and mother. This study found that women who were supported by management could choose how much research funding was necessary to support a laboratory and still spend time with their family.
Spousal support contributed to achieving a leadership position and continued success. In this study, women in leadership roles who were married and had children had the added responsibility of motherhood that increased their duties at home. In order to be successful in their career, women needed a supportive partner at home, who would assume most of the responsibilities at home, so the women could pursue their career. Research studies have shown that women in medical research experienced additional pressure and their familial obligations created more personal demands, therefore limiting their time available to perform research (Cropsey et al., 2008; Speck et al., 2012). There is an underlying assumption that to succeed with a career in medical sciences, women need to put work over family. Tarek and El-Masry (2015) found that 85% of the 46 female physicians and researchers were more likely to consider slowing down their career pace or amend their work schedules, as opposed to only 35% of their male counterparts. The role of motherhood was seen to be as important as their career. The moral dilemma that women face is whether to minimize family commitments or to achieve career success (Morley et al., 2013). This study found that the women scientists needed as much support within their personal lives as they needed in their professional lives.

In the previous finding, work-life balance was construed as an obstacle or a problem for most of the participants. Garg (2012) found that women in the medical sciences frequently had full-time working spouses and experienced greater stress and pressure than their spouses in managing personal obligations and their professional career. However, the relationships with spouses and the career goals within this study varied with each participant. This finding was not specific to marital types, or roles of everyone within the marriage, or the spouse’s career. Women leaders with a spouse in this study had a positive and healthy relationship that supported their career goals, and spouses managed many of the obligations at home that are typically
perceived or seen as the “mother’s role” in U.S. society (Garg, 2012). Their relationships with their spouses were strong enough to support them through all of the obstacles that men typically do not experience. This provided the flexibility to perform research and present scientific data, as well as pursue highly competitive grant funding.

**Personal characteristics and leadership training are important.** Gendered perceptions play a substantial role with regard to implicit biases. According to Eagly and Karau (2002), people preferred male supervisors to female supervisors solely based on their ideas and conditioning regarding male behavior. Men are perceived as being more aggressive than women, more able to make tough choices, and lack emotion, which meant that women had to behave in the same manner to be effective leaders (Eagly & Karau, 2002). Female supervisors were perceived as forgiving or less capable as leaders, and this was attributed to failure to understand the realm of high-powered leadership and business (Isaac et al., 2010). This indicated that there was a gap in knowledge between employees and their understanding of healthy supervision. Employees were biased toward male leaders due to their lack of understanding of what it means to be an effective leader (Eagly & Karau, 2002). However, in this study, the women leaders embraced the need to have a well-developed sense of empathy in order to be successful. Effective leaders were more compassionate and possessed empathy for their colleagues, as well as for their patients.

Gender bias in medical academia often creates intentional or unintentional barriers for women’s career advancement (Carnes et al., 2015). Referred to as the “boy’s club mentality,” women have encountered this organizational cultural barrier since they began to study and practice medicine (Van den Brink, 2011). To become an effective academic medical leader, women leaders needed to be persistent throughout their career to overcome this type of barrier.
Strong feelings of persistence overcome several major challenges, including gender biases. Women in the field of academic medicine in this study saw this as a valuable personality characteristic in order to succeed, due to the many disproportionate obstacles and challenges facing them throughout their careers.

In this study, leadership training and development programs were recognized as an important tool for these women leaders, helping them embrace and further develop their personal characteristics to navigate the role of an academic medicine leadership position. The reality that the medical institution implemented these programs meant they were supportive of women going into leadership positions. Learning new leadership skills had elevated their level of confidence and enabled them to perform at their highest potential, while developing their own leadership style, especially as their careers advanced into higher positions within the organization. Leadership training also addressed gendered biases and helped the women leaders overcome this hurdle within the academic medical institution. These development programs supported women in academic leadership roles while increasing awareness on how to aspire to and obtain leadership opportunities.

