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Perceptions of Women of Color on Career Advancement in High Technology Management

Angela Michelle Charles
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Walden University

College of Management and Technology

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Angela Michelle Jiles-Charles

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Walden University
2017

Abstract

Perceptions of Women of Color on Career Advancement
in High Technology Management

by

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MSM, Troy University, 2005

BS, Troy State University, 2004

AS, Troy State University, 2003

Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy
Management

Walden University

November 2017

Abstract

In information technology, few women of color hold senior level executive leadership positions in the United States. Currently, in the high-tech industry, Asian and Black women hold 1.7% of executive/senior-level positions, and only 0.2% are in CEO positions. The purpose of this research was to understand professional executive women of color experiences in career advancement in the high technology fields. The study's conceptual framework included organizational culture theory, Krumboltz's theory of career counseling, and the leadership pipeline model. The overarching research question and subquestions addressed the lived experiences of 15 professional senior executive women of color in relation to career advancement in high technology to understand their perceptions, feelings, and values through a transcendental descriptive phenomenological approach. Through the use of Colaizzi's method of data analysis, 8 major themes and 11 subthemes emerged from interviews with the participants. The results indicated that women of color needed to have access to internal opportunities for advancement, adjusting to longer work hours in a male dominated work environment, and the need to establish networks of women of color for support. This study may support positive social change by prompting organizational leaders to develop gender-neutral, comprehensive strategies that do not impede women from obtaining technical executive positions. If women were extended the same opportunities as their senior executive male counterparts, women executives could thrive as senior leaders.

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Dedication

I dedicate this doctoral study to the Girls for a Change not-for-profit organization for working with all the young girls of color striving to make an impact not only in their lives, but also in the lives of others through a positive social change. Girls for a Change has several locations on the east and west coasts of the United States. The mission of the Girls for a Change organization is to inspire girls of color to visualize their futures, which also includes the development of social change. As a social change practitioner, I feel that it is important to recognize organizations that seek to empower young girls of color toward a bright future of empowerment and self-value. I wish the Girls for a Change the best in your endeavors.

I dedicate my work to my family. To my husband, Ronald Charles, Sr., thank you for the support and the cries I had through the process and you saying I can do this. The last few days of this process, was very stressful. Thank you! My two adult children, Terrion C. Charles and Ronald Mervin R. Charles, Jr., you are the love of my life. I hope I have made you as proud of me as I am of the two of you. Terrion, thank you for the dinners I did not have to cook. Ronald, thank you for driving me around when I did not feel like driving on your college breaks. Thank you all for being there for me at the end of this journey! I love all of you!

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Most individuals completing the PhD journey feel that the process is isolated. You are not the lone traveler as stated in Robert Frost's poem *The Road Not Taken*. Like Robert Frost stated, two roads diverged, and I chose the least traveled! I would like to thank Dr. Charles Sherman; I hope I have made you proud. Thank you for caring! I give highest acknowledgments to my chair, Dr. Karla Phlypo; my methodology expert, Dr. Stephanie Hoon; and my URR, Dr. Diane Stottlemeyer, for being the Michael Jordan of committee members. Dr. Phlypo, I appreciate your guidance and explaining why the changes were necessary to the study, which allowed my growth as a new researcher. I am thankful for so many who supported me during my doctoral journey. Dr. Stephanie Hoon was my first encounter in the PhD program, with her expertise as both my committee member and methodology expert. What a complete circle of life as a PhD student. Thank you, Dr. Hoon, for being here to finish my journey, and I appreciated your feedback. Dr. Stottlemeyer, thank you for your detailed guidance. Dr. Abigail Adoyewe, thank you for the push to succeed. My PhD twin sister, Dr. Michelle Preiksaitis, thank you for listening and the encouraging words of support. Yes, we will have our day on the beach! Thank you to CopyRights Clearance House for the licenses. Finally, Dr. Steven Tompa, thank you for your coaching, support, mentorship, and friendship throughout this arduous journey. Thank you!

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Chapter 1: Introduction to the Study

Introduction

The perceptions of women of color might assist human resource leaders in promoting career advancement for this population in the high technology industry (Carter-Sowell & Zimmerman, 2015) in the eastern region of the United States. The amount of literature on the leadership of women has increased (Davis & Maldonado, 2015); however, the overwhelming majority of research that has been conducted on barriers women face in STEM programs has lacked a focus on women of color who advance in the high technology industry (Armstrong, Nelms, Reid, & Riemenschneider, 2012). Women of color have been increasing in number in the workforce, but they are present in smaller numbers in executive roles (Davis & Maldonado, 2015). Effective diversification efforts in organizations could influence career trajectories for women of color.

Based on previous research, women of color struggled in the United States to obtain leadership development over the years (DeFrank-Cole, Latimer, Reed, & Wheatly, 2014). Awareness of the value that women of color provide as leaders in the high technology sector could result in human resource managers revamping existing initiatives for women of color to create positive change. At present, human resource leaders may not fully understand the perceptions of professional, senior-level executive women of color on career advancement within the high technology industry (Carter-Sowell & Zimmerman, 2015). In general, job descriptions have changed so the social implications of women in the high-tech industry appeared to have changed. Although the social impact

of this study may also create environments conducive of women and not women conducive of the environment, i.e. to include earning the same salaries as their male counterparts, women remaining in high technology, and sustainable growth of women in the high-tech industry may be a positive growth. The overarching research question for this study concerned the feelings, perceptions, and values of executive women of color on career advancement in the high-technology industry.

In this chapter, I describe the background of the problem and the gap in the literature that justified the research. I then present the problem statement, the purpose of the study, and the overarching research question and subquestions that guided my study. Additionally, I address the nature, conceptual framework, scope, assumptions, definitions, significance, and delimitations of this study, which drew on multiple underpinned professional realities women in general potentially endure in response to distinct bodies of the literature review. Finally, I discuss the key concepts addressed in the literature review in Chapter 2.

Background of the Study

There are more women than men entering the workforce today, yet women of color are not as visible in industry leadership positions as their male counterparts (Morgan et al., 2014). Since 1990, women have entered the workforce at the same rate as men, only to represent 6% of CEOs and 16% of senior-level executives (Cook & Glass, 2014; Elby, Ibarra, & Kolb, 2011). Women have been attaining more degrees in comparison to their male counterparts (Morley, 2013). Specifically, 60% of bachelor's and master's degrees are attained by females, and 50% of doctoral degrees are earned by

women (Catalyst, 2013; Morley, 2013). Women of color make up 10.6% of the bachelor's degrees earned in science, technology, engineering, and math (STEM) fields in the United States (Catalyst, 2013a; Gardner, 2013; Mack, Rankins, & Woodson, 2013; Morley, 2013).

Although there have been studies on women in information technology, very few studies have addressed the topic of the perceptions and lived experiences of women of color in relation to career advancement in the high-tech industry. Davis and Maldonado (2015) explored the double-blind of race and gender for African American women in terms of their lived experiences of development as leaders. As Mack et al. (2013) noted, with improvements in global economies, the United States can no longer rely on foreign-born STEM talent. Mack et al. identified the representation of women of color in the high technology industry comprise a larger percentage of the minorities by 2042, arguing that the United States must develop talent in women of color in order to remain competitive in the global STEM industry.

The STEM industry is essential to future economic growth in the United States and global economies (Flower, 2014). Women, in general, earn 57% of bachelor's degrees; consequently, the representation of women in the high technology industry must improve (Flower, 2014). According to Kulik (2014), there is no definitive way to improve career development for women of color in the high-tech industry. Based on the gap in the research, a need existed to conduct a transcendental descriptive phenomenological study to explore feelings, perceptions, and values of professional

senior executive women of color concerning career advancement within the high technology industry.

Problem Statement

In information technology, few women of color hold senior level executive leadership positions (Center for American Progress, 2014; Ong, Wright, Espinosa, & Orfield, 2011; Pompper, 2011). Women of color professional senior level executives' experience in the workplace environment are different from those of executives of other ethnicities (Cole & Salimath, 2013; O'Neil & Hopkins, 2015; Remedios & Snyder, 2015). The experiences that this population of women endured has generated the desired change in how organizational structures support developmental practices and related cultural values for executive women of color (Alexander, Havercome, & Mujtaba, 2015; Kamney, DeRosier, Taylor, & Pifer, 2014) in the high technology industry. Some women may have experienced unspoken bias, covert bias and fewer opportunities for progression as leaders.

Currently, in the high-tech industry, Asian and Black women hold 1.7% of executive/senior-level positions, and only 0.2% are in CEO positions (Catalyst, 2016). Statistics on Latina women specifically indicate that only 1.0% hold executive or senior-level positions and 0% hold CEO positions. Given that 57% of the population is female, and of that percentage, 38% are in the workforce (Catalyst, 2014; National Science Foundation, 2013; U.S. Census Report, 2014), the low representation of women of color among executive leaders does not accurately represent the workforce. Human resource program leaders understand the need to create a positive diversity climate through

diversity management programs in their organizations, as perceived by Kulik (2014). The general problem is that human resource leaders do not understand the experiences that professional senior executive women of color have with executive career development. The specific problem is that human resource leaders may not fully understand the perceptions of professional senior executive women of color on career advancement within the high technology industry (Carter-Sowell & Zimmerman, 2015) in the eastern region of the United States.

Purpose of the Study

The purpose of this transcendental descriptive phenomenological study was to understand the experiences of professional executive women of color in career advancement in the high technology field. The descriptive approach enabled me to obtain rich, elaborative, thick details that are unique to women of color participants as professional senior executive leaders in the high technology industry (Carter-Sowell & Zimmerman, 2015; Kay & Gorman, 2012) in the eastern region of the United States. Prior researchers have focused on race, gender, identity development, and glass ceiling effects on women of color (Buckalew, Konstantinopoulos, Russell, & El-Sherbini, 2012; Davis & Maldonado, 2015). Research on the perceptions of women of color concerning career advancement could be applied to efforts to increase the number of women of color (Carter-Sowell & Zimmerman, 2015) in the high technology industry. By presenting information on the perceptions of executive women of color, this study may provide human resource leaders with resources to increase the representation of this population in the high technology industry (Carter-Sowell & Zimmerman, 2015; Dai, De Meusue, &

Tang, 2011; Kay & Gorman, 2012). The participants in this study had a shared lived experience and were willing to provide details of firsthand experiences of the phenomenon.

The data collection methods for this study included telephoning participants based on their shared lived experiences in the high technology industry. I posted a recruitment flyer on LinkedIn, appropriate social media sources, and Yahoo Groups to obtain a snowball sample of 15 professional senior executive women of color in high technology leadership positions. To meet inclusion criteria for this study, potential participants needed to be professional senior executive women of color, be at least 25 years old, and have a minimum of 5 years of experience in the high technology industry as managers, directors, or higher-level executives. Chapter 2 provides more detail on women in management and their experiences.

Research Questions

The problem statement and the purpose of the study allowed the development of an overarching research question (ORQ) and four research subquestions (SQs) to understand the feelings, perceptions, and values of professional executive women of color on career advancement in the high technology industry. The questions developed were as follows:

ORQ: What are the feelings, perceptions, and values of professional executive women of color on career advancement within the high technology industry within the eastern region of the United States?

- SQ1: What do women of color who are in senior executive positions feel about their organization's career advancement process?
- SQ2: What do women of color who are in senior executive positions value about the career advancement process in their organization?
- SQ3: How do women of color experience career advancement as executives?
- SQ4: How do women of color perceive their identity as leaders?

The ORQ and the four SQs provided alignment necessary for the specific interview questions I develop in further chapters.

Conceptual Framework

The conceptual framework comprised a blended foundation of organizational culture theory (OCT), the leadership pipeline model (LPM), and Krumboltz's (1996) theory of career counseling (KTCC). I applied this framework to the phenomenon of interest, which was that human resource leaders may not fully understand the perceptions of professional senior executive women of color on career advancement within the high technology industry (Carter-Sowell & Zimmerman, 2015). OCT lends itself to studies exploring the behavior of participants as well as an organization's impact on its members. The LPM provided the needed connections from each passage within the organization's hierarchy to measure the acquired skills needed for continued upward mobility for the participants in this study. A branch of Krumboltz's social learning theory 'environmental conditions and events' provided insights on modeling learned behaviors within the organization. Krumboltz discussed how members of an organization learn from observing others in the group. Krumboltz's (1996) theory originated from Bandura's social learning

theory, which established the importance of observation when an individual is learning a new skill set.

The combined conceptual framework was necessary to explore the research problem in an in-depth manner. The conceptual lens for this study included women of color's feelings, perceptions, and behaviors, as well as the influence of professional executive women of color in the high technology industry.

The framework related to this transcendental descriptive phenomenological approach addressed the overarching research question and subquestions for my study. OCT helps human resource leaders to understand how the perceptions and experiences of women of color may be based on the intangible difference in the workplace between their European American peers, and how people's behavior can stimulate and possibly restrain innovation within an organization. Organizational culture affects the performance of motivated employees and therefore affects a company's performance (Zhu, Gardner, & Chin, 2016). The culture within an organization determines how members function, which is critical to the success of the members. OCT, as it relates to understanding how colleagues in a group affect one another, can help human resource leaders better understand their employees' perceptions, experiences, and values. The LPM indicates that traditional leadership styles have changed (Charan, Drotter, & Noel, 2011; Dobrow, Chandler, Murphy, & Kram, 2011). Changes in leadership development create new knowledge for organizational leaders.

The LPM creates opportunities for new knowledge on multidimensional levels for the 21st-century leader. Leaders within various organizations gain an understanding of the

importance of developing internal talent leaders (Charan, Drotter, & Noel, 2011). The LPM helps to facilitate organizational leaders in internal career development readiness, which involves transitioning their skills from one position to the next without transitioning all the behaviors/skills from the past position to the next leadership role (Charan et al, 2011). In addition, KTCC indicates that individuals' identity is influenced by observed behaviors. Krumboltz found that senior executive leaders influenced internal and external factors. As the organizational environment affected the behavior of the individuals' experiences, perceptions, feelings, and values; the members were affected also by the new learning styles in the existing environments (Krumboltz & Worthington, 1999). As the organizational environment impacts members' behavior in the organization, the development of women may impact the advancement of women's leadership.

A branch of Krumboltz's (1997) social learning theory of career development that addresses environmental conditions and events provides insights on modeling learned behaviors within an organization. Krumboltz maintained that organizational members learn from observing others in the group. OCT facilitated an exploration of the behavior of the participants as well as the organization's impact on its members in this study. The LPM provided the needed connections between each passage in the organization's hierarchy to measure the acquired skills needed for continued upward mobility for the participants of this study.

Constructs derived from OCT, the LPM, and KTCC provided the needed boundaries for this transcendental descriptive phenomenological qualitative study. The

OCT provided the rationale for organizational leaders (human resource leaders) to have the influence to promote behavior within the organization as well as the organization's impact on the members of the study. The LPM enabled the needed connections between each passage in the organizations' career ladder by measuring the acquired skills needed for continued upward mobility for the participants in this study. The KTCC provided the rationale for career advancement with women of color social learning based on the environment. More detailed explanations of these conceptual propositions are presented in Chapter 2.

The conceptual framework, which consisted of a blend of OCT, the LPM, and KTCC, was applied to the phenomenon of human resource leaders not fully understanding the perceptions of professional executive women of color on career development within the high technology industry (Carter-Sowell & Zimmerman, 2015). In seeking to understand the career advancement of women of color in high technology, I explored their lived experiences concerning career advancement, including their perceptions.

Nature of the Study

This transcendental descriptive phenomenological study described the feelings, perceptions, and values of women of color regarding career advancement in the high-technology industry. The rationale for selecting a transcendental descriptive phenomenological design was that it would afford a unique way to understand the lived experiences of the participants. Participants in a phenomenological study tend to develop a unique *voice* that articulates the phenomenon (Giorgi, 2009). In a descriptive

phenomenology study, the participants' responses are derived from probing questions asked in an open-ended fashion to investigate the fundamentals of the phenomenon experienced by the participants (Giorgi, 2009; Moustakas, 1994; Sousa & Oz, 2014; Turner, 2010; van Manen, 1990). Transcendental phenomenology allows researchers to set aside personal bias (Moustakas, 1994). To derive the overarching research question and subquestions, I consulted the empirical literature to understand the perceptions of women in high technology.

The participants needed to have experienced the phenomenon of interest, which was career development (Giorgi, 2009). The descriptive inductive approach provided me an opportunity to collect and analyze the data. I used Colaizzi's seven-step strategy for data analysis:

1. Transcribing the participants' description of the phenomenon.
2. Obtaining significant statements that directly relate to the phenomenon.
3. Formulating various general restatements based on the significant statements extracted from the participants' phenomenon.
4. Utilizing codes and/or themes to group data with similar meanings.
5. Developing thorough descriptives of the phenomenon articulated by the participants; researcher interpretative analysis.
6. Identifying the basis of the phenomenon.
7. Validating analysis with participants (Edward & Welch, 2011, p. 464).

These strategies constituted an effective approach to data collection as I sought to understand the feelings, perceptions, and values of professional executive women of color on career advancement in the high technology industry.

Definitions

The definitions of terms listed in this section are intended to ensure that readers understand important operational meanings and concepts for this study.

C-suite: Refers to senior leaders whose titles start with *C*, such as chief executive officer, chief operating officer, and chief information officer (Cook & Glass, 2014).

Diversity: Diversity means diverse, varied and the recognition of various races and cultures combined within or by a culture, group, or organization (Buttner, Lowe, & Billings-Harris, 2012).

Gender: For this study, gender is the set of characteristics or traits that are associated with a certain biological sex (male/female). Society refers to these characteristics as *masculine* or *feminine* (“Gender,” 2016).

Glass ceiling: This is a term for intangible barriers within a hierarchy preventing women or minorities from obtaining upper-level positions (“Glass Ceiling,” 2016).

Intersectionality theory: This is a theory named in the 1990s related to a resurgence in popular and academic feminism and studies of how different power structures interact in the lives of minorities, specifically Black women (Crenshaw, 2014).

Leaders: These individuals inspire others with teamwork, honesty, hard work, and dedication (Bass, 1990).

Leadership: This term means different things to different people around the world, and different things in different situations (MindTools, 2016).

Organizational culture: This is a successful and valid pattern of basic assumptions invented, discovered, or developed within a group to cope with its problems of external adaptation and internal integration, which are taught to new members as the correct way to perceive, think, and feel in relation to problems (Schein, 1984).

Role model: This involves a cognitive process in which individual's cognitions rather than the role model's actions or a necessary relationship between the role model and his or her observer (Gibson, 2003).

Sociocultural theories: Vygotsky's sociocultural theory of human learning describes learning as a social process and the origination of human intelligence in society or culture. The major theme of Vygotsky's theoretical framework is that social interaction plays a fundamental role in the development of cognition (Vygotsky, 1978).

Women of color: The political term *women of color* surfaced in the violence against women movement in the late 1970s to unify all women experiencing multiple layers of marginalization with race and ethnicity as a common issue (Women of Color Networking, 2014).

Assumptions

The primary assumption that the participants may be honest was necessary for the context of this study to have me engage with the participants. I have utilized an explicit interview guide to provide the best opportunity for the participants to share their lived experiences of career advancement in the high technology field. The prevalence of

literature supporting women's identity development and gender identity assumptions may not fully apply to women of color. I assumed that a role model was an ideal mentor.

Additionally, I assumed that role models were positive. This assumption was necessary because of the conceptual lens for this study. Rubin and Rubin's (2012) implemented strategies using the responsive interview model with open-ended interview questions which provided the clarity and the depth of the phenomenon to answer the research questions. I further assumed that the participants' responses would be honest and open, that the experiences of women of color are different from those of their White counterparts. I did not change participants' responses in the that I had data collected, and that this population of women expressed their experiences as they encountered them in the high technology field. I assumed that no internal or external coercion took place with the participants and that they shared their lived experiences in a truthful manner.

In this study, I made the assumption that participants used their authentic voices, as recommended by Grant (2014). An authentic voice comprised of individuals who lacked opportunities that empowered individuals who may not have a voice, as posited by Leedy and Omrod (2010). The assumptions in this study were critical to the research problem and may enhance the existential literature written on barriers that women encounter in organizations as senior leaders as women are still entering the workforce.

Scope and Delimitations

The scope of this study was determined by the research problem, which was that human resource leaders may not fully understand the perceptions of professional executive women of color on career advancement within the high technology field on the

eastern region in the United States. This study offers specific insights on how the participants' influence might contribute to the process of increasing the representation of women of color in the high technology field (DuBow, Quinn, Townsend, Robinson, & Barr, 2016). The transferability of a study derives from the potential for other researchers to apply the data to other populations, cultures, or locations (Miles, Huberman, & Saldaña, 2014). The scope of this descriptive phenomenological study encompassed professional executive women of color, STEM students, human resource leaders, CEOs, recruiters, and consultants. With this study, I sought to contribute research for positive social change within the high technology field.

The delimitations of this study were defined by the recruitment of professional senior executive women of color in high technology from the eastern United States using a flyer and snowball sample technique with limitations on gender, age, and ethnicity. This study did not include any women who were not women of color or who were entry-level or mid-level managers. This study included 15 participants, which would provide the development for the rationality of the study per Crouch and McKenzie (2006). Delimitation was appropriate due to the sample size (Crouch & McKenzie, 2006). Next, I viewed the limitations of my current study.

Limitations

The limitations of this transcendental descriptive phenomenological design included the fact that I served as the primary tool to collect and analyze the data. Researcher bias can take place with limitations, that would include a lack of money to complete the study, time, and executive personnel upon the various women of color in

various high technology sectors based on career advancement. Limitations characterized as events within the study were out of my control as the researcher. The limitations of the role of the researcher involved strategies to maintain healthy boundaries for understanding the perceptions conveyed by me based on the participants reading the transcripts (Cridland, Jones, Magee, & Caputi, 2015). Time constraints are also a limitation with phenomenological approaches, and participants did not include all members of the population, as stated by Miles et al. (2014). The demographic information allowed me to target a population for the study.

Another limitation was the demographic information regarding the participants captured in the population; it was not the principle during the selection process. The participant selection process included only professional senior executive women of color in the high technology field, which left a segment of the population unrepresented. Researcher bias may influence the outcome of the study as “going native” and not allowing personal perceptions to agree with the participants and not allowing bracketing to analyze the data (Miles et al., 2014, p. 294). The impracticality of including numerous participants in qualitative research constitutes an inherent limitation of this approach (Atran, Medin, & Ross, 2005). The sample size must be large enough to obtain saturation; if saturation is not met, other factors could influence the outcome of the study (Mason, 2010). The sample size of the study allowed for a better understanding why there are reasonable measures that addressed limitation bias.

Reasonable measures addressed limitation bias in this study. Participants were required to have a minimum of 5 years of professional experience at a minimum level of

supervisor, manager, or director and to be a minimum of 25 years of age. As the researcher, I thought in a conceptual manner by transcribing data collected into logical statements, triangulating the data collection, and maintaining focus on the overarching research question and subquestions (Miles et al., 2014).

Significance of the Study

Significance to Practice

This study may advance knowledge on human resource leaders' ability to develop diverse initiative training that supports the development of women of color in terms of leadership styles, employee commitment, and relationships within the organization (Koutroumanis, Alexakis, & Dastoor, 2015). From the results of this study, human resource leaders might develop a pipeline of professional senior executive women of color to obtain diversity in career development training after the recruitment process, which may lead to upward management positions in the high technology field and may also address the gap in the literature. Women of color have experiences of career development that may differ from those of their male and/or White counterparts in the selection process of mentors, upward mobility, and executive leadership opportunities (Kay & Gorman, 2012). This study may fill the gap in the literature concerning the perceptions of women of color on the career advancement support that they need in the high technology industry (Mack et al., 2013). The impact this population of women could have on organizations and social change may improve the culture within the organization as well as the stakeholders' perspectives of the organization.

Significance to Theory

This study contributes to the body of knowledge in organizational leadership and human resource disciplines. By exploring the perceptions of women of color on career advancement, I sought to address the lack of literature on this subset of the population and, more specifically, on possible career advancement to support the human resource development of professional senior executive women of color in high technology leadership (Carter-Sowell & Zimmerman, 2015). Several quantitative and qualitative studies have been published on the leadership pipeline, sociocultural theory, and feminist theory with a focus on race, gender, and inequalities affecting women (Charan et al., 2011; Davis & Maldonado, 2015; Virick & Greer, 2012) in the education and high technology industries. Through this study, I provide a deep and rich understanding of the shared lived experiences of women of color.

Additionally, this study supports the importance of the *voices* of women of color in the high technology industry.

Finally, researchers and scholars may expand the scope of this research to encompass other specific populations, cultures, and industries to improve the representation of women and women of color in the United States and possibly in other countries.

Significance to Social Change

The voice of women of color may encourage career advancement growth and improvements for this population. Positive social change may take the form of continued improvement of diverse succession planning in leadership practices (Virick & Greer,

2012). This study could increase the perceptions for women of color on diversity and career advancement initiatives in the high technology industry by providing clarity as to what women of color view as racial inequalities. Application of this study may lead to improvements in mentorship, sponsorship and cross-cultural support for women of color, thereby promoting their career advancement in the high technology industry.

Summary and Transition

In this chapter, I have presented background on the problem of interest in this study and described the gap in the literature that justified the research. The problem statement, the purpose of the study, and the overarching research question and subquestions to guide this study. The nature, definitions, scope, assumptions, delimitations, limitations, framework and significance may depict upon multiple foundations of professional realities within organizations in response to distinct bodies of literature for this study.

There are five distinct chapters in this study in which I explore the problem concerning the perceptions of professional senior executive women of color on career advancement. I sought to address a gap in the available literature on this topic with the hope of fostering open dialogue between human resource leaders and women of color in high technology and encouraging future career advancement and initiatives for this group.

In Chapter 2, I present an in-depth review of literature relevant to the idea that human resource leaders may not fully understand the perceptions of professional senior executive women of color on career development within the high technology field

(Carter-Sowell & Zimmerman, 2015) in the eastern region of the United States. In Chapter 2, I present the literature search strategy, the study's conceptual framework, a literature review related to key concepts, a synthesis of related concepts, and a summary and conclusions.

Chapter 2: Literature Review

Introduction

The specific problem was that human resource leaders do not fully understand how professional senior executive women of color perceive career advancement within the high technology industry (Carter-Sowell & Zimmerman, 2015) in the eastern region of the United States. The purpose of this transcendental descriptive phenomenological study was to understand how professional senior executive women of color experience career advancement in the high technology industry or field. A descriptive approach enabled investigation of meaningful, rich, and comprehensive details that are unique to the journeys of women of color as executive leaders in the high technology industry (Carter-Sowell & Zimmerman, 2015; Kay & Gorman, 2012). Additionally, this approach provided opportunities for women to shared lived experiences through their perceptions. My selection of this approach was based on empirical literature.

The field of inquiry has lagged in understanding the perceptions of professional senior executive women of color in relation to career advancement. Lack of knowledge in this area may have contributed to human resource leaders not fully understanding how professional executive women of color perceive career advancement within the high technology industry (Carter-Sowell & Zimmerman, 2015) in the eastern region of the United States. The rationale for this literature review of the related theories may support the perceptions, feelings, and the values of the lived experiences of senior executive women of color to promote human resource leaders.

In this chapter, I describe my literature search strategy, including keyword searches in various databases. Next, I present the study's conceptual framework, outlining seminal works from theorists who developed elements used in this study. I then review the body of literature relevant to the topic of this study. I describe the gap within this research area pertaining to the perceptions of professional senior executive women of color in relation to career advancement in the high technology industry. I end this chapter with a summary and conclusions derived from the review of the literature.

Literature Search Strategy

Key terms used in the literature search included *feminist theory*, *gender identity*, *women of color*, *women in management*, *human resource leaders*, *intersectionality*, *sociocultural*, *leadership*, *women in leadership*, *high-potential employees*, *talent management*, *marginalized*, *mentorship*, *sponsorship*, and *social networking*. Other than some older works of primary research, the publication dates of the journal articles, books, and dissertations I reviewed ranged from 2012 to 2017. I acquired sources and references from ProQuest, Google Scholar, Walden University's library, Questia, East Carolina University library system, Research Gate, Southern New Hampshire University library database, and North Carolina Library System.

The search of the literature was an iterative process using very direct search terms such as *organizational climate*, *career advancement and women*, *women in leadership roles*, and *African American women in the STEM* in various databases, gradually broadening the range of related constructs. I extended the search query to organizational culture and then narrowed it to organizational culture theory. The search direction then

moved in a parallel direction focusing on subjects in the high technology field as I sought information on senior or executive leadership and high technology information systems.

Finally, I isolated related concepts relevant to a wider range of disciplines including women of color, career advancement, and high potential employees. The search query did not generate the term *women of color*, however, the term *African American women* generated results. I gathered articles from various databanks on women in general. I implemented the same approach for each related concept related to the literature review.

In the literature reviewed, many articles focused on race-based obstacles and marginalization experienced by African American women. There was little to no research on the perceptions of women of color working at professional executive senior levels of career advancement in the high technology industry. In searching databases, I noted that there was still a lack of research on this topic within the most current publications. Based on the lack of research on women of color in leadership, my study represents an effort to close the literature gap and provide understanding among human resource leaders and other organizational leaders so that they can improve the pipeline for women of color leaders within their organizations.

Key Concepts

In Table 1, I provide a summary of the sources for the literature review focused on qualitative and quantitative approaches that provided the knowledge of the theories and phenomenon of the current study.

Table 1

Literature Review Sources

Source	2012–2017	2011 and earlier	Total
Peer-reviewed articles	141	48	189
Non-peer-reviewed	15	0	15
Government papers	8	7	15
Trade magazines	25	8	33
Books	23	24	47
Dissertations	2	0	2
Total	214	87	301

The overarching research question concerned the feelings, perceptions, and values of professional senior executive women of color on career advancement within the high-tech industry in the eastern region of the United States. For the review of the literature, I consulted sources related to many key concepts. Three major concepts for this study were women in high technology fields, women in management, and women's experiences as executives. I identified 18 supportive thoughts for these three main concepts. First, I explored the glass ceiling, Queen Bee phenomenon effects, work-life balance, role changes of women, fair employment, and women's integration into leadership roles in corporate America. Next, I investigated quota systems and the increase of women's representation, feminist theory, women on boards, women's assessment in organizations, sociocultural theory, minority progression in executive roles, identity development, developmental relationships of minorities in STEM and leadership skills, women of color's mentorship resources, mentorship importance, and mentorship of women.

Conceptual Framework

The conceptual framework for this study was grounded in organizational culture theory (OCT), the leadership pipeline model (LPM), and Krumboltz's theory of career counseling (KTCC). When implementing the transcendental descriptive phenomenological approach, the lived experiences of the population included the meaning of the experience of the participants as stated (Rapport & Wainwright, 2006). Seminal researchers have used descriptive phenomenological approaches when lived experiences have constituted an appropriate focus for research, and direct contact with participants was better than the quantitative studies option (Goldberg & Allen, 2015). The existing literature focused on many different perceptions of leaders in various industries to understand the culture in the organization.

The theories and model that formed the conceptual framework have been applied in relation to education, the healthcare industry, leadership development, global strategic leadership, high-potential talent, and employee contracts for corporate social responsibility in a variety of cultures and organizations. OCT offers a way to "know and understand the values and beliefs of a specific group of people or an institution" (Taplay, Jack, Baxter, Eva, & Martin, 2014, p. 1). Talent members in organizations who are deemed as valued leaders not only demonstrate the basic principles but also expose all new members to the same principles of success. The amplification to increase women of color within the high technology sector could increase the presence of women in the high technology industry. Researchers have contended that the uniqueness of an organizational culture stems from the attitudes of leaders and employees (Duke & Henry-Edet, 2012).

Marchand and Haines (2013) posited that organizational culture is a contextual firm-level construct that varies between departments within an organization.

Organizational culture is an integral process shared by various members at all levels within an organization. Organizational culture, as a heuristic process, has been examined by numerous scholars in relation to a variety of topics, including Muslim employees (Alkhazraji, 1997), pregnant employees (Halpert & Burg, 1997), and employee performance (Wiwiek, 2016). In the 18th century, there were over 160 definitions of organizational culture (Klucholn & Krober, 1991). *Organizational culture* is one of those terms whose interpretation varies by author and topic; for this study, I applied Wu's (2007) definition of "accumulated choices and interactions among critical masses of people" (p. 27). Organizational culture theory was considered vague but the theory captured the behaviors needed for the organization, as defined by Duke and Henry-Edet (2012). Even if the definition of organizational culture is vague, the core of the definition remains the central theme of organizational behavior.

As the definition of organizational culture has evolved over the past century, its foundation has remained the organization's behavior and collection of knowledge (Marchand, Dextras-Gauthier, & Haines, 2013). The attention placed on organizational culture by scholars based on workplace-level factors has provided in-depth understanding as to how organizational culture affects levels of workplace stressors, which are important to relationships and job satisfaction (Marchand et al., 2013). This approach has fostered a better understanding of organizational culture in a population-based on occupational health research from a quantitative approach by viewing the multilevel

proof between organizational cultures and the guidance of the researchers working to implement organizational culture by creating an environment conducive to togetherness (Marchand et al., 2013). The Organizational culture profile (OCP), a survey instrument, has been used to understand how 1,164 employees from 30 workforce organizations based the findings on the study conducted by Marchan et al. tested the correlations with OCP survey and employee psychological distress (Marchand et al., 2013).

Although the OCP scale assesses person-organization, the OCP instrument has performed well for population-based research for organizational culture group or individual-level phenomena (Marchand et al., 2013). One of the weaknesses of the OCP survey instrument is determining which platform of organizational culture is relevant. The second weakness of this instrument is the limited number of participants in population-based investigations. Inconsistencies in the OCP scale have impeded the conceptual structure (Marchand et al., 2013). The measuring scale or tools used in studies may impact the culture in review within an organization.

An association with organizational culture and the performance of nongovernmental organizations (NGOs) postulated organizational culture due to the changes in the economic status of many for-profit and not-for-profit organizations impacted the behavior of the organizational members, as established by Duke and Henry-Edet (2012). These leaders Duke and Henry-Edet are in search of methods which could facilitate in accomplishing the goals of organizational performance. Duke and Henry-Edet conducted a quantitative study based on 99 NGOs and 132 businesses operating in Nigeria from 2005 to 2010. In obtaining organizational performance data, Duke and

Henry-Edet stressed the importance of understanding differences across subcultures within the same organization. The researchers postulated that strong subcultures, as well as the flexibility to continue the organizational culture development, was important to the organization's environment.

With subcultures, organizations have the capability to generate responses on various constructs without alienating the goals. The findings from Duke and Henry-Edet's (2012) study provided positive results of 73.74% organization's culture for the clients across the study with a validated between organizational cultures with a link to more funding with 69.70% of the respondents when viewed through the culture of the organization impact on participants. Duke and Henry-Edet fostered the association of organizational culture had a positive influence on the clients, however, that means there was a strong linear relationship which increased the performance of NGOs. The Duke and Henry-Edet study provided valuable insights for the current study on developing all members of an organization to facilitate growth. Each subculture within these organizations was essential to overall performance. Hence, there was a significant impact of the subcultures within the organization on the members' development on each level of the organizational structure.

Leadership Pipeline Development

Leadership pipeline development takes place when employees successfully learn and demonstrate skill sets within an organization's structure (Winiarska-Januszewicz & Winiarski, 2014). The leadership pipeline is critical to the future of an organization, impacting the internal talent pool of future leaders (Winiarska-Januszewicz & Winiarski,

2014). The leadership pipeline model provides views of an organization's management talent development and changes based on the needs of internal and external stakeholders, as observed by Winiarska-Januszewicz and Winiarski (2014).

As shown in research conducted by the Corporate Leadership Council, high-potential employees are critical to the future leadership of an organization's corporate executive board (Winiarska-Januszewicz & Winiarski, 2014). Talent management development should take priority in the development of high potentials through the selection of assessment methods that are unique to the individual's plan (Winiarska-Januszewicz & Winiarski, 2014). Organizations seeking to retain high-potential employees should create an environment with an educational developmental training program that fosters an accelerated pipeline for future leaders (Winiarska-Januszewicz & Winiarski, 2014).

The primary strength of Winiarska-Januszewicz and Winiarski's (2014) study is its emphasis on the importance of opportunities for talent management. The 70-20-10 learning rule for developing a leadership pipeline for high-potential employees, as shown in Figure 1, distinguishes high-potential employees from high-level performers in an organization (Winiarska-Januszewicz & Winiarski, 2014).

Winiarska-Januszewicz and Winiarski (2014) advocated the selection of high-potential employees based on specific leadership requirements that facilitate development and mentoring to maintain a high level of performance. The researchers proposed developing and supporting skills within the 70-20-10 learning rule by high potentials members to obtain the internal educational from a leadership program established by

building the framework that supported the individual development plan (IDP). Internal education is professional development training or skill development training established within the organization.

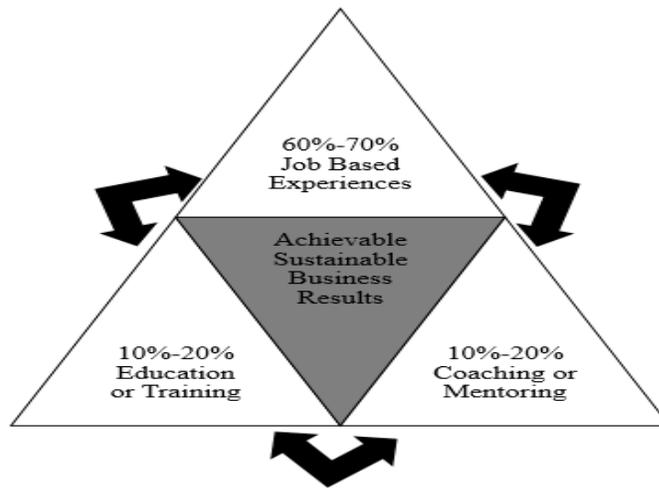


Figure 1. 70-20-10 learning rule. From “Advancing Leadership Pipeline Through the Development of High-Potential Employees,” by A. A. Winiarska-Januszewicz and J. Winiarski, 2014, *Journal of Intercultural Management*, 6, p. 20. doi:10.2478/joim-2014-0002 Copyright 2014 by Walter de Gruyter GmbH. Reprinted with permission (see Appendix K).

Figure 1 contains an illustration of the concept of achieving sustainable results correlated to 60% to 70% job-based experiences, 10% to 20% based on relationships from coaching and mentoring, and 10% to 20% based on education or training. The Talent management (TM) was necessary to establish criteria for identifying high potentials consistently with a clear understanding as to the expectations of this population of leaders (Winiarska-Januszewicz & Winiarski, 2014).

The goal of talent management is to attract and develop skilled high-potential employees (Winiarska-Januszewicz & Winiarski, 2014). Properly “vetting” the best-performing employees for entry into the high-potential arena is critical for organizations.

Leadership Pipeline Model

Although many organizational leaders have implemented the leadership pipeline model in their organizations, Kaiser (2011) demonstrated that this concept has no formal theory for guidance or any “empirical study” to support it (p. 72). Kaiser explored how leaders *viewed* the concept of LPM from the behavior of managers at different levels in the hierarchy. He questioned whether the behaviors of the managers at various levels of the effectiveness of LPM within the organization’s level made changes (Kaiser, 2011). The potential changes within any organization impact the organization if that skill the member implements at the next level was not acceptable. Not all skills leaders implement at one level is required or needed, new skills may be required at different levels.

The level of expertise was different from one level of management to the next; however, all levels build onto the next passage within leadership pipeline development (Kaiser, 2011). Organizational leaders viewed LPM as valid (Kaiser, 2011). Kaiser also looked at existing literature and discovered that there were no definitive studies on behaviors’ effectiveness pertaining to LPM. Kaiser’s overview of LPM regarding behaviors and the development of talent managers was very extensive but lacked the definitiveness one would find with formal theories (Kaiser, 2011). The LPM allows for guidance, which may also impact the assessment of members in the organization.

Kaiser and Bartholomew questioned the assessments across the organization was on the same platform for each level or was there variations depending on the systems within the organization (Kaiser, 2011). To explore the concept of LPM, Kaiser used 2,175 supervisors, midlevel managers, and executives from 15 industries and

organizations across the United States. Kaiser conducted a multivariate analysis that confirmed significant changes in the arrangement of compartments coupled with the success on many levels in the hierarchy, with increased support of LPM. One of the weaknesses, Kaiser discovered gaps in the passages with positive development on one level was not as effective on the next level, but consistent due to the unique needs of managers at each level in the hierarchy.

The development of LPM requires leaders to adapt to different skill sets necessary for success at the senior level (Dai, Tang, & De Meuse, 2011; Kaiser, 2011). Although LPM connects with the concept of developing a pipeline, Freedman (1998), in pathways and crossroad models, discussed various ways to implement LPM and provided guides for middle-level managers to implement as they transition into upper-level roles. Freedman provided a triple challenge for administrators' upward mobility and the skills needed in the six passages of leadership pipeline model, at various levels the managers would no longer need those same skills. He also stated that once lower level staff attain higher levels, there are shifts in the skill set used and transferred between one level and the next. Freedman postulated that the crossroads these individuals are enduring is critical in pathways and crossroads. He continued by supporting his findings that upwardly mobile persons must leave anachronistic skills and abilities behind and maintain skill sets suited to newly acquired roles as managers (Freedman, 1998). Managers at the senior level strategize and compete against external competitors versus effective management within the organization.

Institutional leaders incurred pathways and crossroads along their career paths per Levinson (1980). There are twenty distinctive characteristics involved in the normative criteria of candidates to develop higher roles of leadership instead of the nine pathways and crossroads of (Freedman, 1998). Regarding leadership disciplines, the core of business school programs specialized in various leadership, management, and development of leaders; but do not include the competencies that managers need (Levinson, 1980). Therefore, members seeking upward mobility needed to develop a career plan that allows opportunities to develop the needed skill sets and organizations to support higher-level development.

Researchers of leadership understand the importance of a robust leadership pipeline (Freedman, 1998; Kaiser, 2011); and in healthcare industry excellent leadership pipeline is extremely important (Hess, Barss, & Stoller, 2014). The authors demonstrated the importance of competencies needed to lead organizations are different than that of researcher's skills and the ability of the responsible leaders to develop a talent pipeline of capable leaders must engage in certain aspects of the developmental process (Hess et al., 2014). To keep up with the challenges of the universal coverage, leaders are in high demand and high-level competencies to maneuver the complex situations and establishments (Hess et al., 2014). With the literature reviewed, yet the urgency did not emerge rapidly to increase leadership programs. There were only about 10 studies conducted that met the standards of quality leadership training and the conclusion demonstrated the acceptance of the rewards for organizations with leadership training

(Strauss, Soobiah, & Levinson, 2013). In contrast with these studies, curriculum competencies make a difference in leadership training.

Curriculums offered competencies needed for each level in the organization. The quantitative study conducted at the Cleveland Clinic Academy leaders studied 42,000 employees, 3,200 faculties; that encompassed physicians, nurses, and administrators from that setting (Hess et al., 2014). Professors designed courses around teambuilding and teamwork that was important to the development of new leaders based on sources from Cleveland Clinic Academy (CCA) (Hess et al., 2014). The strengths of this approach provided a perspective from internal clinical faculty with external healthcare faculty who are experts and members from business schools (Hess et al., 2014). The researchers continued by including the significant outcomes of the participant's leadership progression and the benefits of completing the program (Hess et al., 2014). The results of this study 285 Cleveland Clinic Academy (CCA) offered courses from September 2006 and December 2012 with a steady increase of 54 courses in 2012 utilizing Likert Scales demonstrating the high-level of satisfaction within the organization (Hess et al., 2014).

The CCA researchers discovered that due to the experience of the individuals in this study, CCA had the largest leadership development program within that institution with high ratings from those participants enrolled (Hess et al., 2014). The strategies implemented in the coursework for CCA healthcare leadership program was in alignment with the talent leadership pipeline that will support the community of CCA health system (Hess et al., 2014). This phenomenon highlighted in the CCA health system study will provide a nuance for my current study based on how leadership development will create

opportunities for future leadership development in the underrepresented population in my current study.

Transferability is important in studies. The weakness of this study's approach was the transferability and the participants only included attendees employed by Cleveland Clinic Academy locations as well as the impact the program has on the organizations (Hess et al., 2014). The rationale for this study as it related to my current study was the positive outcome, the development of the leadership pipeline model, and the continuous development of leadership by expanding onto leader's professional environment in which they perform the duties as leaders.

Social Learning Theory

Organizational leaders being aware of the skill sets women, in general, have obtained due to their personal and professional background could change the culture in the organization. Krumboltz's theory (1996) derived social learning theory (SLT) concepts from Bandura (1977). Individual's behavior formulated the basis of subjective observations of their environment and less external reinforcement as formulated by Bandura (1977). Krumboltz also argued that *genetic influences, environmental conditions and events, learning experiences, and task approach* skills affect career choices. Krumboltz's social learning theory of career development evolved over the past twenty years. The evolution took place due to the change in Krumboltz thought process. Social learning theory of career decision-making (Krumboltz, Mitchell, & Jones, 1976); the theory of career counseling (Krumboltz, Foley, & Cotter, 2013); the planned happenstance theory (Krumboltz, 2009) that the premise of the original theory expands

through each theory and accepted as one theory. The literature lacked understanding for understanding the importance with engagement between counselor and clients.

Traditional career counseling typically took place with limited meetings with the counselor when the client discussed their career occupation (Krumboltz, Foley, & Cotter, 2013). Due to the economic downfall of 2008, career counselors moved towards a longer relationship of career development with their clients that included working with senior level executives who are trying to retain or change their careers (Krumboltz et al., 2013). The literature selected provided the building blocks for this current study as to it related the human resource leaders may not fully understand the perceptions of professional executive senior level women of color on career advancement in the high technology industry.

Descriptive Phenomenological Qualitative

Phenomenology design provided researchers the opportunity to understand real-life experiences and viewpoints of participants with a shared phenomenon. The phenomenological approach allowed science to guide the study in a more comprehensive deliverable that engrained the phenomenon studied with actual or empirical objects (Giorgi, 2009). The phenomenological design required the researcher attitude and perspective not only review the descriptions of worldly objects but the descriptions of the experiences that took place (Polkinghorne, 1989). By expounding on the researcher's ability to implemented phenomenological epoche and commonsense understanding; the distraction removed where some approaches seek outside evidence (Polkinghorne, 1989). The phenomenological design focused on the participants' *cause*.

In Figure 2, I intend to depict the contextual lens for this transcendental descriptive phenomenological qualitative approach with opened-ended interview questions using Colaizzi's methodology to analyze data. In Figure 2, the upper left portion of the circle represents the alignment of OCT with *women of color* to the overarching research question and the first subset research question (ORQ, SQ1) that pertains to the concepts perception and experience. The top right side of the circle signifies the alignment of LPM with *career advancement* to the overarching research question, second and third subset question (ORQ, SQ2, and SQ3) that pertained to value and women perceived identity as leaders. The bottom of the circle represented the alignment of KTCC with *high technology management* to the overarching research question and subset question four (ORQ, SQ4) that related to the concepts of feeling, perception, and value of professional senior executive women of color career and development in the high technology industry. The overarching research question what are the feelings, perceptions, and values of professional senior executive senior-level women of color on career advancement within the high technology industry in the Eastern region of the United States.