**Implications for Practice and Recommendations**

This IPA study explored the lived experiences of high-achieving female leaders in an academic medical center with a focus on how they successfully rose to the top. Moreover, the findings in this study will help guide future generations of women leaders in a primarily male-dominated field. For continued success in advancing women into leadership roles, organizations would do well to recognize that gender disparities do exist. These gender disparities need to be identified by the decision makers within the organization. As outlined in the diagrams in Chapter 2, there needs to be a strong collaboration between senior leadership and human
resources within educational academic medical centers, which is often classified as faculty affairs, an office dedicated specifically for faculty hiring, retention and promotions.

Feminist theories have provided theoretical background for many of the factors shaping women’s experiences towards professional advancement in medical and academic settings, in general; and the theories have identified the obstructions that prevent women in those settings from achieving success. The feminist theoretical framework also explores interactions among gender biases within organizations to provide perspective for analysis and critique (Ghaus-Kelly, 2014). The following five implications for practice describe how institutions could become more vigilant with regard to gendered biases, as well as providing individuals with a better understanding of the conditions within an academic medical career, so they can better manage their expectations.

**Academic medical centers need to be aware of gender differences and provide support to women.** Included in organizational awareness is the understanding that there is a lag in achieving an equal playing field in order for women to obtain these high-level positions. In this study, women in leadership positions may have felt supported by their organization, but more support and resources were necessary to help more women receive leadership advancement opportunities and tenure. A key recommendation is to place more women on high-level committees that make decisions in hiring and recruiting faculty, especially a more diverse faculty that fully includes women. The organization needs to provide institutional support and adequate resources for research funding and a higher rate of promotion for women to be equally represented and advanced.

The researcher recommends that academic medical centers build institutional capacity to monitor and evaluate faculty development and diversity policies, practices and programs. These
will bridge the gaps and prevent gender bias, such as the undervaluing of women’s contributions and holding women to higher performance expectations than their male counterparts (CGO, 2014). To have these changes take place, the organizations need a strong senior leadership to acknowledge the necessary changes needed and make these changes happen to transform their organization to have a better representation of women in senior leadership positions.

Academic medical centers could benefit by strengthening mentorship programs and creating more opportunities for leaders to become mentors. Having a formal mentoring program dedicates leadership role models for both clinical and research areas in academia and provides junior faculty the opportunity to learn the skills and attributes necessary to obtain a future senior leadership position. A positive role model can share their own lived experiences on what worked and what didn’t when they moved up the ladder within an academic environment. The right mentor will have a greater understanding of how to overcome barriers to advancement, especially the specific needs of their mentee, which can prove essential for women to succeed in their specialty in academic medicine (De Angelis, 2000, DeCastro et al., 2013, Nonnemaker, 2000). Mentorship is important for assisting women to advance into academic leadership positions, and for women that means having more female mentors. Women mentors provide insight into problems that are unique for women.

**Work-life balance impacts science careers.** Participants in this study were compelled to follow their chosen careers in academic medicine—a personal calling to help people. The study confirmed that it can be stressful managing family obligations and trying to write a grant, publish a paper, and travel to present research findings, all done to remain competitive in the field. Another recommendation is for academic medical organizations to create work-life balance policies that provide flexibility and paid leaves to avoid stressful decisions when a leader
is raising a family or deciding to not have children at all. Since it was noted that some women opted to drop out of the sciences, this could present a problem if organizations do not invest in supporting all members of their organization who have children. Flexible work-life policies and paid leaves will help change the career choice for individuals into one that is more inclusive than exclusive.

**Academic medical centers are encouraged to support personal and professional development for women in order to foster leadership qualities.** By having a dedicated women’s faculty committee at an organization, the institution provides a formal program of peer mentoring, which is also a form of faculty development for women. It is recommended that organizations set aside funding for mentors, so the mentors can set aside some of their research hours to assist women with leadership development skills. Development would focus on getting women to speak up to have their opinions heard and to have a place on leadership committees. When women have a strong voice during faculty meetings with senior leadership, they participate in the hiring of faculty members and in making the recommendation for promotion.