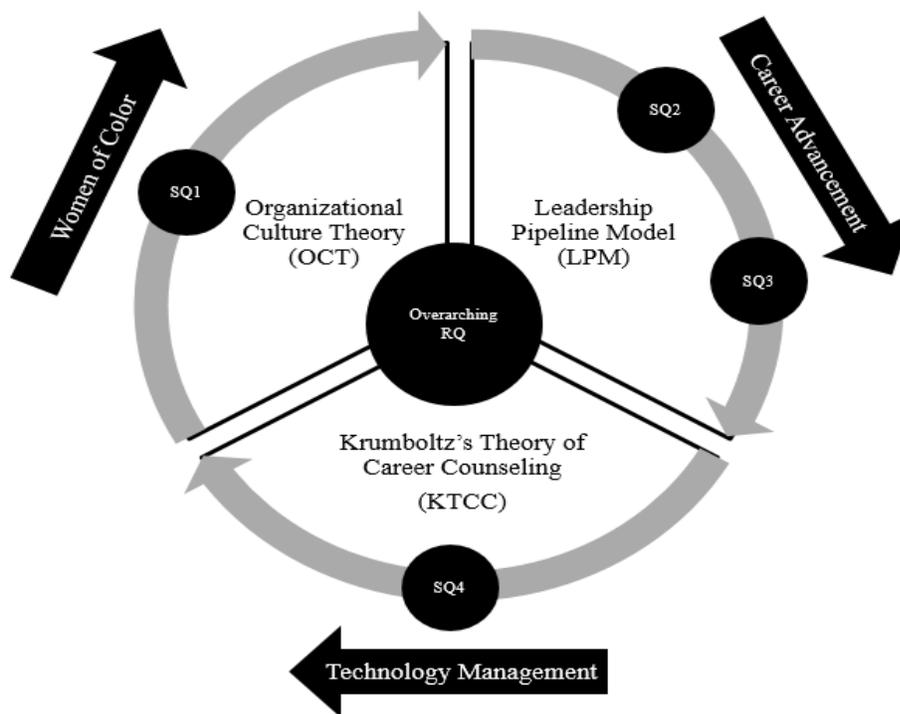


Figure 2. Descriptive phenomenology model.

The descriptive phenomenological approach detailed a pivotal time in participants lives regardless of the length of time the occurrence (Giorgi, 1998). Giorgi concluded the transformative moment that took place based on the lived experience. Colaizzi's seven-step strategy combined with descriptive phenomenology allowed an exhaustive description of the shared phenomenon (Shosha, 2012). In Chapter 3, I included more details on data analysis, as well as Colaizzi's seven-step strategy. Colaizzi's method of data collection was a qualitative research method in social science to gather meaningful shared experiences that correlated with all the participants and organized by codes and themes.

Table 2 lists the alignment of the three conceptual frameworks that blended to illustrate the framework for this transcendental descriptive phenomenological qualitative study and supported the overarching research question and sub-questions.

Table 2

Conceptual Framework Alignment

Conceptual framework	Origin	Research question(s)	Construct
OCT	O'Donnell-Trujillo & Paconowsky (1992)	ORQ, SQ1	Women of color
LPM	Charan, Drotter, & Noel (2011)	ORQ, SQ2, SQ3	Career advancement
KTCC	Krumboltz, Foley, & Cotter (2013)	ORQ, SQ4	Technology management

Organizational Culture Theory

Schein's (2010) organizational culture theory based on three major tenets:

1) artifacts which designed the design of the building, structure, and the dress norms considered a superficial level within the organization; 2) espoused beliefs or values which are derived based on the organization's mission and mission statement; and, 3) basic assumptions which are at the deepest level of this model that impact attitudes and behaviors.

The three major tenets as unconscious or taken for granted at the level in which the concepts implemented to expose the influences that clearly occur within the organization considered by (Schein, 2010). Organizational culture affected how interactions take place among members, clients, and the community. Organizational culture theory premise formulated the productive and diversity of the organization as well

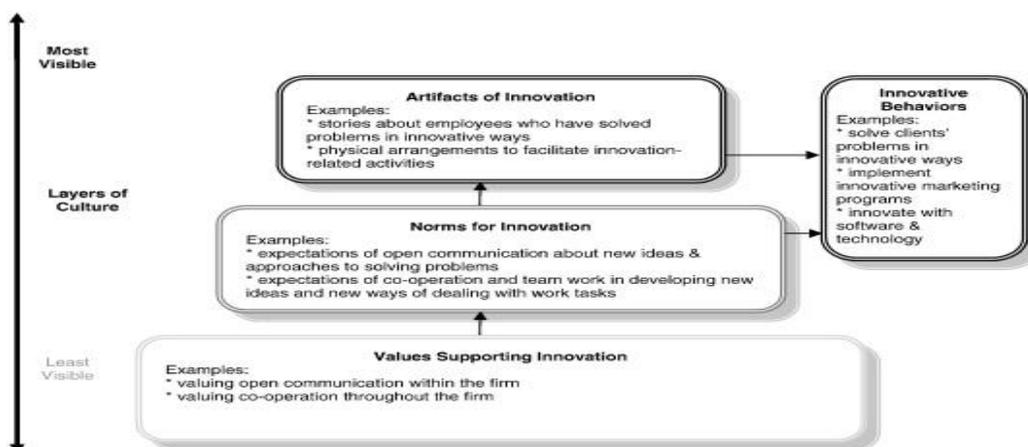
as how the members of the team communicated with the members (Pacanowsky & O'Donnell-Trujillo, 1982). Organizational culture theory offered researchers the insights needed to understand the stories, ideologies, and culture of the members of the organization (Pacanowsky & O'Donnell-Trujillo, 1982).

The concepts in organizational culture theory also provided guidelines to make judgments on the team's value, innovation, attention to detail, emphasis on an outcome, emphasis on people, teamwork, aggressive and stability (Pacanowsky & O'Donnell-Trujillo, 1982). Based on the concepts identified in organizational culture theory, this approach facilitated the process of exploring the behavior of the members of the study as well as the organization's impact on the members in this study. The organizational culture theory connected with real organizations as well as actual employees, as concluded by Pacanowsky and O'Donnell-Trujillo (1982). Organizational culture theory provided a conceptual lens of the members of the group. Based on the organizational culture theory concepts, the perspectives from the organizational members could facilitate leadership pipeline models for members' advancement in the organization in this study.

Each level of organizational culture has a different definition, therefore due to the multiple layers; there was confusion in the definition of culture as stated by Schein (1984). This quantitative study conducted in Sydney, Australia in metropolitan of senior principals provided a contribution to literature to clearly understand the links between distinct layers of an organizational culture and innovative behaviors based on artifacts, norms, and values supporting innovations in large law firms (Hogan & Coote, 2014). Organizational leaders whose interest promoted the organizational culture relied on

inclusion and not separation with executive lunch rooms and flamboyant executive office space; but means to collaborate, have open dialogue within the office spaces that facilitated these concepts (Hogan & Coote, 2014).

As illustrated in Figure 3, organizational culture depicted as a means of survival in organizations due to the multi-levels of organizational culture (Hogan & Coote, 2014). Although organizational culture originated from the discipline of cultural anthropology (Gregory, Harris, Armenakis, & Shook, 2009), is derived from the concept to provide insights of the expected behavior of employee's values and belief system. The organizational culture had many definitions for many decades, but the definition in this current study referred to the organizational values communicated and observed behaviors, routines and practices (Hatch, 1993; Homburg & Pflesser, 2000; O'Reilly & Main, 2012). Organizational culture was an invisible social force based on researchers, yet very powerful (Hogan & Coote, 2014). Organizational culture was a single concept in prior research. However, Figure 3 has illustrated the organizational culture with multilayered cultures within the organization.



*Figure 3. Organizational culture. From “Organizational Culture, Innovation, and Performance: A Test of Schein’s Model,” by S. J. Hogan and L. V. Coote, 2014, *Journal of Business Research*, 67(8), p. 1610. Copyright 2014 by Copyright Clearance Center. Reprinted with permission (see Appendix H).*

In Figure 3, I have indicated the most visible layers of culture and least visible in organizational culture. Areas most visible include artifacts of innovation, i.e. stories about employees who solved problems in innovative ways and physical arrangements to facilitate innovation-related activities. Layers of culture referenced the norms for innovation, i.e. expectations of open communication about new ideas and approaches to solving problems as well as expectations of co-operation and learning work in developing new ideas and new ways of dealing with work tasks. Least visible included values, innovations, and open communication throughout the firm.

Like organizational culture, the organizational climate enforced many facets of human service fields to influence the climate of the organization (Lindén, Ohlin, & Brodin, 2013). This quantitative study used a structural test based on the internal and external effects of the culture of the outcome from a national sample of the welfare

system that affects children's outcome (Lindén et al., 2013). This U.S. Nationwide sample population from "The National Survey of Child and Adolescent Well" included 2,380 youth in 73 children welfare systems applied the multilevel path analysis (ML-PA) (Lindén et al., 2013). The selection process was a stratified random sample design, completed in two stages on a national stage using a Child Behavior Checklist at admission and an 18-month follow-up; assessed the front-line caseworkers using the Organizational Social Context measure (Lindén et al., 2013).

In Figure 4, I have depicted the impact of the behavior of the organization and the consequences of the behavior of the member in terms of social learning. Next, I noted the configuration of ORQ and SQ1 with women's role in the inner organizational environment. I demonstrated OCT within a connotation for constant focus on member's overall behaviors, values, and beliefs. Scholars have discussed the continued use of organizational culture theory due to potential positive results within the culture of the organization (Rivard, Lapointe, & Kappos, 2011).

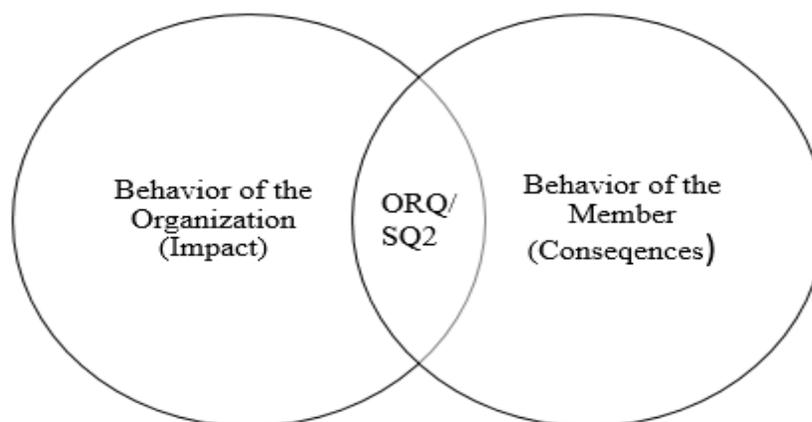


Figure 4. Organizational culture theory.

Leadership Pipeline Theory

The book titled *The Leadership Pipeline*, written by Charan, Drotter, and Noel (2011) provided the opportunities for other authors and development of the theory leadership pipeline. The researchers expanded the theory into the field of management, business, and journalism (Kaiser, 2011). Leadership pipeline model (LPM) was another internal leadership development tool used to measure the career advancement processes of employees. LPM framework tested the ability for individual's skill level of work under professional situations (Charan et al., 2011). Leadership pipeline model facilitated this study in defining the importance of developing leaders within the organization based on the organization's internal talent.

As women, in general, attaining senior level positions, these women provided in-depth knowledge for short-term and long-term career advancement based on experiences (Charan et al., 2011). By utilizing LPM in this study, the pipeline model will further deconstruct how the skills developed are necessary for advancement in the organizational hierarchy (Dai, De Meuse, & Tang, 2011). The six passages identified to measure workers' skills included:

1. Manage self to manage others.
2. Manage others to manage managers.
3. Manage managers to functional managers.
4. Functional manager to business manages.
5. Business managers to group managers.
6. Group manager to enterprise managers (Drotter et al., 2011, p. 64).

LPM was necessary at each level to gain the needed skills for advancement and for bosses to recognize the required skills. Each concept of leadership pipeline model provided the participants with the skillset required to progress.

In Figure 5, these six passages implemented in this study provided clear directions how leaders at each level developed the proper skills for upward mobility in organizations. The role organizational leaders play an important part in these passages by coaching and ensured the required skills learned at each passage maintain a plethora of potential leaders in the organization.

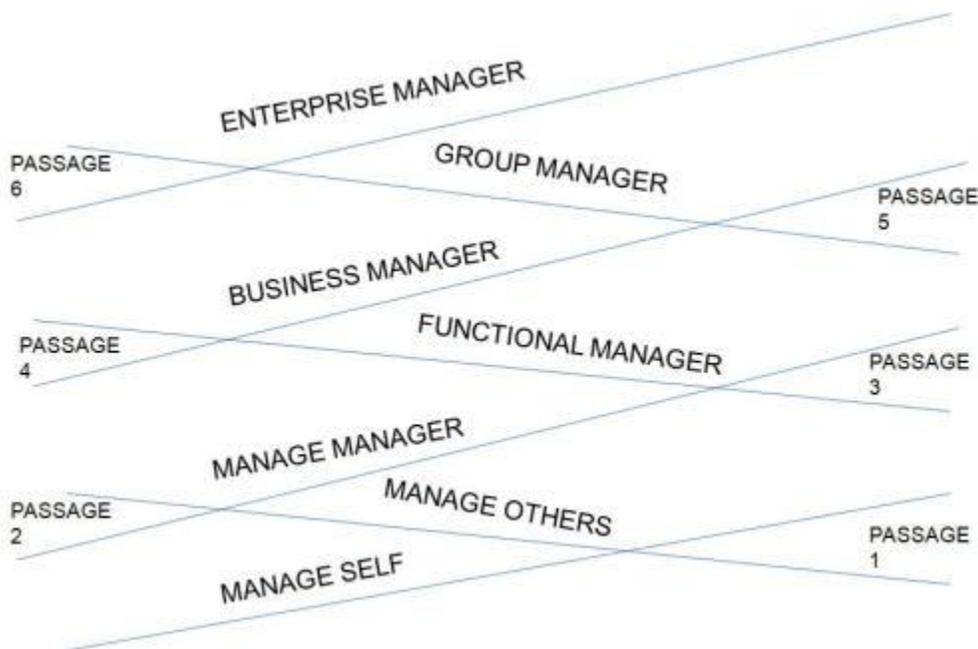


Figure 5. Leadership pipeline model. The drawing illustrates skills that leaders cannot master in a short timespan or take courses on in large business organizations. Charan, Drotter, and Noel (2011) adopted these Critical Career Crossroads ideas from Mahler. From *The Leadership Pipeline: How to Build the Leadership Powered Company* (p. 8), by R. Charan, S. Drotter, and J. Noel, San Francisco, CA: Wiley & Sons. Copyright 2011 by Wiley & Sons. Reprinted with permission (see Appendix J).

Krumboltz's Social Learning Theory of Career Counseling

Krumboltz, Foley, and Cotter social learning theory of career development (2013) presented this theory as for how career choices determine the environment due to observed behaviors. The factors that influenced the individual decision options were from internal and external factors (Krumboltz, 1976). The numerous amount of choices; individual's felt incapable of making the decision or felt indifferent due to the limited number of options or no choice based on their perceptions (Krumboltz, 1997). In the evolution of Krumboltz's social learning theory of career development based on social learning theory, stemmed career decision making (CDM), the happenstance, and the theory of career counseling (Krumboltz, 2011). Krumboltz explored how educational and occupational decision making impacted how outside factors that were uncontrolled by the individual whether planned or unplanned influenced their actions from social, political, natural forces, as well as certain conditions based on the career selection. Krumboltz and Worthington (1999) postulated career development counselors apply learning perceptions for the following reasons:

1. Assessment instruments for stimulating new learning, not merely for matching existing characteristics to current environments.
2. Motional and performance achievement outcomes as well as cognitive outcomes.
3. Success measurement by the extent to which clients continue engagement in learning activities leading to the creation of satisfying lives for themselves, not merely by measures of decisiveness and congruence (p. 312).

The first assessment of career advancement involved counseling in school-to-work movement the principles of human capital theory and not psychological principles (Worthington & Juntunen, 1997). In addition, the researchers utilized the lens of learning theory to include the economic approach limitations addressed. Finally, Krumboltz (1996) evaluated the workforce ability to review the principles of his learning theory where certain implementations of that approach drove practices in school-to-work programs.

Krumboltz et al theory might provide the foundation for the experience the concept of learning. The environmental exposure in the personal and professional life might help with future satisfactory career decisions in the workforce (Krumboltz & Nichols, 1990). Krumboltz et al theory grounded this study, and the conceptual lens of social learning theory behavior was not a single cognitive process, but observational learning and modeling the behavior. On the other hand, observational learning personal and situational determinants of career practices as postulated by Super (1990). The archway model illustrated the strength of social learning theory by actual observation of the environment and implementation of advanced skills being holistic processes of learning as created by Super. The consequences of the categories and the most important concept of this theory was the idea of *learning* as discussed by (Krumboltz, 2011). For example, the importance of observational learning and positive modeling enhanced the proper development of career planning and behaviors as reinforced by (Krumboltz, 2011). The literature review was imperative to comprehend the overall study.

Literature Review

The purpose of the literature review was to provide content as well as to substantiate the overarching research question and the sub-research questions. The literature review, to complete the task a division into three key related concepts: women in high technology fields, women in management, and women experiences as an executive. To support the related key concepts are 18 similar supportive thoughts. In the literature review section, the key related concept of women in high technology fields was next in the study.

Women in High Technology Fields

The representation of women in the workforce does not equate to the underrepresentation of women in the science, engineering, math, law enforcement and other skilled positions (Hackett & Betz, 1981). Women represent 12% of the Global Network of Science Academies (Patel, 2016). In the math field women are represented (Kessel, 2014); within the UK women accounted for 53% of the workforce population, and 36% of the senior level managerial positions, however, the women are part-time contracted employees at the lower-level position (Office for National Statistics, 2013). Within the police departments, there are very few women employed (Johnston & Houston, 2016). The literature reviewed on women in career advancement from a qualitative approach Key et al. asserted the higher number of females entering the workforce continued to grow in the 21st century. With the emergence of more women in the workplace, the contributing factors to their success have intensified (Key et al., 2012). The one way to potentially increase the number of women in executive leadership roles

and reverse the gender gap was to increase the number of women in executive leadership positions and change the rewards and the work evaluations (Joshi, Son, & Roh, 2015). Also, supported the data collection of women emerging in the workforce from an international perspective, but the increase of women in the senior executive roles was still at a significantly low number as supported by Klettner, Clarke, and Boersma (2016). These findings from Klettner et al. study supported the need to explore women perceptions for career development in high technology fields.

On the other hand, there was controversy in the current researcher literature in regard to the number of individuals available or the shortage in the STEM industry to fill the positions (Zheng, Stapleton, Hennenberger, & Wooley, 2016). The same researchers stated there was a shortage, but more noted there was a disconnect between what qualified individuals the industry needs to fill positions and how universities prepared students to fill the available positions (Zheng et al., 2016). Within this study, there were discussions on the underrepresentation of women and minorities within the STEM programs including the workforce (Zheng et al., 2016). These researchers acknowledged within the Maryland workforce; there had been an increase in the number of postsecondary degrees in the STEM from 2008 to 2013 (Zheng, 2016). However, the degree earners were predominately white and non-Hispanic male (Zheng et al., 2016). The strength of this study provided insights on how STEM degree earners from associates to doctorate followed through four quarters after graduation in the Maryland workforce. The weakness of this study not much attention on the persistent underrepresentation of women and minority students and STEM employee's in the

workforce. The next weakness was the limited discussion of the association with high school coursework preparation into the STEM programs, the limited view of gender, race, and the ethnicity of the individuals entering the STEM program. The study provided the clarity that there was a known fact that women and minorities are less likely to have literature written reflecting their attainment into the STEM programs, and the STEM industry as employees Zheng et al. In 2016 literature, yet a gap existed that not much attention on the underrepresentation of women in the STEM field and workforce.

There are senior executive women in leadership roles. There was a need to increase their presence. Senior executive roles of women increased, but it was still significantly lower than that of men in senior leadership roles (Schoen & Rost, 2015). In the global realm, India's workforce, women represented 35% in the high technology industry (Shwetha & Sudhakar, 2014). In the United States, women in the tech industry are lower than their male counterparts there are only 0.2% of the CEOs are women (Catalyst, 2016). Women not obtaining the same work experiences as their men counterparts and exclusionary practice that may play a part in women not progressing in senior level roles and succession decisions (Joshi, Neely, Emrich, Griffiths, & George, 2015). Women's work experiences in comparison to men differed, according to Shwetha and Sudhakar (2014) women worked variable shifts which increased the work stress and impacted their cognitive performance. The inclusion of more women in senior level positions contributed to more women's acceptance, and their voice to speak up.

Women may lack the voice to obtain respect and acceptance of their leadership authority from peers and supervisors. The voice of women may potentially mean their

ability to find a way to discuss topics openly in meetings, move beyond stumbling blocks, and provide encouragement to the team through their experiences (Heath, Flynn, & Holt, 2014). Many women are at a disadvantage in acquiring leadership roles because of their self-doubt as noted by (Archard, 2013). She also pointed out that some men and women might perceive girls who speak up as being pushy (Archard, 2013). The lack of confidence some professional senior-level executive women exuded, in general, may be the reason for they slowed into senior roles.

One other possible reason women do not occupy more senior executive roles may be that many women might lack confidence, in general. The confidence women may lack may also contribute that women not applying for leadership positions as concluded by Archard. To address the companies' leaders concerned about the number of women in leadership roles, human resource leaders at Hewlett Packard Corporation analyzed personnel records within the organization over a one-year period (Mohr, 2014). The human resource managers found that most women at the organization only applied for higher-level positions if their skill sets completely matched those specified in advertised job descriptions (Kay & Shipman, 2014a). Some men in the Hewlett Packard study mostly applied for positions if their skills matched approximately half of the skills listed in job descriptions (Kay & Shipman, 2014a). The limited number of women applying for higher level positions also contributed to the lower number of women in the talent pool (Kay & Shipman, 2014a). Women needed to feel secure in their skill sets and how their performance attributed to possibly obtaining mobility upward.

Men and females sometimes differed in perceptions or opinions on how they attributed their performance of the organization. For example, some male and female Ph.D. students in mathematics differed in how they reacted to earning low grades in a math course (Kay & Shipman, 2014a). Many women focused internally on their personal abilities as a reason for lower grades (Carter & Dunning, 2008). The perceptions some individuals have of themselves vary from reality and their competency levels (Carter & Dunning, 2008). The perspectives women have may differ from that of men in how they view their success or skills.

The success of women from their perspectives may stem from various factors. Many women attributed their success to external factors rather than internal factors like their personal skill sets (O'Neil et al., 2011). An internal factor that women place on themselves is self-imposed perception, conflicts placed on themselves, the thought process of these women and the choices made (McVay, 2013). The external factor was sex-roles stereotyping of women by some men who may hold the position as the decision maker, people, organizations and events (McVay, 2013). The increase of women in the workforce may possibly erode some of these myths with their job performance.

Men and women career seekers differed in how they viewed mobility upward, seeing it regarding seizing an opportunity or being lucky based on management scholars (Laud & Johnson, 2012). The opportunity was "successful career advancement based on the aspirant's hard work, insight, planning, and execution over extended periods of time" (Laud & Johnson, 2012, p. 245). Luck, on the other hand, was "the identification of

positive upward mobility situations that manifest themselves without planning and generally outside the control of the career seeker” (Laud & Johnson, 2012, p. 245).

The theory of Luck based on Laud and Johnson (2012) identified opportunities that occur whether planned or unplanned in positive upward mobility situations. Laud and Johnson’s study emphasized several clear insights (a) the interviews and relationship within the group was of better quality; (b) mentoring was the organization's impact on development; (c) personal relationships built on integrity and morale was essential to leadership advancement; (d) the richness of the data compensates for the bias that could occur (p. 245). A few of the female participants believed hard work and not luck allowed for career advancement opportunities (Laud & Johnson, 2012). Luck and opportunity impacted professional senior executive women's career development ability to advance to higher roles.

Women who took charge of their career advancement might obtain successful senior executive positions. Upward mobility strategies for women in Laud and Paterson (2013) study was useful for examining career progression for females based on luck who scored the concept higher than men. The authors did not include the perspectives of lower-level women workers in the study (Laud & Paterson, 2013). Laud and Johnson’s findings applied to those in senior executive roles not the high-tech sector but how to understand the studies population (Laud & Paterson, 2013). The gender differences in upward mobility of this study focused on how men and women prioritize their ability to navigate the upper hierarchy ladder (Laud & Paterson, 2013). The findings in Laud and

Johnson's study related to my current study's research questions by exploring the perceptions of senior executive women.

The influence women have on work environments, and perceptions women have on career advancement was relevant in the literature. The existing literature on women of career advancement provided an understanding of their personal and the environmental impact based on how women perceived themselves, and their identity (Szelényi, Denson, & Inkelas, 2013). The strength in Szelényi et al. postulated a vital essence to understanding a four-year study of women in STEM majors and career advancement. The limited data on the importance of women in the technology majors and career advancement continued consensus on the higher representation of women in the workforce, yet the impact in the STEM careers was only 25% of women is a weakness in this study (Szelényi et al., 2013). The positive interaction with diverse peers created noteworthy positive outcome on professional consequences and combining a professional occupation with having a poised private lifecycle found by Szelényi et al. (2013). The sample size utilized in the study was a weakness due to the inability of the researchers to examine the relationship not only with the expectations of the professionals but the participants' field research.

The key variables in this quantitative study on student's residential accommodations, related to women did not allow the usage of HLM, which was a method of analysis that allowed researchers to analyze data nested. The limitations in the multiple aggression studies examined the results of the constructs which must be taken into

consideration as reported by Szelényi et al. Clearly understanding the collected data allowed for the results to be examined and considered from various vantage points.

The different vantage points of women may provide positive outcomes in leadership roles. Over the past four decades, domestically there has been an increase in the number of females working in high technology (Beede et al., 2011). Within the literature reviewed on women in professional career advancements, there still exists a gap in the literature on women's perceptions on career advancement and the glass ceiling in the high technology industry. The promotion of women was essential in understanding the perceptions of women.

The slight increase of women in high technology industry, women breaking the glass ceiling, and the lack of confidence may still exist (Archard, 2013). The inability of women to break the glass ceiling in high numbers due to what these researchers see as a lack of confidence and the possibly women's acute (Kate & Shipman, 2014). On the contrary, O'Neil, Hopkins, and Birimoria (2015) postulated the need to examine the system in which women work, instead of criticizing women for the presumption of a lack of confidence which there was no proof validating; however, a substantial amount of literature written reflected a lack of opportunities for women. Women encountered workforce and organizational environments that undermined their chances seeking leadership roles (Kay & Shipman, 2014). As we understand the literature based on the lack of possibilities in leadership for women, we must also understand the glass ceiling invisible barriers. I discussed the perceptions of the glass ceiling phenomenon next as part of my literature review.

Glass ceiling. The glass ceiling accentuated the invisible barriers that encumber some women from possibly excelling in organizations. The Glass Ceiling Commission established in 1991 defined glass ceiling as an intangible barrier concept with minorities pointed out limitation placed on women from upward corporate ladder roles despite the qualifications. The researchers who studied the glass ceiling asserted concerns with upward mobility and not the different boundaries within the various ethnic groups (Thatchenkery & Sugiyama, 2015). Hence, many factors have slowed the growth of women in senior positions such as human capital barriers (Yousaf & Schmede, 2016). Human capital barriers defined as the lack of education, experiences, and resources to accomplish the same goals as their male counterparts (Yousaf & Schmede, 2016). As some women continue to grow in numbers, the glass ceiling if not recognized by more people may continue to hinder women.

As women outnumber men in the workforce and upward mobility was not the same we must learn more about the glass ceiling. There were numerous women in corporate America; many fall under the term glass ceiling as addressed by (Fernandez & Campero, 2016). In this quantitative study, the researchers implemented a standard applicant tracking system with 441 small to medium-size high-tech business on 2,718 candidates who applied for jobs via the internet (Fernandez & Campero, 2016). The researchers determined the concept glass ceiling produced an internal and external hiring process which women are obtaining lower-level positions unlike men (Fernandez & Campero, 2016). As you view the organization's hierarchy, the prevalence women may yield unjustified inferences on the organizational climate and barriers that impact the

advancement of some women (Fernandez & Campero, 2016). The internal processes that contribute to inequalities of women hitting a glass ceiling do not reflect the systems that produce different access to power for both men and females. The external process was the human resource managers extending beyond the boundaries of the organization in recruitment policies that are not designed to protect internal high-level employees; unlike California employee standards which protect internal employees from outside competition (Fernandez & Campero, 2016).

The strength in Fernandez and Campero (2016) study was the population easily identified due to gender inequalities subjective to internal factors include the gender hired (Fernandez & Campero, 2016). Another strength of the study the authors attempted to better understand the imbalance in job compositions and the ability to trace the inequalities from the external and internal hiring process. Some weaknesses would include internal factors of inequalities impacted women and men also impacted women career advancement; and the limited discussion on external hiring factors across different levels of the hierarchy which could contribute to the concept of the glass ceiling (Fernandez & Campero, 2016). The next weakness: limited data collected on if the supply of gender applicants addressed the lower number of women representation in the three levels of hierarchy in the organization (Fernandez & Campero, 2016). The three levels of representation in the organization were lower level, mid-level, and higher-level employees. The study also presented promotion biases, external recruitment, and hiring issues.

The experiences most women often faced may potentially change their lives. Also, at times, women encountered win-loss positions that set them up for a failure with the glass ceiling and striving towards the glass cliff (Sabharwal, 2013). The glass cliff referred to how women are impacted by their limited abilities to rise to upward mobility (Sabharwal, 2013). Women who are in the positions to create change in the environment are in the policy-making and decision-making positions (Sabharwal, 2013). The researcher in this quantitative study investigated women in the Senior Executive Service (SES) in the US Federal government policy agencies impact on the glass cliff. The glass cliffs are steps forward to understanding the glass ceiling. In Sabharwal's study (2013) the findings on women in the distributive and constituent policy organization these women are more likely to face the glass cliffs. The outcome for women falling over the glass cliffs changed when women presence influenced the policymaking ability to make changes and their experiences in the culture within the organization (Sabharwal, 2013). The researcher view of the glass wall in retrospect to women obtained traditional positions that stereotyping of certain roles held by women.

Sabharwal (2013) assessed the glass ceiling framed the challenges women faced in upward mobility such as subtle discrimination, fewer opportunities to move up the hierarchy, fewer chances for decision-making positions, the lack of support, and less work-life balance. The strengths that were discovered, women in different federal government agencies experienced the glass cliffs differently; the inability to exert authority in male-dominated institutions as senior leaders; roles women held in various agencies; women cracking the glass ceiling but less authority to make decisions. The

weaknesses pointed out women placed in positions deemed as nurturing, caring, child care in agencies like the Department of Education, Department of Veteran Affairs, and the Housing Development in the redistributive agencies organization with a higher prevalence in senior level positions and a higher opportunity of facing the glass cliffs. Other weaknesses discussed by the author was secondary data limited focus on the questions, limited focus on the employee's ability to implement policymaking decisions (Sabharwal, 2013). In the study conducted by Sabharwal, 177,586 completed surveys weighted data from survey participants adjusted to represent the population drawn from the federal government.

Sabharwal (2013) collected data from the Federal Human Capital Survey distribution between 75 organizations composing 94% of the executive branches. The stereotyping of women existed in the redistributive agencies that faced the glass cliffs more than women in the regulatory agencies. The women in Redistributive Agencies based on the author opportunities for failure was higher than women in the Regulatory Agencies (Sabharwal, 2013). The federal policy agencies involve distributive, redistributive, and regulatory processes (Sabharwal, 2013). Distributive agencies have policies that directly impact individuals, and promoted discrimination in the hiring process; and an environment conducive upward mobility for the senior executive in a male-dominant organization, Agriculture, Health, Education and Welfare, National Institute of Health, Interior, NASA, National Endowment for the Arts, National Science Foundation (2013) to list some of the distributive agencies (Sabharwal, 2013). Redistributive agencies impacted our society in large numbers, unlike any other federal

government, the Department of Education, Health, and Human Services, Housing and Urban Development (Sabharwal, 2013). Regulatory agencies regulated the government policies that control how regulations imposed on individuals and punishment for nonconformance on individuals or companies that do not follow the regulations some of the agencies: Agriculture, Health, Education and Welfare (Food and Drug Administration) Justice, Transportation (ATF and the FAA), the Treasury, Equal Employment Opportunity Commission, Environmental Protection Agency to name a few of the regulatory agencies (Sabharwal, 2013).

In the distributive agencies, the prevalence for men (47%) in senior-level positions outweighs women (31.2%). Men are the highest representation in the distributive agencies that will not face the glass cliffs; however, in the study women are more likely to face the glass cliffs than men (Sabharwal, 2013). The women in distributive agencies are 3.6 times more likely to face the glass cliffs versus redistributive agencies (Sabharwal, 2013). Sabharwal learned although the higher representation of women in SES redistributive agencies these women tends to face the glass cliffs.

Sabharwal discussed in the redistributive agencies, the representation of women was 39.3% and men 5%, yet women in redistributive agencies impact the glass cliff was unlike the impact women in the Regulatory agencies experience. The regulatory agency has two times more females (13.5%), yet the women are least likely to be impacted by the (25.5%) male-dominant organizations (Sabharwal, 2013). Some of these women in the regulatory agencies expressed job satisfaction due to their involvement with implementing policymaking decisions, their quality of equity as well as how these

women influenced policymaking (Sabharwal, 2013). Although women are shattering the glass ceiling (Davis & Maldonado, 2015; Sabharwal, 2013), there was still limited research on this population of women who obtain professional senior executive women of color in service positions. The service positions allowed some women to shatter policy-making positions who may not obtain the senior executive assessment roles due to networking (Sabharwal, 2013).

The networking opportunities for women in senior executive level roles will need to network with their male counterparts. Some men have more access to networking opportunities which are at a higher status through other male connections. Networking allowed individuals the chance to practice their abilities to develop socio-political for building, sustaining, and developing relationships for personal, positions, and the organization's benefits. Men, on the other hand, use their networking ability to network for self-promotion (Sabharwal, 2013). On the contrary, women who attained the senior executive service positions and fewer opportunities to network with peers unlike that of their male counterparts who obtain senior executive roles was unfavorable for women (Allen et al., 2016; Shuji, Fainshmidt, Nair, & Vracheva, 2014; Sabharwal, 2013). Betty Spence, who was the president of the National Association for Female Executives, explained the glass ceiling exists and was unyielding in the Information Technology (IT) field and was stronger in IT industry than other careers. Although the US. Bureau of Labor and Statistics reported that at least 30% of women represent the technology field. On the contrary, Educause noted an even more in-depth study that discovered lower numbers of 23% of women in the leadership roles (Arroway, Grochow, Pirani, &

Regenstein, 2011). Although, women are earning more bachelor's, master's, and doctoral degrees than men; the women are less favorable to obtain the higher-level role which was a known fact (U.S. Bureau of Labor and Statistics, 2011). The level of degrees has not provided some women the same opportunities in the 21st century.

The expansion of more women in the workforce, the 21st-century literature will need to reflect all populations. In the 21st century, the literature must reflect the increased profits with the association of women with higher level leadership roles (Somerville, Elliott, & Gustafon, 2012). The same researchers also included less on the incompatibility on women's abilities and leadership based on Somerville et al (2012) who believed there was no supported research on the incompatibility of women's abilities and leadership imbalance on corporate boards.

In the study with Somerville, Elliott, and Gustafson (2012) these same executive women based on the study's outcome were not all a part of the internal board of directors or external board of trustees in other companies' due to their personal and professional duties. Most the executives indicated they were not aware of the opportunities or exposure as well as the need to improve their networking system in the Minnesota study (Somerville et al., 2012). Although, fewer women seeking corporate board of directors' seats might increase the number of women executives.

Women executive in different industries may accept board of directors' positions which may impact the organization. The 15 executive women in the Minnesota study that had an interest in seeking corporate board positions, I would consider based on the underrepresentation of women in senior executive roles was a viable number of women

in this area. The strength of the study provided transferability to a very broad range of industries due to the participants is not from the same industry. This study explored and addressed the interest of women executive corporate board member experiences, the possibility of adopting quotas systems, and the focus on the glass ceiling (Haslam, & Ryan, 2009; Somerville et al., 2012). The weaknesses of this approach were the lack of discussion on the profitability of women who obtained corporate board seats. The next weakness was the impact on their business as corporate members of the council, the effects of not gaining seats on the corporate board, and why this class for women on corporate boards at this point (Somerville et al., 2012). Although Somerville et al study's weaknesses lacked discussion on the profitability of women on boards; we must understand how women view other women in the organization from the queen bee phenomenon effects.

Queen Bee phenomenon effects. The Queen Bee phenomenon effects may slow networking with other women. The Queen Bee phenomenon effects created unfavorable opportunities of some women in leadership positions from facilitating to become role models for other women in the same professional career as the potential mentor (Ellemer, 2014). There have been methods in which researchers applied to the Queen Bee phenomenon effects: (a) by presenting themselves more like men (b) by physically and psychologically distancing themselves from other women; and, (c) by endorsing and legitimizing the current gender hierarchy (Derks, Van Laar, & Ellemer, 2015, p. 457).

The Queen Bee phenomenon effects were in response to gender inequality women's ordeals in the workplace (Derks et al., 2015). Senior executive women take on

the characteristics of the Queen Bee phenomenon a method to assimilate into a male-dominated culture that did not value their perspectives, as noted by Derks et al. Some researchers believed the Queen Bee phenomenon was a sexist term (Sheppard & Aquino, 2012). Not everyone viewed Queen Bee phenomenon effects positively but viewed the increase of women in the European Commission differently.

There still may be an underrepresentation of women in the European Commission (EC) in the higher-level positions. The EC reported the increase of women in the workforce and the performance of women was at a higher level than with men counterparts (Schafer, 2013). The purpose of this report was to go beyond the foreseen gender-focused but to focus on the phenomenon in and of itself (Derks et al., 2015). The literature on the gender-focused phenomenon of women was prevalent; however, the premise of women in the high technology fields needed attention in the literature. Some studies focused on the premise of women's inimicality against other women discussing relationship (Derks et al., 2015). The researchers viewed Queen Bee phenomenon effects not as the problem for women in male-dominated industries, but these highly qualified women as the aftermath of sexual characteristics refinement, and occurrence plague women in a negative cast as women endure in male-dominated fields as studied by Derks et al.

High potential employees may increase the opportunities for a diverse team. Organizations profit from gender diversity, especially top management diversity (Ellemer, 2014; Reed, Corry, & Liu, 2012). Organizations that employ a diverse team of high potential employees tend to excel in penetrating new markets due to the various

cultures and vendors in the global and domestic market (Ellemer, 2014). Creating diverse organizations warrants financial results due to the different gendered body as specified by Ellemer. The assumptions that women have endured inequalities, Queen Bee phenomenon effects occur in the workplace with various groups.

The women in the senior level roles may decrease their behavior in the workplace. The researchers Derks et al. (2015) continued by stating women are not the only population exposed to the Queen Bee phenomenon as the workplaces diminish other groups by the same phenomenon. Also, the Queen Bee phenomenon in regard to women is very prevalent but not as forceful but acceptable as a behavior (Derks et al.). The effects of the Queen Bee phenomenon effects rationale about women in leadership roles could improve the selection opportunities for women in the professional senior executive roles per Derks et al. The same composition of the Queen Bee phenomenon effects into high power position produced intangible threats to men. To reduce the intangible threat, the researchers looked at one method was to create a balance in the hierarchy by employing one woman in a high-level role that possibly decreased internal pressures on the organization climate (Hurst, Leberman, & Edwards, 2016). The pressures of women's self-doubt that potentially influenced their career decisions included second generation bias. Second generation bias, stereotyping, and leadership affected women's ability to obtain senior-level positions (Hurst, Leberman, & Edwards, 2016). Women like men, who seek upward mobility expect the same equality as others who would usually dominated that industry (Van Laar, Bleeker, Ellemers & Meijer, 2014). The balance of

equality with women in upward mobility was not as well defined and understood in organizations (Hurst et al., 2016; Van Laar et al., 2014).

Ellemer, Rinks, Derks, and Ryans (2012) study's approach provided clarity as to the importance of understanding the Queen Bee phenomenon does not only apply to women, yet the Queen Bee phenomenon impacted men. The current study drew from the clarity of career advancement and how the organizational culture affected the population of my current study (Ellemer et al., 2012). The organization's culture outcome may diminish due to the Queen Bee phenomenon by lessening the limitation women provided to organization's success (Ellemer et al., 2012). As women make conscious decisions to explore senior leadership roles, they carried out the necessary choices needed to maintain the organizations and household responsibilities. Nevertheless, society should decide life choices with support and respect in mind for members of society (Skillsportal, 2012). The strength of this study was women career advancement, how these women maintained or obtained their roles within the hierarchical workplace ladder, and the same equitability of women. The weakness of this study was some women do work against other women in organizations for their interest in a male-dominate environment; as well as the lack of research on the hierarchical relationship of the development of women (Hurst, Leberman, & Edwards, 2016). The life choice people endured may change their perceptions and how work-life balance may change for both men and women.

Work-life balance. The work-life balance over the most recent ten years shifted from women considered the primary caregiver of the family, to an abundance of men becoming the primary caregivers in a disproportionately manner due to the economic

recession in 2008 (Vandello, Hettinger, Bosson, & Siddiqi, 2013). Over the past fifty plus years, women have entered the workforce at a rapid speed (Vandell et al., 2013). The rapid growth of women in the workforce there was many gender-related changes to the household income, meaning women are becoming the breadwinners, the inclusion of more women attending college, and more women obtaining advanced degrees (Vandello et al., 2013). The researchers conducted a quantitative study exploring work-life balance as one of the studies in the literature from the perspectives on work and family intersections. Within this study, there were initially 154 participants. The researchers had devised four variations of the online survey, and once the participants completed the survey, 148 viable participants with a breakdown of 82 women and 66 men had fully completed the online survey.

In the study postulated by Vandello et al (2013) two variables that correlated from the gender of the target population and whether the gender of the population selected flexible work schedules or accepted normal work schedules. The key variables from this current study of Vandello et al. were flexible work schedules are offered to most members in the organization. Some men and women chose not to accept the flexible schedule due to the perception of men who would utilize the flexible schedules offered by their companies stigmatized their abilities to perform their duties. The gender-related stigmatization that some men fear held them back from flexible schedule options. Some of these men reported flexible schedules could potentially lead to the derogation of the male attributed in the future. Another key variable from the lens of women accepting flexible schedules may potentially increase attributes of female prescriptive behaviors.

The target population may have viewed gender-related stigmatization; however, the two studies provided data that verified the target audience that requested flexible schedule options competencies levels are the same of those who worked traditional hours (Vandello et al., 2013). In fact, the target population who sought out flexible schedules had more morals than that of the traditional scheduled workers in this study (Vandello et al., 2013). The results for this study strengths conveyed that some women and men have the option to select flexible work arrangements that could potentially create a work life balance with the same authority as other competent workers. The weakness of this study, the argument despite the policies that are in place, the leaders are not providing the opportunities to remove the gender-related stigmatization to improve the work environment culture for all employees seeking flexible work schedules. Another weakness noted in the study included that the researchers provided the data on the competency reflected in a consistent manner and the target population of college students entering the workforce have expectations from their employee as well as societal views of men utilizing flexible work schedules.

The authors of this study, tend to agree, although graduate level students are entering the workforce, Vandello et al., (2013) would have potentially provided better data if collected from members of an organization, and or industry. Limitation of the second study focused only on flexible work hours and not on how men or women perceptions from others after childbirth and or adoption of a child which did impact the workforce since women have contentiously entered the workforce. Although many

countries are developing public policies for gender equality, women still experience internal household demands, unlike their male counterparts.

A more progressive country was Sweden with developing public policies with gender-equality supporting women's growth in senior-level management; however, there are still concerns that women versus men take on more internal household responsibilities (Rothstein, 2012). Sweden has the public policies in place to support women in the workforce (Rothstein, 2012). There are still major concerns with gender order differences within the Swedish society that included wage intolerance and more women than men working- part-time (Rothstein, 2012). The public-sector pay was lower for women, and there are fewer women represented in other comparable countries, but not as few as the United States (Rothstein, 2012). On the contrary, women, in general, are responsible for domestic roles than men caregivers in Sweden or the United States.

The expectations and the dynamics of the shift in realities of the primary caregivers and work-life balance intersected when work-life balance was in place (Vandello et al., 2013). Although there was a desire to create a balance between work-life and home-life, there was evidence on the benefits of the career path of the employee when a work-life balance existed (King, Botsford, & Huffman, 2009; Vandello et al., 2013). The policies incorporated within the organization sometimes offset the traditional gendered behaviors that impacted families and the workplace that are slow to change (Vandello et al., 2013). The traditional gendered behavior meaning women are responsible for the internal household responsibility including maintaining external positions in the workforce.

The flexibility in work-life balance for women and men caregivers in the workforce was important despite the under-utilization and the organizational benefits offered by some organizations (Vandello et al., 2013). The external obligations for women included the time spent as the employee obtaining additional education, training, and developing skill sets for potential advancement that encompass extra time beyond the work hours, however, related to work life for career advancement (Sharabi & Harpaz, 2013). Despite the benefits of the flexible work arrangements, there are dominant norms in place that affects the organizational culture based on myths of the full-time employee. The powerful myth are ingrained criteria of full-time workers and no family conflict with negative responses to employee's ability to work full-time or as needed within the organization (Vandello et al., 2013). Many women will not seek the flexible work arrangement due to the possible questioning of their work commitment. Many studies focused on the attitudes of flexible workforce arrange from the perspectives of the women and men in the workforce as proclaimed Vandell et al. Women seeking flexible employment develop from the ingrained socio-culture of their lives due to gender ideology.

The work value of women values derived from the change in the goals and expectations of upward mobility (Sharabi & Harpaz, 2013). On the contrary, Sweden has established itself as a public policy country that women benefit from inclusion; there was not a difference in how women in lower level roles or top management position are the main caregiver. The concern women endured within the home life impacted society from the perspective of the different balance of power between gender orders (Rothstein,

2012). The UN named Sweden as one of the best-gendered equality countries in the world in 1996 that prided itself in feminist views on equality of women and men (Rothstein, 2012).

Women in Management

Role changes of women. Women in top management positions in the 21st-century presence have begun to change. Women's representation in senior management became noticeable due to the growing number in the workforce and board of directors that influence the organization's culture by increasing women (Shuji et al., 2014). Although there was the lack of women in top management, this study viewed how women in male-dominated upper management teams used various behavior methods of listening skills and nurturing abilities that had an impact on the teams' behavior (Shuji et al., 2012). Within the current literature reviewed, a depiction of the increasing numbers of women in top management, and less on the board seats, however, this study specifically explored women of color perceptions held on career advancement.

Women's impact in organizations as senior executive leaders in organizations has increased. The impact women have on organizations and their leadership styles in male-dominated upper management as discussed by (Shuji et al., 2012). The researchers implied based on the 2012 Census 278 executive directors in the ASX 200 as few as 4.3% are women and only seven women functioned as CEOs (Klettner et al., 2016). The literature depicted international companies had increased the number of women in leadership executive roles due to implementing quota status (Machold & Farquhar, 2013; Teigen 2012). The increased numbers of women on boards, however, do not reflect, and

the increase of women in senior executive positions in Australian organizations that remain at 10% (Klettner et al., 2016). The current literature provided relevance to women board members influenced policies and the organizational culture, but this study specifically identifies how women of color perceptions held on career advancement in the high technology industry.

The ability of women to influence change within the organization, their representation must also continue to increase. In Norwegian organizations', the number of women on boards has increased (Gladman & Lamb, 2013). The numbers of CEOs remain at 2% due to the board of director's appointment are non-executive members (Klettner et al., 2016). Also, in the UK 250, executive directors in the FTSE were women (Sealy & Vinnicombe, 2013). In the U.S only 5.7% of Financial Post 500 CEO's are female (Catalyst, 2013b). There was an increase of women. A derisory advancement, especially when you have several articles provided insights on how women increased the profits and improve the organization's performance (Dworkin, Maurer, & Schipani, 2012; Ellemers, 2014). The implication of this agreement took place when companies successfully integrated women into the top management roles; the financial results increased due to the women in management (Shuji et al., 2014; Ellemers, 2014). Literature written by Bhogaita (2011) provided the insights based on women in male-dominated industries increased the financial outcome of at least 20% with women employed by a board of directors. Although 20% appeared to be a small number considering the women in the workforce, this number was high considering the number of women in senior leadership roles.

Within the developing countries, women are not as represented worldwide as in industrialized organizations (Gladman & Lamb, 2012). In the U.S. bank industry, you have women accounted for by 12% and the healthcare industry there are 14% women CEOs (Catalyst, 2013). Sweden was a post-industrialized country, where the legislative quota status was in place to increase the number of women in senior executive position. Women in top management positions within the top 100 Swedish companies hold 24 % of the board seats (Gladman & Lamb, 2012; Soares et al., 2011). There was also an indication that the implementation of quota systems in at least four other countries, has improved the odds of women's presence in executive level positions (Gladman & Lamb, 2012). Within this study, GMI Ratings' 2012 included data on 4,300 companies that included 45 countries around the world on women on boards (Gladman & Lamb, 2012). The increased representation of women in the women on board survey was 1:10 board seats globally; 10.5% in the covered study are women directors; which increased 0.7 percentage from the past year (Gladman & Lamb, 2012).