Stamarski and Son Hing (2015) indicated that it is important to women’s advancement to support fair policies in hiring, to support work-life balance, and to avoid systemic gender biases within the workplace in order to move women into senior leadership positions. The lack of women represented, as it relates to recruitment, promotion, and policy committees, has been documented (Bickel et al., 2002). In this study, the academic medical organization was doing a good job in advancing women, but more work needed to be done. Faculty development at the academic medical institution was an area of concern, and more faculty development programs were needed. The existing committee that met and decided tenure still consisted mostly of men. Human resource departments and promotion committees were often made up of senior male
leaders who were with the organization for a very long time and were engrained within the organization.

Paramount is the concept of building institutional capacity to monitor and evaluate faculty development and diversity policies, practices, and programs to bridge the gaps and to prevent biased practices, such as undervaluing women’s contributions or holding implicitly higher performance rubrics for women than are held for male counterparts (GCO, 2014). Organizations need to be aware of this shortcoming and have an equal playing field for both men and women to be developed and trained toward obtaining tenure and senior leadership positions. When offering these faculty development programs, the organization can provide training for women to attend without creating a hardship for the work and family life.

**Considerations for Future Research**

This qualitative study draws attention for future research in a number of ways. The main focal point of this research was to explore the lived experiences of high-achieving women in senior leadership positions. Because this study involved only eight female participants who were vice provosts, clinical chiefs, and administrators, future research will need to observe other high-achieving women, in other regions of the country, as well as at larger and smaller institutions. Future researchers could also:

- Conduct other qualitative studies to explore the lived experiences of high-level women in leadership positions in academic medicine or in other professional areas;
- Compare high-achieving women in academic medicine to determine if they had greater success in having a male mentor versus having a female mentor;
- Focus on a larger sample size using quantitative study designs to promote a wider understanding of general attitudes regarding women in leadership positions; and
• Compare support versus non-support of females from their female counterparts in academic medicine, which would require a larger female sample and would examine their lived experiences in rising to top leadership positions.

It would also be useful to explore this research study using a larger sample of high-achieving women in an academic medical center with a broader spectrum of other medical disciplines. If the study was to be expanded in future research, it could provide further knowledge as to whether the current findings are relevant to only women in academic medicine or whether a broader study could be done for women in other leadership positions, not just specific to women in academic medicine.

The women participants in this study believed in their calling to pursue a career in academic medicine, which led to a high-level leadership position. They still encountered many barriers to entry and promotion within an organization that was aware of gender inequality and actively trying to support women toward leadership roles. Therefore, future research would do well to continue to identify the barriers that impede women’s progress into academic medicine, as well as the strategies used to overcome those barriers, which would be useful in designing potential interventions that could empower high-level female leaders in the field of academic medicine.

Conclusion

This qualitative IPA study examined eight high-achieving women in senior leadership positions at an academic medical center. The eight participants described many facets of their leadership lived experiences based on what they experienced as individuals in high-level leadership roles at an academic medical center. The findings indicated that a slow, incremental
change has occurred, yet the women leaders still described a need for more support to bring about continued change.

The challenges for organizations and individuals are to determine how to implement more mentoring and faculty development programs, while creating more gender parity in leadership positions. One of these challenges is to establish the best support and mentor women during each stage of their professional careers, which will lead to senior leadership roles. The roles of women should be looked at when they enter medical school and or at the beginning of their science careers. Another challenge is to develop more formal career development programs. These should be offered within the organization to address the underrepresentation of women in academic medicine. Leadership training and development, as well as the identification of mentors, will build a positive succession plan to help women obtain the higher-level leadership positions while maintaining the organization’s vision for the future. Supporting women who pursue leadership roles is a necessary best practice in faculty development for academic medical organizations. It is widely known that leadership needs to be representative and diversified, and this can be accomplished by increasing the number of women in these high-level positions. Once the playing field becomes equal, the balance of power is likely to occur, and women will be successful in obtaining senior leadership positions.

The findings from this study also show that women themselves can be involved in helping to close the gap and increasing the proportion of women in high-level leadership positions. The findings from this study reveal that women need to be comfortable in their own right. They need to speak up. They need to take risks and truly understand the time is now to move up the ladder. Women need to be more self-promoting and develop themselves toward
being retained and promoted through tenure, and they need to reach out to others for peer mentoring and networking opportunities.