Based on the findings from Gladman and Lamb's (2012) report, the industrialized economies when viewed as groups, 11.1% of the members are women directors. Organizations with 63.3% of the companies in the study had at least one woman on the board, and 10.5% of the study population has at least three or more female directors (Gladman & Lamb, 2012). Norway publicly held companies had increased the number of women directors over 36%, considering Germany was less than 13% (Gladman & Lamb, 2012). In Gladman and Lamb (2013), the 2013 GMI Ratings study continued documenting the increasing number of women as board directors by surveying 5,977

companies in 45 countries. The results of this study demonstrated women are slow to increase their representation, but now hold 11% of board seats at some of the larger companies by 0.5% from the past year with an increased total of 1.7% up from 2009 (Gladman & Lamb 2013). The number of women directors in 2013, increased 13% with at least three women; and the developing markets 11.8% from 2012 GMI Women on Board survey (Gladman & Lamb, 2013). The two studies conducted by GMI in 2012 and 2013 Women on Board study demonstrated that women's presence was increasing at a slower pace. The strength of the studies provided evidence on the targeted population women directors on boards slowly increased. The weakness was, with reports conducted based on GMI 2013 report; women are not increasing their representation with countries implementing voluntary sanctions and legislative mandates (Gladman & Lamb, 2013).

Legislative status quotas by various governments implemented policies to increase the number of women on boards of directors. The four countries implementing some form of the legal status quota: Norway, Sweden, Finland, and France women are a part of the decision-making process (Gladman & Lamb, 2012). The legislative status quotas mandated Norway, Sweden, Finland, and France to implement policies that not only benefitted men in the organization but to increase women in senior-level positions (Gladman & Lamb, 2013). The implementation of the gender quotas could increase the pool of qualified women for leadership roles (O'Brein & Rickne, 2016). The exposure women gained from their increased presence may also reshape the organizational culture to a more women-friendly environment; that supports women's ascension to higher positions (O'Brien & Rickene, 2016). The quantitative study by O'Brien and Rickene

postulated even with gender status quotas women are still slowed to progress into top positions; however, the authors cannot assume that the parliamentary quota system does not instantaneously catapult women into leadership positions. The findings from O'Brien and Rickene's study also refuted that barriers limit women in career advancement positions. Gender quotas may potentially help increase women's presence in organization and women changed the office environment.

For example, when women were part of the team, the reduction of inner office conflict reduced due to the presence of female directors on the board per Neilsen and Huse (2010). Women had different perspectives due to the personal and professional environment (Burgess & Tharenou, 2002). Hence, the inclusion of women in decision-making and understanding various diverse market strategies from the perspective of women the process will yield high-quality decisions (Ellemers, 2014).

When women have fewer opportunities in a male-dominated industry, their worldview and decision-making are not represented in the business process (Brennan & McCafferty, 1997). For example, women are stereotypically more prevalent workers in nurturing positions like childcare; it was not natural to have men working in the early education industry (Brennan & Tharenou, 2002). Senior level management roles developed and created by masculinity attitudes influenced the technology industry (Vázquez-Carrasco & López-Pérez, 2012).

The United States do not force the representation of women on corporate boards in comparison to other countries; women represent 16% senior executive members in Fortune 500 companies (Soares et al., 2011). Catalyst (2014) reported in Fortune 500

leadership roles, women, have been immobile in the executive leadership roles around 14% for females, however, in 2013 Catalyst (2014a) reported that of the women in the workforce, women held 24% of the senior executive roles. There has been an increase of women in corporate boards from 1995 from 9.6% to 16.9% in 2013; there was an increase of women in corporate board seats and senior executive positions (Soares et al., 2011). Consequently, results indicated an increase of women on the board of directors and top management teams in the literature from Shuji et al. (2012).

The continuation of viewing women as equals in the workforce will allow for more women to move into the management roles while representing the stakeholders. On the contrary, Vazquez-Carrasco, Lopez-Perez, and Edgar (2012) stated to increased women's presence in senior-level roles in organizations; there was a need for more training opportunities for women to receive the same training for their career planning as men. Vázquez-Carrasco et al also believed there are other tangible and intangible barriers that slow women from management roles. For example, the lack of self-confidence, women's self-assessment, inadequate assessment of women, and society's view of women as leaders are less favorable which could impede women's upward mobility (Archard, 2013; Kay & Shipman, 2014; Livingston, 2013).

There are some jobs that members of society believed attained by some individuals based on their gender. While in senior levels of management, women tend to represent 6% of CEOs and 16% of senior-level executives (Cook & Glass, 2014; Elby, Ibarra & Kolb, 2011). Hence, senior level management roles align with predominantly male attitudes (Vázquez-Carrasco & López-Pérez, 2012). The positive changes in a

higher percentage of women integrate into organizations top management functions; women tend to provide a lower level of legal risk and could create fair employment opportunities.

Fair employment. Non-African American women before the 1960s had the right to work since the enactment of Fair Employment Act of 1946 prohibited discrimination based on race, creed, and nationality. Although since the establishment of the Fair Employment Act, a few women of African descent were not able to obtain jobs even in the 1960s. Johnson (2015) discussed in this study the evolution of how African American women, unlike white men, did not have decades of equal opportunities of supportive mentors or coaching from other women or women of color. The significance of Johnson's study provided insights into how essential leaders' skills facilitated in their job. The past decades, the importance of integrating members from society into the workforce is critical, however integrating women of color in corporate America leaders' roles is essential for the high technology industry (Mack et al., 2013). As corporate leaders within the organization, these leaders understand the importance of balancing women and men (Jay & Morgan, 2016). The organizations with a higher number of women tend to have higher profits, are more competitive and reflective of the current market (Jay & Morgan, 2016).

Integration into corporate America leadership roles. As reported by Engaging to Excel by the President's Council of Advisors on Science and Technology (PCAST) the United States will need to broaden the STEM field and help PCAST obtain the goal on one million-degree earner particularly women of color who indicate an interest in the

high technology industry (PCAST, 2012). Johnson focused on this study; one understands the process of integrating African American women who are entering the corporate workforce and the challenges this population will face as they prove to be an asset in the workforce. Integrating was defined as including leaders from various industries that influenced their style of leadership as postulated by (Johnson, 2015).

Career advancement for women, in general, was important. The need exists to understand professional executive women of color perceptions on career development as formulated by Johnson (2013). A derisory advancement, especially when you have several articles provided insights on how women increased the profits and improved their performance (Dworkin, Maurer, & Schipani, 2012; Ellemers, 2014). Jay and Morgan (2016) tended to differ that women are increasing their presence in senior leadership positions, as such, Mary Barra is the current CEO of GM; the IBM CEO was Virginia Rometty, the head of Lockheed Martin is Marilyn Hewson. But, the authors still believed women, in general, have only made a small fractional change in the executive leadership positions by Jay and Morgan (2016). Within the literature reviewed, significant-related initiatives are in place in the science and technology organizations ability to increase women in the high-tech industry, yet the gap exists for women of color might promote improved interest among upper management.

Change takes time and diligent work to accomplish the needed change not only in the high technology industry but all industries that have fewer women in leadership roles. Johnson (2015) understood almost a decade later, successful African American leadership style in a culturally diverse organization created positive changes. The

increasing number of women into upper management their presence in the organization culture remained the scope of research (Shuji et al., 2014). Women makeup over half the workforce, yet disproportionately lower at the executive level in the United States.

Quota systems and the increase of women. The United States corporate leaders are least represented in the global markets due to the quotas systems some countries have implemented. Global organizations representation of women in top leadership positions in many industrialized organizations than developing countries (Gladman & Lamb, 2012), and with the implementation of quota systems, women's presence has increased (Soares et al., 2011). As Bierema (2016) viewed the underrepresentation of women in the senior leadership position and women underrepresented in various countries, there was a variation because of parliamentary quota status systems. Despite women have obtained the degrees that support their endeavors into upward mobility (Bierema, 2016; Mack et al., 2013; Morley, 2013; Pastore & Tommaso, 2016); there was still a slow representation in many global countries. Countries like Iceland, Spain, Malaysia as well as India, to include the Netherlands implemented gender quotas but with no sanctions (Pastore & Tommaso, 2016). To combat the issues of the lack of women representation in higher-level roles, leaders in some countries have implemented gender quotas that increased the number of women in male-dominated roles (Pastore & Tommaso, 2016).

In this study, Spain encouraged publically owned companies to increase the percentage of women to at least 40% by 2015 (Giovinco, 2014). The Netherlands required companies to increase their rate to 30%; and Germany has implemented new laws requiring 30% of any new board positions reserved for women, which by 2018, over

50% of the board potentially could be women. Malaysian government in 2011 incorporated regulations without sanctions to encourage business owners to increase women on publicly held companies by 30% over the next five years (Scott, 2014). To potentially combat the underrepresentation of women in senior executive roles, the government officials in India's government mandated nearly all publicly held companies have at least one female on board seats (Afsharipour, 2015). The Australian government in 2012 enforced a Gender Equality Act that supports the adaptation of policies for women (DSS.gov, 2012). The weaknesses of the study are no sanctions or consequences for any organization that did not incorporate women on board seats. The strengths of the studies are the fact each country understands the importance of women in high-level positions in a male-dominated organization.

The adaptation of the quota system within corporations in the mentioned countries was a valid tool. Despite the quota systems, the United States was not alone with the underrepresentation of women in top-level positions; Norway, Britain, and France to name a few countries that continue to struggle with increasing the number of women (Coobineh, 2016). Corporate board seats in Norway businesses the government leaders attempted to address the concern by implementing the gender quota system (Sweigart, 2012). Nevertheless, we must understand if the policies implemented on gender quotas were enough to increase the percentage of women in leadership roles while advancing the social good of the organization. The costs to implement policies argued by critics outweigh the benefits (Coobineh, 2016). If women are selected based on gender, there was a fairness issue that arises which questions their competencies (Wiersema & Mors,

2016). Since the population was in place to include women in senior executive roles, feminist theories viewed the various communities to support the continued increase of women in leadership positions.

Feminist theory. The feminist theory encompassed heterogeneous populations as well as the inclusion of the transgender communities (hooks, 2013). Feminist theory has many different facets and contrasting approaches to overcome gender inequalities (Pike & Beames, 2013). Women develop in logical model configurations that copy characteristic sexual detachments that honor men within human resource development (HRD), as viewed by Gedro and Mizzi (2014). Hence, women should be equal members of the population.

The natural rights of women based on feminist theory stressed women's right should be equivalent to men (Donovan, 2012). The tangible and intangible biases that appear in a noticeable manner such as income inequality amongst female and male, to include the higher representation of men in senior level roles within organizations (Gerdo & Mizzi, 2014). Women overall were gaining economic and tertiary educational independence, however; the opportunities for political remonstrations was unequal in all communities, evolving activists in various sectors (Roth, 2004). Tertiary education allowed for the expansion of primary and secondary education, offering quality literacy education and sparking economic growth in the global economic marketplace (Acemoglu, 2013). Tertiary education systems provided the advanced training in the STEM fields (Hooks, Makaryan & Almeida, 2016). Secondary education in STEM may possibly offer

student many opportunities other than what society viewed of heterotypical roles in the business world.

Yousuf (2014) study questioned what was normal and natural in the representation of humans. Yousuf also argued should a natural representation of men include marginalized groups as the heteronormativity? Social order as far the acceptance and obtain the privilege of what society views as a good life becomes unshackled and the right of entry to the HRD as viewed by Yousuf. The heteronormative was recognizable aggression to a cultural phenomenon which denies lesbian, gay, bisexual, and transgender (LGBT) equalities within a setting that promotes and celebrates diversity which challenges diversity of all kind (DePlama & Jennett, 2010). For example, in primary schools and classrooms, the inequalities of heteronormativity in the UK have collaborated to promote the marginalized LGBT community. By including all individuals within organizations, potential positive collaboration might occur.

Next women's management impacted the organization in a positive manner with the stakeholders, the behavior of the board members improved, different perspectives (ideas and strategies) possible personal and professional environment (Burgess & Tharenou, 2002). Shuji et al. quantitative study data revealed the use of archival information did not create opportunities to distinguish between the distribution of power between the talent management team, and the board of directors made this approach weak. Based on the results of this study, primary data collection created different opportunities than utilizing archival data (Shuji et al., 2012). Although incorporating women in the organization created a diverse environment, management has approached

the lack of women in top management teams in this study by viewing how women in male-dominated upper management teams used their diverse methods of listening skills and nurturing abilities impact the team per Shuji et al.

The differences implied within Shuji et al. (2012) and Johnson (2015) the top management teams' presence on women in general impact or influence gender diversity. Shuji et al. discussed the financial impact on legal risk, by examining if the presence of women at the top level create legal risk. The legal risk is the many risk organizations face. The strength of Shuji et al. (2012) study provided insights to view as a representation of acceptable humans in the workforce and gaps difficult to due to the corporate policies created to implement inclusiveness of all cultures as well as the progress of women and minorities in senior-level roles. In Johnson's (2015) qualitative study she provided insights into how essential leadership skills facilitated in the ability of African American women to achieve success. With the increased number of African American women entering the workforce, it is imperative to understand what these women endure as leaders have proven to be critical in creating diverse environments (Johnson, 2015). The researcher continued by discussing how education and religion fields have a high presence of African American women in leadership roles, and less literature written on this population in corporate America leadership positions (Johnson, 2015). The strengths of this study was the number of women in the workforce. The abundance of literature on African American women in leadership roles in education and religion may experience more obstacles (Johnson, 2015). Johnson also intended to discuss the journey of this subgroup population into leadership positions.

She also understood that by interviewing this population of women and collecting data from them their journey to success as leaders may potentially increase the data as well as empower the existing and new leaders within the workforce (Johnson, 2015). In the 21st Century, there was an abundance of literature on white women accomplishment in the workforce; ensuring exposure to younger women can duplicate them in the workforce (Johnson, 2015). The weakness of this article was the sample size of participants who successfully achieved leadership in the top one positions of leadership. Overall question from Johnson's study to society: Are we providing women of color the same level playing field for this population to succeed?

These studies contributed to my current study as to how professional senior executive women of color in management with similar topics are relevant to the positive impact on high technology industries, but the gap explicitly recognized the experiences women of color encounter during their career management as an executive in male-dominated industries. The studies on women in management has provided the in-depth understanding of how critical women are to the professional senior level executive position in the high technology industry. The shift in the population by 2025 will increase the need for women of color to compensate for the limited number of foreign high-tech expatriates entering the US for technology careers (Mack et al., 2013). Also, Allen, French, and Poteet (2016) conferred women representation in high-technology was imperative due to the shift in the workforce.

Women Experiences as an Executive

The representation of women in the workforce has rapidly grown. The rapid growth of women entering the workforce, there was a disproportionately lower number of women as executives (Calder & Ross, 2013). Calder and Ross contended the labor force within their company employ over 75% of the women; however, women only represent 23% of the executives in the organization. Women, however, represented in the Calder and Ross companies' board at a higher percentage around 31%. Based on the literature reviewed on the concept of women's experiences as an executive, the consensus was women aspired to obtain leadership roles and to function as leaders within an organization. Women that aspired to senior leadership may face societal, official, private businesses, and structural business obstacles. Organizational leaders must understand the importance of acceptance of women's norms, and women who employ skills needed that create positive career development (Beeson & Valerio, 2012). Other members analyzed these same leaders who aspire to executives' roles as being too tough in an aggressive or abrasive manner as well as or in conjunction with possibly being too soft which is damaging to their ability to lead members of the organization (Beeson & Valerio, 2012). The strength of this study was to understand the importance of untapped women leadership with limited representation and potential leaders who can replace the baby boomers at the C-Suite level. To decrease the gap in the C-Suite, all members should provide the sources needed, especially women since they are not as represented at that level of authority. Since there was a shortage of executive, organizational leaders must aggressively assess the pool of potential leaders to determine the best candidate to

progress into leadership roles, however, there needs to be better clarity on assessing the potential executives.

Promotional decision makers potentially hinder the future leaders in some organizations due to the unstated criteria needed to advance to the C-Suite. The lack of clarity needed to obtain executive levels impactt women with special challenges to the executive level. The weaknesses of Beeson and Valerio (2012) study denoted that women lack the proper feedback that cannot be validated, and some managers revert to safe feedback. Safe feedback, for example, managers' ability to produce results, or obtain professional development training, or subtle, covert feedback as communication, instead of stating gain skills on conflict resolution and creativity (Beeson & Valerio, 2012). The core issues women endured do not uncover the real concern of skill development to improve their conflict resolution abilities. Very few discussions on high-level men in leadership roles should gain recognition for their practices as exemplary leaders in increasing diversity and develop leaders; these men recognition for adopting these practices in leadership (Beeson & Valerio, 2012). The lack of feedback that could provide women with leadership development and balance in how leaders are assessed may change the outcome for women moving through the barriers in corporate America.

Many women face barriers throughout their career. Davis and Maldonado (2015) concurred women work to ascend into corporate America; the barriers are not easier; in fact, the challenges become more involved. Women demonstrating leadership behavior may not view as such in a male-dominated industry (Walker & Aritz, 2015). The literature reviewed noted women's experiences as executives overwhelmingly impact the

organization, yet a gap exists between the how human resource leaders may not fully understand professional senior executive women of color perceptions on career development in the high technology industry. Next, I discussed how women on boards impact the organization from the quota status as well as the increase of women as executives do not correspond with the number of women in the workforce. Women of boards could expand my current study by demonstrating from empirical literature how women impact boards, not due to quotas, but from a financial impact.

Women on boards. In the literature, many international companies had increased the number of women in leadership executive roles due to implementing quota status (Machold & Farquhar, 2013; Teigen, 2012). The increase of women on boards does not reflect an increase of women in senior executive positions in Australian organizations which remains at 10% as highlighted by Klettner et al. (2014). The researchers implied based on the 2012 Census 278 executives' directors in the ASX 200 as few as 4.3% are women and only seven women functioned as CEOs. In this quantitative study, of the 500 companies and a total of 731 executive directors, of that number only 28 (3.8%) are women, and 12 (2.4%) of the women were CEOs (Catalyst, 2013b). Sealy and Vinnicombe (2013) in the US only 5.7% of the financial posts only 500 CEO's were women. In the UK 250, executive directors in the FTSE were female.

Although in Norwegian organizations, the number of women on boards has increased, the number of CEOs remain at 2% due to the board of director's appointment are non-executive members (Klettner et al., 2016). The strength of Klettner et al. study demonstrated how regulations impacted the increase of women in senior executive roles

and the negative impact on the mid-level roles of women that slowed their upward mobility to the next level. The self-regulation potentially stalled women's growth beyond the mid-level positions in organizations in Australia. The Australian stock exchange leaders implemented codes to increase the diversity in senior executive positions. The weaknesses of Klettner et al. study was the lack of evidence of women leaders in senior executive positions. Although there was an increase of women on boards, there was less of some increase as senior executive women in leadership positions in Australia.

Individuals' must take control of their career advancement by obtaining the higher-level skills to possibly obtain high-level positions. The highlighted ideal model was the ability to act as a male model by working the extended work hours, and constant availability, and starting new assignments (Bierema, 2016; Coffman & Neuenfeldt, 2014). Some women faced daunting negotiating obstacles in male-dominated organizational cultures which created rifts and exclusions in important meetings if they do not speak out and be heard (Bierema, 2016). These same women are less promotable on potential than their male counterparts as concurred by (Tandrayen-Ragoobur & Pydayya, 2015). Organizations without any visible opportunities for promotion for women may restrict policies for hiring women in leadership roles.

Many years after the revolution of the feminist waves women in several industries scuffled as leaders in executive roles. Various organizations have incorporated policies and hiring procedures to overcome the issue of women in a leadership role (Walker & Aritz, 2015; Rosette & Livingston, 2012). Also, one views the differences between men and women in decision-making where women lack prevalence, concluded by Walker and

Aritz. The quantitative case study focuses on 22 mixed groups of participants represented by 110 members as part of the survey and consistently stated the workforce did not view women as leaders, although the researcher identified this population as the leader in the study per Walker and Aritz. Before conducting the study, Walker and Aritz informed the participants the authorities were women in this study. Based on the information provided to the participants in the Walker and Aritz study, the participants selected the male members of the population with authority. The participants in the study Walker and Aritz disregarded women as the authority. Walker and Aritz questioned the two groups of participants as to women acceptance as exhibiting leadership; however, the third case viewed in the study some leadership behaviors not conducive in men dominated organizations. The culture within the organization defines what is acceptable and what is not acceptable.

The organizational culture provides guidance as to how individuals behavior in organizations. Organizational culture represented the acceptance of leadership; overall society recognized women as leaders, however, not as well-known amongst the company despite gender (Walker & Aritz, 2015). Leadership was a standard paradigm like gender (Aritz & Walker, 2015). The strength in the quantitative case study approach provided supportive leadership styles which created a balance within the organization and each department of this study Aritz and Walker. The balance allowed increased opportunities for women upward mobility within the company. As the number increased for women on boards, their values and perspectives impacted the organization financial goals Aritz and Walker. For example, women were not leaders in the 22 mixed gendered teams in Aritz

and Walker's study. These same set of women selected as women with attributes of leadership style.

The strengths of Aritz and Walker's study (2015) was the literature provided clear insights on the value women impact organizations financially and how qualified women have the competencies needed for various high-level positions. The weakness of Aritz and Walker study was not choosing the women as leaders, however, some demonstrated leadership characteristic in a masculine-oriented organization. The weakness of this study one could view when women tend to show leadership trait; not everyone accept women's ability to fit the mold as a leader. Fewer women in leadership viewed men as better fit for leadership roles (Rosette & Livingston, 2012). The current study conducted by Rosette and Livingston does not expand the traits as masculine characteristic of leadership, but the lack of resources for women to develop proactively within the male-dominated organizational culture that supports their roles as executive women. The opportunity to expand on the male-dominated corporate culture was relevant to my current study to understand what support is in place and what possible support to continue the increase of women in the high technology industry. Within the literature reviewed, the ability for women to adapt to the male-dominated behavior of leadership existed in the literature, but the gap exists explicitly to recognize women experiences could encourage more resources to educate and train students, and employers on the importance of inclusion of women as an executive. The dominating group in the Aritz and Walker study were men, who may impact how women assessment in organizations due to men outnumber women in leadership roles.

The empirical literature provided the understanding that women are important in organizations, however, yet the limited number of articles written specifically for women of color importance in career advancement (Aritz & Walker, 2015). More specifically, women's favorable assessment in organizations could provide opportunities for women to advance at the same rate as men due to skill sets. Next, I discussed women's assessment in the organization, which relevance to my current study explores how women's behavior may determine the outcome of their progression in upper senior executive positions.

Women's assessment in organizations. The performance evaluation of women was less favorable based on the perceptions of male supervisors' assessment of women competencies (Lacey & Groves, 2014). Feminine behaviors or masculine behaviors impact women's job performance evaluations in male-dominated organizations (Fitzsimmons, 2012). The performance evaluation of women tends to be in a negative manner when women demonstrate aggressive behavior (Bowles, et al., 2007). On the contrary, men who displayed an assertive behavior or mostly referred to as a domineering manner will not experience the same negative performance evaluation or consequences as women, but a positive experience the same negative performance evaluation or consequences as women, but influence and acceptable behavior by their followers (Allen, French, Poteet, 2016; Rosette, Koval, Ma, & Livingston, 2016). Women obtained lower performance rating as executives when they demonstrate masculine behaviors, however, when men show the same aggressiveness; the behavior is considered acceptable of men without adverse impacts on their job performance (Beeson & Valerio, 2012). The researcher continued that women's behavior was less aggressive and more in line with

soft skills (Beeson & Valerio, 2012). The researchers discussed masculine ways that women demonstrate as opposed to the aggressive behavior of men tend to not fare well which was an ongoing ramification woman endure (Allen et al., 2016; Beeson & Valerio, 2012; Rosette et al., 2016). Potentially the acceptable masculine behavior from men, but not from women may potentially increase women's lack of confidence. Some women have a lack of confidence and can impact others with authority (Kay & Shipman, 2014). In today's shortage of potential managers, organizational leaders must successfully transition new leaders with assessment tools that are reliable.