The research done in this study presents findings and suggestions for women to move toward successful high-level leadership positions in academic medicine. The study addressed the issues and barriers and the positive outcomes of women who hold senior leadership positions; it includes their input on what worked and what needed improvement.

Appendices

Appendix A – Interview Protocols

From: Karen Griffin

Sent: Sunday, March 25, 2018 8:50 PM

Subject: Fwd: Participating in my Research study

My name is Karen Griffin, and I am a doctoral candidate in the College of Professional Studies at Northeastern University. I am working toward a Doctorate in the Graduate School of Education.

I am inviting you to take part in a research study. This email will tell you about the study, and you can feel free to contact me via email or telephone if you have any questions.

The purpose of this research study is to understand the experiences of high-achieving women in senior leadership positions at an academic medical center and to document their perceptions of the barriers they face that have impacted their success and advancement in careers in medicine, academia and science. This research is important for understanding the strategies
successful high-achieving women in academic medicine have identified and utilized to attain top leadership positions when possibly facing bias and gender imparities in the workplace.

The research will include an interview that will last between 60 and 90 minutes, with the option of arranging a second interview session, if both the participant and I agree that this would be useful. After the interview, I will estimate when transcripts will be available to review to ensure accuracy and to amend or correct the text. I will ask each participant if they have additional questions and graciously thank them for participating thus far in the study. In the first meeting of about 20 to 30 minutes, I will describe the process of the study. The main interview, in person, will be a 60 to 90-minute A participant can choose to skip over any question included in any of the interviews if she does not want to answer it, and they can respond as much or as little as they choose to any particular question. Finally, another interview will be scheduled if we agree it will be valuable, by phone or in person. After all of the interviews are completed, each participant will receive a copy of the transcript of their interview to review it for accuracy and to add or change any comments that they wish. The interviews will be recorded through digital software on a laptop and an Apple I Phone or Apple IPAD to ensure there is a backup copy in case of technical issues. Participation in the study is completely voluntary and confidential. A participant may decide not to join or may withdraw consent to be in the study at any time and for any reason, without penalty.

Only I will see your personal information, and I will only identify the material you share using a pseudonym. No reports or publications will use information that can identify you in any way. All audio recordings will be destroyed according to protocol after analysis.

If you have any questions, please call me at *** or ***. Please email me at *** if you would like to participate. I am honored that you agreed to consider my request for an interview. Thank you so much in advance.

Best Regards,
Karen Griffin
Doctoral Candidate
College of Professional Studies
Graduate School of Education
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Interview Questions

• What led you to a career in academic medicine?

• What is it like to be a woman in academia?

• What challenges did you face in your career?

• In your experience, do you believe bias exists against women trying to achieve leadership status? Please explain.

• Describe the environment of support that helped you advance. Explain what that environment lacked. What changes have you seen this institution make to better support women to achieve senior leadership positions?

• Have you heard of unconscious biases for women to advance? Explain.

• What is your greatest success as a leader? What helped you achieve it?

• What was it like for you to obtain a leadership position?

• How or when if at all did you first become aware of the lack of leadership positions for women in academic medicine? How did you address those barriers?

• Do you feel women in academic medicine are supported by female peers? What has been your experience with mentorship?

• Can you tell me a story about your experiences in receiving mentorship from a colleague/supervisor?

• Do you feel that there is an equal playing field for everyone in academic medicine to obtain higher level positions? Why or why not?

• How would you advise future women on how to navigate success in academic science?
Appendix B – List of Figures and Tables

Figure 1. Level of discrimination in organizations 18
Figure 2. Discrimination in organizational structures. 19
Figure 3. High Achieving Women in Academic Medicine 21
Table 1 – Pseudonyms and Demographic Data 65
Table 2 – Super-ordinate themes and subordinate themes 69
Table 3 – Super-ordinate themes and subordinate themes 92
References


https://doi.org/10.7326/M17-3438