Members who successfully qualify with reliable assessment tools by talent management advantages may increase in the high potential program process. Lacey and Groves (2014) believed that corporation leaders created high potential programs to gain a leadership pipeline of internal employees successfully. High-potential programs facilitated human resource managers in identifying and develop the organization's talented employees who will have a greater effective commitment to the organization. Organizational leaders understand the diligence needed to compare the competencies of identified high potentials internally and externally ensuring the skill sets against the top-rated competitors (Lacey & Groves, 2014). The scope of Lacey and Groves' qualitative study focused on how organizational leaders target high-potential employees for specific developmental opportunities; however, women members are not as fortunate. The strengths of this study accentuated practice of talent management unintended effects impacted high potential programs revealed exclusions that hindered diversity. The vast amount of benefits for employees' exclusionary were due to the talent management

practices from high potential programs. The authors discussed to improve diversity, talent management practices must provide access to all staff to the high potential programs to improve the unintended boundaries that infringe on growth (Lacey & Groves, 2014). The weaknesses of this study the gap in the literature on the actual unexpected benefits and the talent management practices that will be developed to include diversity by offering practical suggestions for the development of future leaders.

In the qualitative study, the researchers Allen, French, and Poteet (2016) explained there were a constant number of women increasing in the workforce across all fields, yet the gap exists with the same pattern and fewer women obtaining executive board seats are less visible. The strengths of this study provided evidence that women gaining to some extent increased executive roles and the focus on their ability to make decisions which may impact their careers. The researchers appear to elude, although women are obtaining high-level degrees, on the positive side, which seems to compensate or potentially justify why fewer women may be accepted into higher level positions (Allen et al, 2016). The researchers concluded governments have implemented laws to help benefit a more diverse workplace, but the advancement of women structure on the dynamics of demonstrating more assertiveness at the risk of crossing what society view as a going against a gender norm (Allen et al., 2016).

Women have worked for many decades in various non-supportive roles and positions in male-dominated industries (Roger, 2015). The discussion on the relationships that overlap technology and women's leadership in higher education provided insights on their role in leadership across many industries (Rogers, 2015). The inclusion of women in

the traditional fields of computing and information technology, but more in the softer skilled positions as customer service representatives, service desk levels, but no roles in the technical areas. There was an abundance of literature that conveys that women have a disadvantage in technology-based fields. Rogers stated that the men dominated nature of technology, in general still holds the androcentric culture today. Androcentric culture means whether in a conscious or subconscious manner placing what society view as masculine characteristics as the perceptions for all genders in society (Rogers, 2015). Within the study conducted by Roger, she understood that the original leadership positions were men and women held positions in non-technical roles, such as supporting roles i.e. assistants, customer services, and other soft skills roles. The strength of Rogers' study is women understand their presence was low; however, the reason for the barriers and expanding the scope of the studies was to all women.

The importance of socio-culture theory in my current research was to bridge how individuals' personal and professional environment impacts the developmental process through interaction within their environments. Within the literature reviewed, there still exists a gap that does not connect the context with how women interact or respond to their personal and professional environment which may provide an understanding of women of color perceptions on career advancement in the high technology industry. In the next section, I discussed the importance of socio-cultural theory and the impact on women in professional environments.

Sociocultural theory. The workplace could determine one's social identity. Socio-cultural theory based on behaviors the person experiences within their professional

environment, which also affects their behavior in their personal environment (Vygotsky, 1978). Based on socio-culture method individuals develop and facilitate their higher-order, and intellectual development develops (Robinson et al., 2015). There may be opportunities for socio-culture theory may provide opportunities through developing culture artifacts which facilitate in regulating and controlling the behaviors of individuals.

Socio-cultural studies viewed leadership based on the situation in which the person remained within the personal and professional environment to include the organization culture (Burke & Cooper, 2012). The socio-culture theory was used to conduct research in the educational development and global initiatives (Marginson, Kim, & Dang, 2014). For example, Vygotsky has used socio-culture theory on how learning takes place in global mediation (Marginson et al., 2014). Another example of socio-culture theory, and the development of student's cognitive for learning (Collier, Burston, & Rhodes, 2016). The sociocultural theory used as a social networking tool, digital multi-literacy, and teaching with technology (Lomicka & Lord, 2012). As the organization becomes diverse, an ardent mindset takes place to support gaining a larger pool of qualified applicants who represent the population (Godwyn & Gittell, 2012). As qualified candidates graduate from colleges, these women seeking paths to senior-level positions have limited opportunities (Morley, 2013). Women of color with resources in networking, mentoring, and sponsorship underestimates the importance of their skill sets, which limits their chances for achieving their goals (Johns, 2013; Morley, 2013). When networking occurs, the opportunities for women in executive roles may continue to increase at the senior executive level.

Minority progression in executive roles. The change in population over the next few decades will possibly create shifts in the demographics of leaders in the high-tech industry amongst other sectors. The U.S. Census Bureau (2008) reported 42% of the population would be minority Americans by 2025, and by 2050, 53% of the population will become more diverse. Due to the increase in the minority population, organizational leaders should work to obtain qualified applicants as well as facilitate in enhancing leadership studies (Buttner, Lowe, & Billings-Harris, 2012; Center for American Progression, 2015; Chin, 2013). As the support systems change, the possibility to increase the number of women, in general, may provide unique benefits to companies (Billings-Harris et al., 2012; Center for American Progression, 2015; Chin, 2013). Within the reviewed literature, noted women overwhelmingly if given the opportunity in senior and executive leadership roles would impact the organization, yet a gap exists between women of color perceptions for improving career development for females in the high technology industry.

There are beneficial outcomes to companies while women and minorities representation increase in population, as well as in the labor pool, the organizations implement creative methods to hire, utilize and maintain these qualified applicants. In Fortune 500 organizations in 2014, only three women of color represented corporate America top leadership roles (Catalyst, 2016; Rhode & Packel, 2014). On the contrast, the general population does not view women of color as the best fit as leaders (Rosette & Livingston, 2012). Women, in general, are slowed from achieving senior and executive leadership management roles due to out of date social support systems that stemmed from

societal, governmental, private business, and business structural barriers (Johns, 2013; US Congress Joint Economic Committee, 2010). Within the literature reviewed, the benefits for an increased population of women and minorities as qualified applicants, but a gap surfaced between women of color perceptions for improving career advancement for females in the high technology industry.

Progression with females has increased in the hiring process and promotions for men have increased too. Not many minority women or men represented at senior executive levels in the federal government postulated by (Murray, 2015). The National Health Service (NHS) reported in the United Kingdom one of the largest employers of Black and minority ethnic (BME) individuals reported very few minorities progress into senior executive positions (Ashrah, 2013). The two articles potentially provided more evidence on the relevance of my study due to minorities in limited leadership positions in corporate America and global concerns, but also within the federal government.

The limitations of women in corporate America also included immigrant women in senior leadership roles. Women of color immigrants' population were understudied and underrepresented in the literature (Pei-Wen & Munyi, 2015). For example, the Hmong-American are immigrants' women whose increasing presence influenced leadership roles despite their strong Hmong culture (Moua & Riggs, 2012). Hmong-American women endured bias from patriarchal members who also held senior executive positions (Moua & Riggs, 2012). The population of Hmong-American women has begun to emerge into the leadership roles that held at one time by patriarchal members (Moua & Riggs, 2012). Although patriarchal members held higher-level functions, women

continue to progress into senior executive roles. The importance of discussing the Hmong-American females in my current study where society viewed women in general not viewed as leaders (Moua & Riggs, 2012; Rosette & Livingston, 2012). The Hmong-American women at early ages understand that the men are the leaders and females support from behind (Moua & Riggs, 2012). The relevance to discussing Hmong-American women in leadership provides insights to women in generally endured barriers although these women are Americans.

Women in general and more specifically minority women will need to understand there may be challenges obtaining corporate executive positions. Therefore, like most minorities progressing into senior executive roles, the women's awareness was imperative, especially women to understand the challenges they may face while ascending into corporate leadership roles (Moua & Riggs, 2012). Unlike some other minority populations, the Hmong-American women must overcome bi-cultural oppressions to become leaders who often view themselves as lonely and like other women of color, very few role models and mentors to guide this population of women (Moua & Riggs, 2012). Women who have networking resources and role models, their opportunities increased based on the literature (Bickel, 2012; Rogers, 2015). In the next section, identity development was discussed.

Identity development. Identity development was important in an organizational environment (Jackson & Charleston, 2012). Researchers are paying close attention to the personal and professional growth of women obtaining mentorships (Jansen, van Vuuren, & deJong, 2013). Women should understand mentorship is important as well as their

identity development in their upward mobility. Gender identity that women of color faced in an atmosphere predominately held by European American men created different issues with upper mobility career paths for this study's population (Jackson & Charleston, 2012; Johnson, Brown, Carlone, & Cuevas, 2011; Margolis, Goode, & Bernier, 2011). Due to the multiple layers of identity development, women of color endure intersectionality which exposed women to various types of discrimination that created inequalities against women (Crenshaw, 1989; O'Neil, Hopkins, & Bilimoria, 2015). The relevancy of identity development in my current study provided some clarity to inequalities women endure in work environments (O'Neil, Hopkins, & Billimoria, 2015). Falcón and Nash (2015) expressed how intersectionality recognizes different methodologies that have fostered significant scholarly work when capturing the feminist imagination, yet a gap exists on women of color perceptions on career advancement in high technology.

Within this literature, researchers reported the experiences women endure due to their identity development to achieve leadership roles; however, the gap exists in the literature how policies do not reflect the needs of continued identity development for women upward mobility to senior-level leadership. The role models for women are important, and the development of relationships and leadership skills throughout the organization was also beneficial to the organizational culture. The next discussion was the developmental relationship of minorities in STEM and leadership skills of women.

Developmental relationships of minorities in the STEM. Women leadership in the high technology was imperative for relationship development. The developmental relationship of the underrepresentation of women and minorities in the high-tech industry

may be due to the disproportioned amount of ethnic faculty in the high-tech program (Chemers, Zurbriggen, Syed, Goza, & Berman, 2011). In a similar study, the demand for Asian international faculty in the United States STEM programs, minority women some have decided to remain in the field only if there was a strong organizational commitment to add more women (Lawrence, Celis, Kim, & Tong, 2013). Faculty in the STEM programs may work to increase developmental relationships for women in leadership.

The potential change of the organizational leaders' mindset may impact the climate of the organization. As the organization becomes diverse, an ardent mindset takes place to support gaining a larger pool of qualified applicants who represented the women population (Godwyn & Gittell, 2012). As qualified candidates graduate from colleges, these women seeking paths to senior level positions may have limited opportunities (Morley, 2013). With the change in the organizations' population over the next few years, the mindset will need to reflect a more general change to facilitate women in leadership roles. With the reviewed literature, the demand for a professional group of this minority population is available, yet a gap exists with minorities' perception of developing relationships and advancing their career advancement of women of color in the high technology industry.

Each of the studies supports the concept of career advancement was essential in promoting leadership pipeline among women. As evident in this review, there have been several scholars conducting studies discussing women's perceptions toward women progress in the high technology industry from both the negative and positive consequences of promoting diversity at the organizational level. Women impact their

organization in many different methods. Some negative impacts included the lack of diversity in token status of women, regulatory imbalance between professional and personal life (Mišić-Andrić, 2015); sexist views (Bluestein, Medvide, & Kozan, 2012); organizations (Godwyn & Gillett, 2012); to the limited number of ethnic faculty in the STEM degree program lack of mentorship (Chemers et al., 2011); and the underrepresentation of minorities in high technology representation (Mack et al., 2013). On the positive side, the strength of this approach women was increasing numbers in the workforce (Allen et al., 2016; Catalyst, 2014; National Science Foundation, 2013; Mack et al., 2013; U.S. Census Report, 2014); new career models (Kuron, Schweitzer, Lyons, & Ng, 2016); glass ceiling and upward mobility (Thatchenkery & Sugiyama, 2015); and organizations investing in women of color in the high technology field (PCAST, 2012). The impacts women have on organizations have supported literature that was positive and negative.

Although the impact stems from both positive and negative, leadership inclusiveness was relevant. Next was a discussion on inclusive leadership development was critical to women of color in organizations, and this topic was relevant to my current study which may create opportunities due to the change in the minority population (Sugiyama, Cavanagh, van Esch, Bilimoria, & Brown, 2016). The researchers only focused on an institution that has both women's leadership development programs (WLDPs) and general leadership development programs (GLDPs) to obtain participants who are aware of themselves and can relate to maintaining the overall outcome of the business (Sugiyama et al., 2016). The researchers concurred the value of inclusive

relationships mitigates more positive relationship and lessen conflict for those who tend to feel devalued (Sugiyama et al., 2016). The women in the qualitative study on WLDP and GLDP program on inclusive leadership to capture the value of the relationships and identity-based methods by including potential long-term results and high-quality relationships within the team (Sugiyama et al., 2016). The literature presented in the feminist pedagogy, women, will face relational and forms of identity-based leadership because of the challenges in organizations.

The strengths of the study are the researchers understand the importance of focusing on leadership development for women. The weakness of this limited universities included in the study, an only inclusion of 40 leadership programs; there was not an exhaustive coverage that provided clear leadership development programs. Also, Sugiyama et al. believed the constant change in leadership due to scientific, worldwide and regional, previous factors modify the nature of work, consolidating and empathize the current leadership is the problem in fluctuation in the population.

The descriptions for women leadership development programs (WLDP) and general leadership programs (GLDP) accentuated if there is a similarity that reflects differences in how guidance and recognition between the two in qualitative studies by Sugiyama et al. (2016). Leadership development was a journey that one must build throughout their career advancement that creates a leadership behavior that is positive self-reflection (Read, Pino-Betancourt, & Morrison, 2016). Similar, to the CCA Health Systems longitudinal study (Bilimoria, 2015; Hess et al., 2014; O'Neil, & Hopkins, 2015) conducted a study within the realm of leadership development of executive women

obtaining coaching on self-confidence, self-efficacy, influence, and authenticity. The process that may facilitate future leaders involved (a) Instilling the message to emerging leaders that they have personal control over their development; (b) Exposing emerging leaders to successful leaders for observational and social persuasion; (c) Providing opportunities for service in leadership positions, where emerging leaders can experience both success and failure and build their self-efficacy (d) Developmental feedback and encouragement that builds leadership self-efficacy (Read et al. 2016, p. 165).

The strength in the study provided understanding on how nursing students started the program with a lack of confidence (Read et al., 2016). The leaders understood confidence could potentially develop through experiences, extracurricular leadership programs, by responding to the challenges of inclusion, understanding there are broad definitions of diversity; and the development of stakeholders to ensure students opportunity to observe and learn by making connections (Read et al., 2016). The weakness of this study the limited focus on connection women of color to mentors although an example of African American, Asian American, and White students positively gained from faculty mentors. Since the study focused on the leadership program designed for nursing students who did not self-identify themselves as leaders, whose underrepresented and under-resourced in the nursing program impacted by social change model (Read et al., 2016). The researchers contended the leadership program implementation into all the programs across the university will benefit all the underrepresented and under-resourced for better development of personal self-efficacy in

leadership which is a valuable method of best practice and contribute to positive social change within the community (Read et al., 2016).

Leadership capabilities are one resource organizations are promoted to fill the gap with the change of direction due to the baby boomers' retirement and developmental relationship with talent management leadership. This qualitative study approach related to the construct of technology management in the high technology industry as to how women, in general, are essential to this industry. On the contrary, Lacey and Groves' study focused on addressing the corporate social responsibility of employee's behaviors which is impeded most the members who were not selected for the high potential employee's positions. Also, Lacey and Groves believed there should be an expansion of broader basis for members to gain access to high potential programs, by creating a selection process for high potentials, and an assessment tool that is reliable. Women role models are important in the development of relationships and the leadership skills throughout the organization benefit the team. The inclusive leadership means when everyone takes part in the process and not excluded from the process. The next discussion is on women of color mentorship resources.

Women of color mentorship resources. Women of color with limited social networking resources may have limited opportunities to connect with mentors or sponsors who are willing to open doors for qualified applicants. Due to the stigmatization, some organizational leaders view women of color as incompetent in leadership roles; however, this population was vulnerable due to the underrepresentation in significant senior-level administrative positions based on the population proportion in

the United States (Steward & Cunningham, 2014). Several professional women of color, in various industries, reported marginalization and exclusion from opportunities for advancement in their workplace, due to the lack of access to networking, and the isolation from social capital (Ahmad, 2014). The literature that pertained to the underrepresentation of women of color in the high technology industry lacked the rigor that examined the shared experiences endured by these women based on race, gender, and disparities which infringed on their identity development (Davis & Maldonado, 2015; Rosa, 2013). As we develop relationships, the mentorship resources we utilize to obtain mentors is imperative to potential change in our selection process.

Mentorship resources. Mentorship was formal or informal relationship developed between mentors and mentees (Duran, 2016). Mentorship created aspiration capital by understanding how to develop skills and social behaviors necessary for gainful employment (Duran, 2016; Mason et al., 2016). Aspiration capital was the confidence the mentee obtains by connecting with a mentor in a positive manner (Duran, 2016). Mentorship described an important strategy that facilitates in the socialization of new members within the organization to positions and the expectations of the organizational climate, as well as time to develop new skills that allow for continuing strong growth within the organization (Schmoll, 2016). Women of color with limited social networking resources have limited opportunities to connect with mentors or sponsors who are willing to open doors for qualified applicants.

The women are vulnerable due to the underrepresentation in significant senior-level administrative positions based on the population proportion in the United States

(Steward & Cunningham, 2014). The strength in the study conveyed the importance of changing the representation of women of color in the high technology industry was critical to continued identity development of women and more specifically professional executive women of color perceptions on career development within high technology industry (Carter-Sowell & Zimmerman, 2015). Mentorship has been known to be a valuable resource for all women and especially to those of color. I explored the literature about mentorship in various contents. The reports on various experiences women endured related to their identity development to achieve leadership roles in the literature reviewed; however, the gap exists in the literature how policies do not reflect the needs of continued identity development for women upward mobility to senior-level leadership. The workforce accepted mentorship in professional life with the potential goal of success when paired with the right mentor. The next topic was mentorship importance.

Mentorship importance. Race in developmental relationships may challenge mentors of a different race with the discussion on racial issues with mentees. The disclosure from some European counselors thought if their discussion with participants of color excluded issue of race, mentee's might form an opinion of the mentor as a racist, denoted by (Carroll & Barnes, 2015). The avoidance of race topics created barriers and delays the success of the developmental relationship between the mentee and the mentor concluded Carroll and Barnes. The literature does not compensate for any form or resolution to the racial barriers in the report provided. I considered this a weakness in the qualitative approach for the study. The strength in Carroll and Barnes study concurred that if the discussions of race are open, the opportunities to remove assumptions allows

for a better understanding and engagement within the STEM programs. The weakness in Carroll and Barnes' study demonstrated the lack of importance of to understand the perceptions of the counselor and client. The researchers needed to clearly define their positions in the research as to the potential importance to open communication and developing a relationship due to the changing economic standards clients are more apt to utilize the counseling services. Within the literature reviewed and the findings of Carroll and Barnes' study in respect to managing diverse groups the relevance of developmental relationships building, yet a gap exists in the literature of the importance of different populations in the STEM programs and organizations.

In fact, published research provided insights to mentors who broach the topic of race tend to achieve a higher level of personal perception of complex issues, which increase the confidence of the guide's approach to not only race but another delicate topic (Carroll & Barnes, 2015). Within the literature reviewed on the importance of continued leadership development for women in senior level roles, the connections needed between mentors and mentees was apparent, yet a gap exists in the importance of aligning the right mentor with the correct mentee may develop a relationship with the mentor.

Although, these researchers reviewed the concern between developmental relationships and traditional mentorship there are still limitations on specific content that influence the developing networking opportunities (Dobrow, Chandler, Murphy, & Kram, 2011). Networking opportunities for the protégés (mentees) are available to develop relationships with several members of the organization as well as organizations outside of their current organization. For example, if the mentor of the protégé has

developed a relationship and the mentor leaves the group, the mentee has other developed relationships to continue to move forward due to the networking opportunities established (Carroll & Barnes, 2015).

Mentorship of women. The roles of mentors are essential for continued developmental relationships for women skill set as senior-level leaders. The role of mentors is to shape the skill sets of the mentee, which is important how mentor's play in the development process. Mentee's experience was critical in the continued development of the skill sets gained from the mentor (Carroll & Barnes, 2015). The alignment of mentor and mentee at higher level management was not only critical but also involved, postulated Davis and Maldonado (2015). Women obtaining mentors was essential to facilitate the navigation through the internal office politics and provide the needed support (Foust-Cummings et al., 2011; Dworkin, Maurer, Schipani, 2012). Mentors for women could stem from various members for minority mentee's, which provided developmental relationships between any relational dyad with a senior leader (Carroll & Barnes, 2015). Individuals in the workforce should not assume senior-level executives who hold specific roles automatically are great mentors within organizations.

The assumption senior level mentor experienced exceed someone with less experience, and, therefore, should serve as mentors based on their experience and no other contributing factors could produce a broken relationship (Alvarez & Lazzari, 2016). The problem with pairing junior executives with senior executives limits the intensity of trust the junior executive has with the top executives and thus place constraints on the effectiveness of the connection between the mentor and the mentee (Alvarez & Lazzari,

2016). The clash with the senior executives may be opportune and unanticipated and not fully understood or respected (Alvarez & Lazzari, 2016).

The strength of Alvarez and Lazzari's (2016) study provided insights on how closely developmental relations is important to mentorship selection, and how mentors engage with mentees. The weakness of the researchers' study was the lack of discussion on the importance of learning from the council members who hold leadership positions as well as their experiences in leadership positions. The discussion included how to conduct leadership, meaning what you learn from colleagues in the position as leaders. Within the literature reviewed on the importance of appropriate mentorship for women in junior level positions to senior level roles, and the connections needed between mentors and mentee's, yet a gap exists in the importance of aligning the right mentee with a mentor who contributed more than experiences. The relevance of this study to my ongoing research was the benefit of understanding the importance of relationship building between mentors and mentees not only based on experience but other contributing factors. Like an open dialogue that may remove assumptions between mentor and mentee creating an open relationship.

Professional senior executive level women of color perceptions, feelings and values perhaps provided human resource leaders open dialogue with the women of color in high-tech fields could encourage future career advancement and initiatives. I emphasized the gaps within this research area by understanding the perceptions of women of color view of career development in the high technology field. While

recognizing the shortcomings of the literature, it was imperative to synthesize the related concepts discussed within current literature.

Synthesis of Related Concepts

The literature review in my study included an examination of 200 plus studies based on the established criteria earlier in this study. The criteria for my study how human resource managers do not fully understand the professional senior executive level women of color perceptions on career advancement in high technology. The participants will be a citizen of the US, a woman of color, minimum age of 25 years old, women of color who have worked for five years in the high technology field, and at least the first level of executive management, director level or a higher level. The various forms of articles reviewed were non-peer-reviewed literature, dissertations and peer-reviewed articles on women was often qualitative due to the increasing number of women entering the workforce has continued to grow in the 21st century (Key et al., 2012). Women in qualitative studies provided opportunities for women's voice in many phenomena's. The data collection consisted of various sizes, men and females, secondary data, and hypotheses from quantitative studies.

My research may fill the gap in the literature on women of color perceptions on professional senior executive feelings, experiences, and values on career advancement in the high technology industry. This transcendental descriptive phenomenology qualitative study was aimed to investigate how professional senior-level executive women of color experience career advancement in the high-tech industry. The overarching research question and the sub-research questions were used to explore, in depth, with the

participants, how the data collection utilized from the empirical studies in the subject area of women in the high technology industry. Throughout all the qualitative literature reviewed from various sectors through the lens of the participants: stories, course development, training for women in leadership roles, and identifying the various complex problems in the limited roles women have obtained in the senior leadership role as denoted by Stake (2013). The quantitative data suggested consistently that there was still a big gap in women of color in senior executive was significantly low numbers not only internationally, but in the US industries (Klettner, Clarke, & Boersma, 2016). The authors explored some reason why the increase of women in the workforce are not impacting the board of director's seats at a higher number, although there these women have increased their visibility in board seats and upper levels in senior executive roles (Klettner et al., 2016). Based on the overall literature presented in my study, the importance of women obtained senior management positions based on their skill sets and ability to change the organizational culture within the organization was important.

On the other hand, several of the quantitative authors tend to believe women confidence could be the problem that impeded women's upward mobility to senior level positions. The effect of the glass ceiling for women's career development was the problem as contributed by Bombuwela, Alwais, and Chamaru (2013). Several factors, i.e., individual, family, organizational and culture factors could also impede women's growth into higher level roles as hypothesized in the study by Bombuwela et al., (2013). Further, Bombuwela et al. used a sample of 150 executive women to conduct a self-administered questionnaire. The analyst found that individuals, organizational, and

cultural factors contributed to the glass ceiling and the career advancement of women semi-moderate negative relationship, but family factors impacted the glass ceiling.

Not all members of the corporate world believe in the glass ceiling. Although there was empirical literature that details glass ceiling, Rai, and Srivastava (2010) enunciated glass ceiling does not exist. These authors stated women accepted lower paying jobs, lower salaries, and left their positions midway through their career due to their personal reasons (Rai & Srivastava, 2010). Rai and Srivastava believed the glass ceiling was a myth and women can obtain higher paying jobs based on their skillset, and their ability to work hard. Another researcher also discussed how family obligations play a role in their career development midway through their careers (Archard, 2013). Hence, there are family responsibilities that arise in women's careers that slow their progress to higher level positions, as a gap postulated by Bombuwela et al. (2013) in the empirical literature available from the perspective of Sri Lankan women on the glass ceiling.

These studies provided data on the lower pay women receive and how family obligation impacts career advancement. My research expanded on this area as stated above from the perceptions that human resource leaders may not fully understand professional senior executive women's feelings, attitudes, and values on career advancement in the high technology industry. Also, recognizing career advancement was important for all women, to know the fundamental concept related to the literature review was imperative. Global organizational leaders understand the increased number of women in executive leadership due to implementing quota status (Machold & Farquhar,

2013; Teigen, 2012); however, there still was a gap in the literature on women of color perceptions on career advancement in high technology.

The increases of women on boards do not reflect the same increase of women in senior executive positions in Australian organizations which remained at 10% as highlighted in the study (Klettner et al., 2016). The researchers implied based on the 2012 Census 278 executives' directors in the ASX 200 as few as 4.3% are women and only seven women functioned as CEOs by Klettner et al. In the quantitative study, in the 500 companies and a total of 731 executive directors, 3.8% are women, and 2.4% were CEOs (Klettner et al., 2016). Although their findings are consistent, the representation of women in the workforce, but not in the same numbers as senior executives. Within the fundamental concept of women in high technology career advancement, management should engage in fair assessments for promotions within the organization while providing the same rights and responsibilities to both genders on the same salary level, based on experiences and knowledge (Bobuwela et al., 2013). If women are working to change the perceptions of others in the workforce; women must not take on the Queen Bee phenomenon effects and not perform their duties based on the characteristics of males. Women are working at the highest level within the organization as qualified women with the nature of what these women view as attributes of women (Bobuwela et al., 2013; Ellemers, 2014; Derk et al., 2015).

As researchers consider the underrepresentation of women in the senior leadership position, women underrepresented in various countries; there was a variation because of parliamentary quota status systems (Bierema, 2016). Women worldwide highly represent

the top leadership positions in many industrialized organizations than developing countries (Gladman & Lamb, 2012), and with the implementation of quota systems, some women's presence increased (Soares et al., 2011). Fortune 500 leadership roles, women, have been immobile in the executive leadership roles around 14% for females (Catalyst, 2014b), however in 2013 Catalyst (2014b) reported that of the women in the workforce, women hold 24% of the senior executive roles. On the contrary, there has been an increase of women in corporate boards from 1995 from 9.6% to 16.9% in 2013; there was an increase of women in corporate board seats and senior executive positions (Soares et al., 2011). As we learn more about women on board seats, more information from the qualitative approach increased the understanding of women's perceptions.

The qualitative approaches were rich in the description of women in management from various careers focused on understanding why women do not represent board seats as well as higher representation of women as CEOs. Therefore, leadership development program must address the challenges of inclusive of all members and should have the same accessibility to the programs (Read, Vessey, Amar, & Cullinan, 2013). Sugiyama et al. (2016) study provided an analysis of WLDP and GLDP provided a training structure that supported the inclusion of leaders in organizations and maintains enduring partnership outcomes from diversity. The expansion of leadership literature increased and recommended inclusion leadership training for managers to incorporate in organizational training (Sugiyama et al., 2016). Although several authors discussed women's barriers in corporate America, women experiences as an executive, leadership development from the perception of women of color was not part of the research.

Inclusive leadership may construct inconsistency and undesirable results that lessened over encouraging affairs and regarding of various characteristics (Sugiyama et al., 2016). Based on the literature to obtain top executive leadership board positions; senior leaders must work through the leadership pipeline to secure those positions which are not as available for senior executive than for non-executive level members (Klettner et al., 2016). The disproportionate changes in board members globally and domestically do not mirror women in the workforce or the talent pool when selecting new board members'. Potential leaders who may have a different ideology of cultural changes might offer different perspectives. Organizational board members should not seek members to replace their ideologies, as postulated by Fitzsimmons (2012). Buse, Bernstein, Sessler, and Bilimoria (2016) emphasized when board members are seeking new members; similarity bias takes place. Similarity bias occurred when the new members have attributes like the person who one replaced (Fitzsimmons, 2012). Also, she expounded that similarity bias was not as ubiquitous and women's evaluation in a new constructive way than men. Organizational leaders understand the difficulty or that there are not as many senior executive women available for administrative roles concluded by (Klettner et al., 2016). The trend to increase women in the various senior executive positions may be due to what others may view as a lack of opportunity.

The experience women endured through management positions change due to the impulsive decline in some women confidence and opportunities due to the masculine stereotyping some members deem as successful executives in U.S organizations (Bierema, 2016). The authors discovered women's confidence changed due to the

stereotyping and not motherhood which was unconnected to women approach or attainment to higher level positions (Bierema, 2016). Women experiences as executives are sometimes desolate, due to the difficulty to connect with role models, and less encouragement to integrate into male-dominated cultures when women must adapt to performing as the ideal worker likeness (Bierema, 2016). The connection with the right role model may need more studies on women in general.

These studies provided literature that women of color in the workforce need more study and research, as well as evidence indicating the literature, does not include career progression of ethnicities. Therefore, my study may expand the research on women of color as well as increase the opportunities of other ethnicities to understand the perceptions of women of color on career advancement despite the limited number of studies on women of color. My current research increased the understanding of how senior executive women of color perceptions on career development in the high technology industry by the inclusion of developmental leadership systems. The BME reported very few minorities in the UK progress to upward mobility roles, as well as in the United States federal government lack of minority women or men in senior-level positions which provide the need to discuss this information in my current study. The importance conveyed in the present study one of the United States largest employer and other organizations will need to increase the presence of minorities in senior executive level roles due to the demographic shift in the population over the next decade. Constant changes in leadership create exclusivity when leadership opportunities need to be established at various levels within the organization (Sugiyama et al., 2016). Women's

leadership development provided relevance to my ongoing study (Sugiyama et al., 2016). Leadership development with women, in general, is increasing. The inclusion was necessary for the benefit of the organization.

To integrate inclusion, leaders must address the challenges a diverse population may endure on their journey into leadership roles by developing relationships and expanding leadership skills. The developmental relationship in organizations allows for the improvement of the professional social milieu for women in various groups (Janssen et al., 2013; Madera, 2013; Richard, Roh, Pieper, 2013). Although members of the workforce and management understand the importance of mentoring, there was not a formalized mentorship initiative developed in some organizations; comprehensive diversity strategies should implement mentorship programs to influence programs the effectiveness. Mentoring was a leadership development tool when applied that reaffirms the mission of the organization (Sabharwal, 2013). As we have learned about mentoring, the continuous support of the development networks was important.

Research early development stages contributed as an extensive occupation of progressive support roles in the developmental networks, as expressed by Janssen, van Vuuren & deJong (2013). The approaches presented in the review and synthesis related to the research questions from women of color perceptions on career advancement in the high technology industry. With the expansion of developmental relationship, the support system change was unknown while including both forms or relationship building and mentoring.

Summary and Conclusions

In summary, Chapter 2 was an exhaustive review of the literature related to the concepts of the study, the perceptions, feelings, and values of professional senior executive women of color perceptions on career development in the high technology industry (Carter-Sowell & Zimmerman, 2015). I viewed the literature related to the organizational culture theory, leadership pipeline model, and Krumboltz's theory of career counseling. Within those theories and model, I discussed several studies that illustrate the importance of women, in general women dominate men in the population. Also, in the past four decades, women have entered the workforce in various paid roles at a faster rate than their male counterparts. There was progress on work-life balance. Some countries have public policies in place. The past literature on diversity in the high technology industry attributes to several platforms. What the past research revealed the importance of a diverse organization with a culture where women and more particularly women of color can thrive which created benefits for the organization in the global worldview (Mack, Rackin, & Woodson, 2013). The need to expand women and women of color (PSCAT, 2012) was vital to the continued growth due to the shift in demographics over the next few years (Buttner, Lowe, & Billings-Harris, 2012; Chin, 2013; Center for American Progression, 2015). Research provided evidence that identity development was necessary and an advantage to the organizational culture.

The specific problem was that human resource leaders do not fully understand how professional executive women of color perception on career development within high technology industry (Carter-Sowell & Zimmerman, 2015) in the Eastern region of

the United States. The literature dwelled on prominent research constructs that included three major concepts of women in high technology and 18 supportive related concepts. In Chapter 3, I discussed the research procedures and the study's projected research proposals and the rationale. I then discussed the research role; a flow chart developed for the research process, methodology plans, and issues with trustworthiness, transferability, conformability, credibility, dependability, ethics concerns, and the conclusions. The segments related toward this phenomenological descriptive qualitative study design.

Chapter 3: Research Method

Introduction

The purpose of this transcendental descriptive phenomenological qualitative study was to understand how executive women of color experience career advancement in the high technology industry through the lens of a qualitative approach. The study started with a gap in the literature, due to which human resource leaders may not fully understand the perceptions of professional senior-level executive women of color regarding career advancement within the high technology industry. The population of this transcendental descriptive phenomenological qualitative study included professional senior executive women of color with experience in career advancement within high-tech management. A descriptive approach enabled me to obtain meaningful, rich, and exhaustive details that are unique to the journeys of professional senior executive women of color as leaders in the high technology industry (Carter-Sowell & Zimmerman, 2015; Kay & Gorman, 2012) in the eastern United States. The aim of this study was understanding the lived experiences of professional senior executive women of color in relation to career advancement in the high technology field. During the interview process, I captured the voices of women who had experienced the phenomenon as it occurred.

The aim of this transcendental descriptive phenomenological study was to understand the experiences of executive women of color in career advancement in the high technology industry. The population of this study included professional senior executive women of color within the high technology field. Improved prospects for women, in general, in the high technology field may lead to changes in the design of job

descriptions and may create environments conducive to women's development rather than creating women to fit the environment. Issues of concern include women earning the same salaries as their male counterparts, women remaining in the high technology field/industry, and sustainable growth of women of color in the high-technology field/industry. Additionally, I discuss ethical procedures, issues of trustworthiness, data analysis, and data collection. In the next section, I focus on the objectives, research design, and rationale.

Objectives

In order to gain an understanding of advancement opportunities for women of color, I worked within the organization to identify an efficient instrument for employee training and continued senior executive development. Human resource development leaders could determine gaps in skills, knowledge, and performance (Li, Wai-Lung, Lam, & Liao, 2011) to partially resolve the underrepresentation of women in high technology management. The existing literature lacked information on the feelings, experiences, and values of women of color on career advancement in high-tech management (Carter-Sowell & Zimmerman, 2015). The research problem was that human resources leaders may not understand the perceptions of professional executive women of color on career development within the high technology industry.

In this chapter, I present the research design and the rationale for selecting a descriptive phenomenological approach, discussing my role as the researcher as well as the methodology, instrumentation, data collection, and data analysis plan. Additionally, I address issues of trustworthiness.

Research Design and Rationale

The roadmap for this study was the research design. The selection of a research design for a study depends on the problem statement and the research questions. The transcendental descriptive phenomenological methodology is appropriate for research based on the influence of what the participant view as the phenomenon, the behavior, and what was important (Shank, 2009; Sheehan, 2014). A transcendental phenomenology approach allows the essence of a phenomenon to emerge from the experience of the participants (Moustakas, 1994). A phenomenological methodology study allowed me to study the phenomenon from the explicit experience of the participants. Furthermore, this approach conveyed the related shared lived experiences of the phenomenon.

The problem statement and the purpose of the study allowed the development of an overarching research question (ORQ) and four subquestions (SQs) to understand the feelings, perceptions, and values of professional executive women of color on career advancement in the high technology industry. The questions developed were the following:

- ORQ: What are the feelings, perceptions, and values of professional executive women of color on career advancement within the high technology industry within the eastern region of the United States?
- SQ1: What do women of color who are in senior executive positions feel about their organization's career advancement process?
 - SQ2: What do women of color who are in senior executive positions value about the career advancement process in their organization?

- SQ3: How do women of color experience career advancement as executives?
- SQ4: How do women of color perceive their identity as leaders?

The ORQ and four SQs provided the alignment necessary for the interview questions I developed, as presented in Chapters 4 and 5.

One of the central concepts for this study was organizational culture theory, which involves the communication of corporate values and observed behaviors, routines, and practices (Hatch, 1993; Homburg & Pflesser, 2000; O'Reilly et al., 1991). The second central concept for this study, the leadership pipeline model articulated by Charan, Drotter, and Noel (2011), indicates the importance of developing leaders within an organization based on the organization's internal talent. Finally, the learning theory of career counseling (Krumboltz, Mitchell, & Jones, 1976) indicates that there are four factors in career advancement; in this study, environmental conditions and events served as the focal point. These conditions and events are outside the control of the individual, whether they are planned or unplanned; they take place due to the actions of the individual, culture, political policies, environmental disasters, and career preferences (Krumboltz, Mitchell, & Jones, 1976).

The identified research tradition for this study was qualitative. Grounded theory was not selected for this study due to the existence of other theories that could support the study (Corbin & Strauss, 2015). Another qualitative approach, ethnography, encompasses culture observations (Kemperapi & Chavan, 2013) and was not appropriate for this study. Ethnography stems from anthropology and provides an opportunity to study an entire culture in a broad range. Ethnography was not used for the current study because

ethnography's requirements are extensive and the participants observed as a significant portion of the field study.

Unlike researchers conducting ethnography, case study researchers do not immerse themselves in their studies as active participants. A case study can provide a rationale for specific content for this study because it is focused on a specific group of people and specific content. However, the structures of a case study can involve various designs and methods. A case study's purpose is to explore the individuals involved in a phenomenon using several data sources (Yin, 2009). A case study answers *how* and *why* questions. Therefore, a case study was not appropriate for this study since the focus is the what and how of the participant's voice. The researcher guides a case study in keeping with what he or she deems relevant to the study (Yin, 2009).

The rationale for the use of a transcendental descriptive phenomenological design was that human resource leaders may not fully understand the perceptions of professional executive women of color on career advancement in the high technology industry. Phenomenology allowed the participants to share their lived experience in relation to the phenomenon, which was the best approach for my study.

Role of the Researcher

As the researcher, I functioned as the instrument. I was pivotal in collecting the data. A qualitative researcher is part of the study he or she conducts, as well as its primary instrument (Erlingsson & Brysiewicz, 2013). I approached this study through a postpositivist lens, due to the participant's reality (Yin, 2009). A postpositivist approach was helpful in uncovering meanings in the data. Unlike researchers using a positivist

lens, through which reality can be verified or predicted (Yin, 2009), postpositivists tend to think that the information provided reflects a perception of reality and that verification is unrealistic due to each person's experience of the situation.

As the researcher, I was pivotal in collecting data, performing data analysis, and interpreting the collected data. The primary method of data collection was in-depth, semistructured interviews. Stereotypical gender biases were carefully avoided. As an African American woman, I did not have personal or professional relationships that imposed any subjective findings on the participants. I had no informal or formal power over any of the participants at any time during or before the study.

To manage researcher bias, I gathered the data in brackets, themes, clusters, and trends. The transcendental descriptive phenomenological approach provided the opportunity to collect and analyze data using Colaizzi's seven-step strategy (see Table 4). To lessen my chances of bias at the onset of the study, the data analysis contributed to rationality, as recommended by Zenobia et al. (2013). As I conducted research for this study, I followed the literature presented by acknowledging any prejudice or preconceived thoughts and subjectively placing any of my personal findings aside to ensure that personal experiences did not change the dynamics of any themes (Girgio, 2009; Zenobia et al., 2013). By developing and using a semistructured interview guide with open-ended questions, I maintained a focus on the purpose of this study.

I did not have professional contact with the participants once the data collection process finished. I implemented a phenomenological approach to data collection. Other methods for maintaining credibility for my study included triangulation and the use of

interviews and field notes. Participants were selected from different locations throughout the eastern region of the United States, from different organizations, and from different roles. In bracketing my bias, I sought to ensure that participants would not feel inhibited in providing honest information, due to the limited interview timeframe. I had intended to perform telephone interviews and use a Zoom teleconference webinar audio recorder. However, the participants opted only for the telephone conference and handheld audio recorder. Therefore, Zoom was not used to contact the participants. I used Dedoose qualitative software and manual hand coding for data management and organization. To illustrate and explain this research process, I provided a flowchart in Figure 6.

No major issues surfaced during the field test, other than an expansion of *Interview Question 7* (Do you feel your personal identity as a woman of color has changed since taking on a leadership role in the high technology field or industry?) The first field test participant questioned the word choice in *Interview Question 7*. For better quality, I introduced the term character along with personal identity. Because the term *character* implied similar content, the study continued. If major changes had been made, I would have asked to make modifications of the proposal through the Institutional Review Board (IRB). One participant in the field test was a family member of mine by marriage who resided in a different state; I have never formally met this individual. Based on responses to the interview questions, I interpreted and analyzed the information within a thematic analysis. The interviews were audio recorded, and I transcribed the data within 24 hours of each interview. I performed the analysis to address the overarching research question and subquestions.

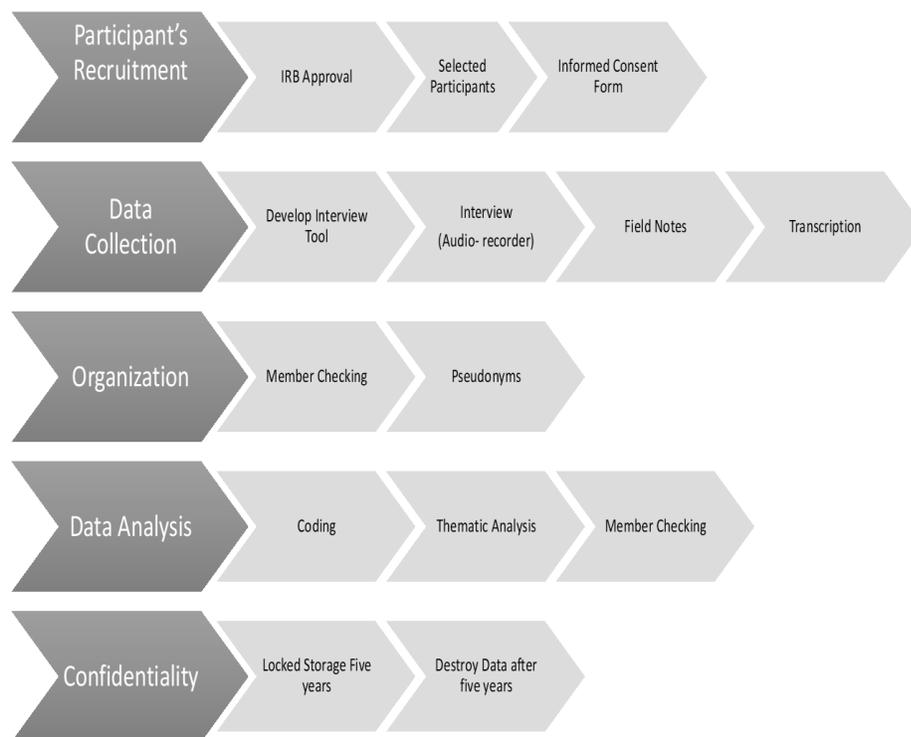


Figure 6. Flow of the research process.

Figure 6 depicts the flow of information in the research process, based on the work of Jones (2016). The diagram includes five processes pursued to complete the study. First, I engaged in participant recruitment, which included seeking IRB approval, selecting participants, and distributing the informed consent form. Second, data collection involved interview tool development, field notes, and transcription. Third, the organization involved member checking and the assignment of pseudonyms. Fourth, data analysis included coding, thematic analysis, and member checking. Fifth, confidentiality involved protecting participant information by placing it in locked and passcode-

protected electronic data storage for 5 years, after which the data will be shredded, burnt and erased from all electronic sources.

Methodology

The methodology section of this study describes the approach taken for this transcendental descriptive phenomenological study. A researcher must constantly review the methodology to ensure that the overarching research question is answered. Qualitative methodology was appropriate to the research based on the influences of what the participants viewed as the phenomenon, our behavior, and what was important (Shank, 2009). Erlingsson and Brysiewicz (2013) contended that qualitative research tends to enhance a study. The qualitative design addressed this study's purpose as well as the overarching research question and subquestions; the descriptive phenomenological approach allowed a focus on the perspectives and views of the participants (Bloomberg-Volpe, 2012; Brod, Tesler, & Christensen, 2009; Denzin & Lincoln, 2011; Flores & Matkins, 2014). Transcendental descriptive phenomenological design was appropriate for this study because the phenomenon of interest required the *voice* of the participants, reflecting internal aspects of their lived experiences. Additionally, this study focused on how human resource leaders may not fully understand the perceptions of professional senior executive women of color on career development within the high technology industry (Carter-Sowell & Zimmerman, 2015) in the eastern region of the United States.

The voice of the participants provided opportunities to collect information on themes related to this transcendental descriptive phenomenological study. Unlike quantitative methodology, a qualitative approach allows the participants to introduce

themes based on the structure of interview questions (Charleston et al., 2014). The qualitative approach not only ensured critical awareness in this study but more importantly, made it possible to determine how to make a positive difference (Shank, 2009). Qualitative research provides rich data from participants about phenomena experienced in a natural environment (Sousa & Oz, 2014). The phenomena experienced in this study allowed me to gather the data.

Qualitative researchers understand that gathering data is not an easy process. The qualitative approach allows for a focus on presenting rich descriptions (Krogh & Lindsay, 1999). In that the overarching research question and subquestions called for the collection of in-depth data directly from participants who had a shared lived experience, a qualitative approach was most appropriate for this study. The research tradition was transcendental descriptive phenomenological design, which allowed the *voice* of the participants to emerge in this study.

A researcher listening to participants may gain a better understanding of a topic under study. In a descriptive phenomenological design, researchers provided a sense of understanding of the phenomena by the participants (Giorgi, 2012). Descriptive approach used intentional details of the experience as contended by Giorgi. In using a qualitative research approach, I provided the opportunity to the participants from multiple concepts of various realities of life as to what truly makes sense in the shared situations. For a phenomenon to be captured within a descriptive phenomenological qualitative design, Giorgi (2009) contended the participant must have been present at the time of the *experience's* occurrence. A descriptive phenomenological approach not only provided the

voice of the participants but also provided access to the *anecdotal experiences* that gave original meaning to the reflective conscious and the thought of *being* during the phenomena (Holloway, 2005).

A phenomenological design was the focus of a phenomenon experienced by the constructs of the individual's shared experiences. Descriptive phenomenological design detailed a pivotal time in the participants lives regardless of the length of time the occurrence (Giorgi & Giorgi, 1998). The fundamental concepts used for the phenomenological design allowed me to place their ideal objective in a none personal space that validated the decisions and findings of the participants (Sousa & Oz, 2014). Phenomenological design when utilized produced eidetic results with verification using only phenomenological models (Sousa & Oz, 2014). Dankzer and Hunter (2012) criticized qualitative research approach as not being as scientific as the quantitative design method. But, Sousa and Oz continued by including qualitative research provided rich insights to the participant's *experience* with the phenomena within the natural environment. All studies must follow a methodology suited for the problem, rationale, and the research questions.

The rationale for selecting this approach for this transcendental, descriptive, phenomenological study was because the central phenomena were to understand the experiences of women of color and their views on career development (van Manen, 1990; Moustakas, 1994; Giorgi, 2009). The methodology must be considered based on the research questions and the nature of the study to maintain the purpose of the study

(Clough & Nutbrown, 2014). While structuring the correct methodology based on the research design the importance of participants' selection method was important.

Unlike quantitative studies, the qualitative approach allowed the participants to introduce themes based on the structure of the interview questions (van Teijlingen, 2014). Transcendental, descriptive, phenomenological design was appropriate for this study due to the phenomenon of the study required the voice of the participants from an internal aspect of their lived experiences. This approach not only ensured the critical awareness of this study but more importantly, I viewed how to make a difference in a positive manner (Shank, 2009). Qualitative researchers understand gathering data is not easy, nor a pure abstract of information (Sousa, 2014). Since, the overarching research question and subquestions employed in-depth data collection directly from the participants, who have a shared lived experience; a qualitative approach was the most appropriate for this study. The implementation of word cloud provided the clarity of the frequency of the codes and themes from the data collected. The research tradition for this type of study was a transcendental descriptive phenomenological design which allowed the *voice* of the participants in this study.

Participant Selection Logic

The participant selection process for this study involved a snowball sampling approach. The sampling strategy involved a snowball sample of 15 participants (Roy, Zvonkovic, Goldberg, Sharp, & LaRossa, 2015). The identified sampling for this study was women of color for my study: African-American, Asian, Latina, Egyptian, Native American, Caribbean women, Pakistan, Egyptian women and other women of color who

resided on the Eastern regions of the United States of America. This sample provided the justification and significant for delving the gaps in the literature to describe the values, feelings, and experiences of women of color advocate for a positive social change on career advancement in the high technology industry. I recruited the participants from LinkedIn, Yahoo Group, and other appropriate social media sources.

The sampling strategy for my study was intended to target 15 professional senior executive women of color who worked or currently employed for a minimum of 5 years in a high technology field at a supervisor, manager, an executive level, director or higher implementing semi-structured, open-ended interview questions. Snowball sampling allowed for the rationalization for the best approach to obtain the goals of my study. The participants must meet the criterion and based on: women of color, participants were a citizen of the US, minimum age of 25 years old, have five years working in the high technology field at the first level of manager, supervisors, directors, executive management, or higher. I estimated approximately 60 minutes' interview time.

The personal contact with the participants obtained the needed responses for the study. The participants must be fluent in English, to facilitate the data collection process and ensure the accurate collection process. To gather sufficient data there had to be a balance between the sample size and sampling strategy during the data collection phase. In qualitative proportions, the number of participants was smaller than quantitative sizes (Miles et al., 2014). The 15 members identified in this research were professional executive women of color who work or have worked in the high technology located in the United States in the Eastern region. The data selection process and manual hand-

coding allowed for triangulation. Transcendental descriptive phenomenology studies, however, are specific to a group of individuals who have shared lived experiences of the same phenomena of the research inquiry.

Instrumentation

The primary data collection included a researcher-development instrument, sixteen questions, semi-structured open-ended interview questions tool (Appendix F) facilitated in answering the overarching research question and the subquestions. The researcher developed instrument established the validity of this study due to the interview protocol questions derived from the overarching research question and the sub research questions for the participants. The interview guide ensured that the focus remained on the scope of the study based on each participant interviewed. The development of the interview guide was a critical component in qualitative studies as believed by (Krogh & Lindsey, 1999). The phenomenological approach allowed an interview strategy according to van Manen (2014). I set aside any preconceived notions or knowledge and allowed the phenomenological interviewing process that the participants' real-life experiences are expressed. Phenomenological approach interviewing questionnaires are not the same for all researchers. The objective of entering the interview process was to allow for experiences of the participants (Maxwell, 2013). Semi-structured interviews involved in-depth conversations with the participants, which was governed by the interview protocol, but conducted by the participants lived experiences as concluded by (Krogh & Lindsey, 1999). The conversations with the participants allowed for an in-depth interview for data collection.

Qualitative computer-assisted data analysis and manual hand-coding was used to manage the data collected from the interview. Dedoose is a qualitative data analysis software demanded translucence with methodological accuracy (Dedoose, 2017). Dedoose software and hand coding were utilized to protect the files, real-time updates, coding, data organization, and retrieval of coding, linking devices to Dedoose analysis tools, search and interrogating the database, output, and team-working (Seror, 2012). In Table 3, I denoted the configuration of the semistructure interview questions in alignment with the overarching research question, subquestions, and conceptual framework concepts.

Table 3

Alignment of Interview Questions

Interview questions	Overarching research question	Subquestions	Theories
IQ1, IQ8, IQ16	ORQ		OCT, LPM, KTCC
IQ1, IQ3, IQ7	ORQ	SQ1	OCT
IQ12, IQ13	ORQ	SQ2	LPM
IQ2, IQ5, IQ15, IQ8, IQ14, IQ11	ORQ	SQ3	LPM
IQ4, IQ6, IQ9, IQ10	ORQ	SQ4	KTCC

Field Test

I utilized two volunteers with similar backgrounds to the study. I submitted to the volunteers with the interview guide, scheduled the interview based on the availability of the volunteer. I sent the volunteer the consent form with a return email stating “*I understand and consent to participate.*” Tools utilized during this process included field test invitation letter (Appendix B), field test consent form, demographic questionnaire

(Appendix D), and interview questions (Appendix F). Each of these tools is listed in the appendices. I implemented the data collection as discussed in the large-scale study and the small-scale field test.

A field test was used to conduct the reliability of the test instrument adequacy (van Teijlingen & Hundley, 2002). The field test is a smaller version of the larger scale referred to as a feasibility study (van Teijlingen & Hundley, 2002). A field test with two participants will facilitate to validate the semi-structured researcher developed interview guide. A field test is a small-scale methodological test replica of a larger scale study to ensure the ideas works intended (van Teijlingen & Hundley, 2002). The two participants who took part in the small-scale field test did not participate in the final large-scale field test.

If major changes were needed, I would have contacted IRB to request approval to make the needed corrections should any issues occur from the field test. The participants utilized in the field test did not participate in the large-scale sample population. The large-scale populations will not mix, however, determine the significance of the sample population interview questions suited for my current study in response to the overarching research question and sub-questions. The large-scale study of the interview protocol required up to 60 minutes and allowed the researcher the opportunity to determine the trustworthiness as well as the appropriateness of the interview guide.

Field test provides researchers the opportunity to test the instrument before the main study. For example, a field test on autism screening provided parents with earlier treatment on infants ages 7-15 months old (Rogers et al., 2014). A rural area in

Zimbabwe, researchers conducted a field test on adolescent sexual behavior discovered the tools in place were inappropriate, due to the cultural norms, styles of teaching, and the relationships within the school system (Power et al., 2004). The next example, insulation for home field test suggested the erosion of the product design (Howden-Chapman et al., 2007). These qualitative study researchers could implement changes that were needed before conducting the large-scale studies due to implementing the small-scale field test with their potential population.

The participants utilized in the field test did not participate in the large-scale sample population. The two populations will not mix, however, determine the significance of the sample population interview questions suited for my current study in response to the overarching research question and subquestions. The small-scale field test of the interview protocol will allow the researcher the opportunity to determine the trustworthiness as well as the appropriateness of the interview guide (Amankwaa, 2016). I have provided the IRB approval number for the approved proposal on documents. The field test provided the standards for the participants in the data collection process.

Procedures for Recruitment, Participation, and Data Collection

I recruited large-scale participants with a recruitment flyer and snowball sampling. I posted the recruitment flyer (Appendix C) on LinkedIn, Yahoo Groups, and other forms of appropriate social media to obtain qualified participants. Once I received a response, I submitted to the potential participant an invitation letter (Appendix A), with criteria for participating, followed by a consent form and a demographic questionnaire (Appendix D) which is optional in an email. Researchers must understand the essentials

to having a plan to recruit participants as well as data collecting (Seidman, 2013). I obtained written permission for recruitment after the approval from Walden University's Institutional Review Board (IRB). The IRB approval number was displayed in the appropriate location in the study.

Recruitment. I solicited research participants with a recruitment flyer in LinkedIn and Yahoo groups (Appendix C) by snowball sampling techniques. I also utilized several appropriate social media sources for recruitment. In the literature, research participants target other informants who fit the criteria for the study by recruiting from multi-source (Marcus et al., 2016). Researchers, in general, use snowball sampling to recruit participants. There was very little-published research to determine the potential biases using snowball sampling (Marcus et al., 2016). Snowball sampling has been used in a web-based self-administered questionnaire with graduate students, clinicians, policy makers (O'Brien & Rickene, 2016). Another study used snowball sampling in midwifery education in the United States is not as racially diverse as women of color's experience of maternity care offered (Wren & Donnelly, 2016).

The selected participants for my study signed a consent via email acceptance in the email subject line or the body of the email "*I understand and consent to participate.*" The consent form provided to all participants before the start of the interview process. I conducted all the interviews via telephone for up to about 60 minutes. Once the completion of the interviews, I thanked the participants for taking the time to participate in the process. I also provided each participant a copy of my interpretation of the interview for member's checking via email within two days for review and their analysis

of the content to ensure the proper essences extracted. Some participants requested the transcripts; I provided those participants who requested a copy of the transcripts. Member's checking was a validation technique used in research publication (Brit, Scott, Cavers, Campbell, & Walter, 2016). Member's checking in qualitative research to diagnose patients with melanoma by providing the participants the opportunity to have contact with the researcher after the interview to provide clarity of the collected data (Brit et al., 2016). Although member's checking used in many qualitative studies, there are some researchers believe there was a misrepresentation of the participants, by the participant to the researcher (Thomas, 2016). The researchers understand the participants purpose of the phenomenon may be different than that of the researcher (Brit et al., 2016). I advised the participants to ensure I captured the essence of their lived experiences; and if needed, I intended to follow-up with contact for clarity. I also advised the participants if I do not receive a response within one day (24 hours) from receipt of the interpretation, then I considered the data correct, and the analysis process began. The data collection process consisted of recruitment, outcomes from the field test, and interviewing all participants.

In this study, I interviewed 15 participants and met data saturation at 10 participants, however to ensure I captured the rich voices of the participants, I continued until I obtained the 15 women so not to miss any new information. The snowball sampling approach used to select participants, included criteria of professional executive women of color with a minimum of five years-experience at the level of supervisors, managers, director or higher, fluent in English, on the eastern region of the United States

of America. Once the recruitment requirements are met, I obtained participants for my study through the various appropriate social media sources.

The personal contact with the participants obtained the needed responses for the study. The participants must be fluent in English, to facilitate the data collection process and ensure the accurate collection process. A recruitment flyer (Minichiello et al., 1995) in LinkedIn, Yahoo Groups, and other appropriate social media mediums, within the Eastern region of the United States to advertise for participants. The method for recruitment of participants is a critical component of all research studies, as well as the recruitment of a correct number of members to validate the research data (Minichiello et al., 1995).

Participation. Participants were required to sign a consent form electronically. An electronic signature can come in the form of an acceptance in the body of an email or subject line, stating *“I understand and consent to participate.”* The consent form will be provided to their personal or professional e-mail to each participant and then signed electronically before the interview. The participant was encouraged to utilize their personal email so not to appear as a conflict with their professional work hours. Before the start of the interview, the participants understood their participation was voluntary and at any time they can stop the interview. I solicited 15 participants for my study. Data saturation took place when there was sufficient information the researcher can use to replica with new information or when additional coding does not generate any new themes (Fusch & Ness, 2015). At the end of the interview, the researcher started the member’s checking process requirements, verify the participant's email and inform the

participants to expect within one to two days an email with the interview interpretation of the interview. I continued to promote the study by distributing the recruitment flyer until 15 potential participants have been obtained. While promoting with the recruitment flyer (Appendix C), I ensured the potential participants resided on the eastern region of the United States and meet the criteria for the study. If at any time during the process, the participant had the option to not continue with the study due to the participant's willingness to volunteer their time and lived experience. If at any time the participant would decline to continue with the study, I continued to promote the recruitment flyer to replace the member. I followed up with participants for clarification for any section in the data collection from the semi-structured interview tool.

Data collection. The interviews were scheduled via telephone and Zoom teleconference based on the participant's preference. Based on the responses from the interview questions, I conducted the interpretations and analyze the information based on a thematic analysis. The recorded interview session was transcribed manually within 24-hours of the interview returning for members check. I performed the initial analysis by manually hand coding to address the overarching research question and sub research questions.

The overarching research question and the subquestions were used to develop the interview questions. Phenomenological interviews break down the questions to understand the nature of the interview (Hoffding & Martiny, 2015). The *what* of the interview from the nature of the interview based on the participants encounters with the researcher and the knowledge gained from experience together from all the participants

(Hoffding & Martiny, 2015). To relax the participant before the interview, I developed a rapport with a casual conversation about working as a female that will display openness. The data collected mainly through semi-structured and open-ended interview questions. The importance of the participants was important, pseudonyms, and a unique numeric identifier to ensure privacy. The participant may feel comfortable enough to ask questions. The interview questions are semi-structured and open-ended (see Appendix F). At the end of the interview, I thanked the participant for volunteering their time for my study.

Data Analysis Plan

The research design drives the research problem and the overarching research question, subquestions, which included how to collect the data and the strategies used to analyze themes. The objective of this transcendental descriptive phenomenological study was to understand how professional senior executive women of color experience career advancement in the high technology industry. The data analysis was a critical component in conducting research, which also overlapped with an interpretation of the data, yet the two are conceptually very different (Cridland, Jones, Magee, & Caputi, 2014). The interview questions steered the participants towards gathering the information which was relevant to answering the overarching research question that guided the data collected. Qualitative research data collection may support the purpose of the study (Yin, 2016):

- the study of everyday life with similar relationships; based on real-world conditions;
- expressing the interpretations and perspectives of the participants;

- covering the contextual situation of the lives of the participants;
- contributing insights into current or developing concepts that might facilitate with human social behavior; and
- striving to use various sources of evidence rather than relying on one source.

I divided the data analysis into two major cycles of coding. The first cycle of coding initially was in the form of data chunks which summarized the collected data (Miles, Hubermann, & Saldaña, 2014). The second cycle of coding was chunks of summaries and device into smaller themes (Saldaña et al, 2014). The data analysis was a critical component in conducting research, which also overlaps with an interpretation of the data, yet the two are conceptually very different (Cridland, Caputi, Jones, & Magee, 2014). I replicated strategies of Edward and Welch (2011) using Colaizzi's data analysis and use the seven steps listed in Table 4.

Table 4

Data Analysis Methods

Method	Process	Data analysis process
1	Transcribe	Transcribe the participants' description of phenomenon
2	Extract	Extract significant statements directly related to participants
3	Interpret	Interpret the findings extracted from participants' phenomenon
4	Categorize	Categorize the codes and themes with similar meanings
5	Describe	Describe the phenomenon provided by the participants
6	Identify	Identify the premise of the phenomenon
7	Validate	Validate through analysis with participants (members checking)

In Table 4, Colaizzi's (1978) seven step analysis was described: (a) transcribe the data from the interview to legible transcripts; (b) extract-highlight chunks of statement that are significant; (c) interpret-develop meanings to the significant statement related to

the participant experience; (d) categorize-organize the clusters of themes from the groupings of identified meanings; (e) describe-connect all related themes to the initial interview to validate the participants' description of essential structures; (f) identify-join the cluster of descriptions that demonstrates the essence of the participants' information; (g) validate- member check to determine if the essence of the interview captured the participants shared experience (phenomenon) (Colaizzi's, 1978; Kleinman, 2004; Thomas, 2017).

Colaizzi's (1978) seven step analysis was not new to phenomenological descriptive qualitative studies. Many authors have used phenomenological descriptive qualitative in their studies utilizing Colaizzi's method of data analysis on the lived experiences of commercial sex workers concluded by Abalos, Rivera, Locsin, and Schoenhofer (2016). Secondly, some researchers studying nursing have utilized Colaizzi's seven step analysis which allowed the participants to express their experiences with everyday words (Edward & Welch, 2011). Thirdly, the same researchers utilized Colaizzi's seven steps as an extension for analysis allowed metaphor as symbolic representations as for the voice of the participants describing their experiences of a phenomenon (Edward & Welch, 2011). Peri-operative nurses have used Colaizzi's seven step analysis for an in-depth understanding of protective eyewear in the operating room to fully understand the behaviors and attitudes of nurses' beliefs on wearing protective eyewear (Neo, Edward, & Mill, 2013). Nursing curriculums researchers are implementing Colaizzi's descriptive phenomenological method inquiry using antidotal evidence to describe the perceptions of the student, yet limited research has been

conducted on in-depth experiences on service-learning populations in the inner cities (Knecht & Fisher, 2015). Colaizzi's seven step analysis was used to understand the perspective of homeless individuals who received healthcare and how that encounter influenced the homeless behavior to seek healthcare services (Rae & Rees, 2015).

As I have read, there are several peer-reviewed literatures written using Colaizzi's seven step analysis to break down the data collected from the interviews. As the breakdown takes place with qualitative analysis, the qualitative interpretation provides a new perspective on understanding the data, however maintaining the essence of the original data collected (van den Hoonaard, 2002). Transcribing was also considered a method of data collection and is very critical in reflecting the experiences of the participants during the interview process (Caputi et al., 2015). Dedoose qualitative analysis software enabled the researcher to organize the collection of the transcript interviews for data management. The involvement of participants in data analysis was a new concept but an important process (Dockett et al., 2009). Member's checking ensured the essence of the data collected was the rationale behind involving participants (Dockett et al., 2009).

I took field notes that provided a consistent flow of information gathered during the interview process, initially Zoom meeting conference would have been the recording device, and however, none of the participants selected Zoom and opted for a handheld audio recorder. To transcribe the participant's interview, I utilized audio to text. Dedoose (2017) qualitative data analysis software provided the trustworthiness for data management which represented the qualitative approach provided the validity for this

study. Manual hand coding also provided the quality and a better understanding of the participants' thoughts and experiences.

By better understanding the experiences of the data collection, Word cloud provided codes from large chunks from data collected for visualization of the themes that emerged. The Word cloud generated patterns based on the interview guide responses from the participants are guided and not manipulated (Bletzer, 2015). Word cloud provided significant impact on the frequency of data collected codes and themes. Dedoose software to analyze the organized data collected from the participant's interviews into themes to understand the fundamental phenomena while maintaining the perceptions of the member's shared lived experiences. If any discrepant cases occur, I treated the data that might challenge the expectations or any emerging data. No discrepant cases occurred during the study process.

Issues of Trustworthiness

Credibility

Credibility involved researchers understanding the terminology associated with social sciences, rigor, checking the interpretations of the participants, triangulation, observation, and reliability. To ensure the proper techniques implemented, researchers recommend achieving the precision in a study observational engagement must take place, rich description; negative case analysis, peer-reviewed, member checking, and researcher bias (Morse, 2015). Credibility entailed utilizing literature studies based on the individual's interpretation to reach critical conclusions that are consistent and visible (Rooney et al., 2016). Also, I provided the participants with a copy of the transcribed data

collected to ensure the essence of their interview aligned with their actual interview for members checking (Carlson, 2010). When implementing multiple data sources, credibility improved the study. There were no discrepancy cases in the study that required further investigated.

As the study moved forward, credibility was obtained as the researcher maintain contact with the participant during the study. The credibility due to the researcher maintains contact with the participant during the study. Credibility was assessing reliability due to procedures from systematic review evaluating if the study conducted compromised the outcome of the findings (Rooney et al., 2016). Although the reviews on triangulations in research are mixed, one author debated implementing triangulation fosters a higher level of understanding the phenomenon (Hussein, 2015). Triangulation also takes place when multiple data sources are used to enrich the understanding of the study (Amankwaa, 2016). Member's checking was performed by providing the participants with a copy of the interpretation from the participants' interview to ensure the essence from their lived experience. The participants had the opportunity to verify the translations of the transcription for credibility.

Triangulation was more often used by qualitative researchers versus quantitative researchers to study the validity of the phenomenon (Hussein, 2015). Triangulation from the researchers' perspective was to find the commonalities of the group and not that of the individual cases (Durif-Bruckert et al., 2015). Triangulation included findings from research studies from a priori reasoning based on the original qualitative studies triangulated (Finfgeld-Connett, 2010). Member's checking was used to complete

triangulation. The credibility came from acceptance by the audience, and any uncertainty identified in the study as stated by Miles, Huberman, & Saldaña (2014). The discussion on the participants' credibility allowed for possible transferability to other populations.

Transferability

Transferability of my study may transfer to other studies and populations.

Transferability allowed the findings from my study to disseminate potentially to other populations that may not be the same as the current study participants (Finfgeld-Connett, 2010; Shank, 2009). Although transferability was the idea for research studies, Finfgeld-Connett stated all research methods were tentative to any new studies. Miles, Hubermann, and Saldaña (2014) concluded to transfer data from one study to another properly; there must be sufficient data that developed that permits a viable comparison sample for the studies. The researchers must implement consistent data collection methods to ensure credibility based on the research results as postulated (White, Oekle, & Friesen, 2012). Hence, why I applied an interview guide protocol (see Appendix F) that focused on the overarching research question and the sub-research questions with the participants based on their shared lived experiences of the phenomena. Although the results are in the study, the responsibility that of the reader to base their decision on their ability to understand the resolution as postulated by (Marshall & Rossman, 2016).

The reader must understand if the data collected could transfer in my qualitative study. Transferability in a qualitative design provided appropriate characteristics for the researcher as the primary instrument during the collection of data and analysis. I employed fieldwork in this study due to as an inductive research strategy that produced

rich, exhaustive results from the participants, as recommended by Yin and Volkwein (2010). Transferability was equivalent to external validity in quantitative studies, that related to the commonality of the participants, their surroundings, and the time in which the issue took place that was comparable to the population in the study as postulated by Hays, Wood, Dahl, and Kirk-Jenkins (2016). I input the data collected from the participants into Dedoose, which was a digital computer software program to facilitate the researcher's ability to organize and analyze data in no ordinal manner from an unstructured data collected from the interviews.

Dependability

Dependability was when a to clear path of collecting the data until we complete the study. Dependability was the findings Carl and Ravitch (2015) postulated as the interview protocol response appropriately for my current study's context with the expectations of variations. The role of the researcher should have a clear description of the study; the data collected were from various disciplines and other populations, as stated by Miles, Hubermann, & Saldaña (2014). Triangulation was one method to attain reliability. In additionally, members checking and conducting the field test also ensured the reliability of the interview protocol (Carlson, 2010). I captured the voice of multiple professional senior executive women of color lived experiences that provided the triangulation of the outcome.

To ensure triangulation, I utilized various method of triangulation to obtain a full understanding of the participants by conducting researcher developed semi-structured interviews. To ensure triangulation, I utilized my researcher's journal which should

provide the expression of thoughts and ideas of the members during the interview. I also manually hand coded the data collected which included triangulation of the data.

DeDoose was a digital data analysis software which utilized to compare data in a digital compilation, organizing, and reorganizing the collected data from Colaizzi's seven step data analysis.

The researcher's journal, I maintained from the start of the recruitment process, through data collection, and from Colaizzi's seven step data analysis. Colaizzi's seven step analysis allowed other researchers the ability to replicate the study. I organized the data collected derived from the interview protocol with Dedoose data analysis software. By utilizing the journal, interview transcriptions, and Dedoose data analysis as a part of the research process, and those tools became the tool for confirmability to evaluate the data gathered.

Confirmability

Confirmability looked at the methodology, I utilized as the researcher. Confirmability was the data collected in a neutral manner (Houghton et al., 2013). To achieve confirmability checkpoints and revisions for clarity throughout the study which included employing members check by the participant to ensure the essence of their interview was correct. Members check involved outsiders viewing the notes and collected data the researchers used to make a study to ensure data gathered information was what the researcher claims (Shank, 2009). Confirmability took place with an audit trail, triangulation, as well as reflexivity (Guba & Lincoln, 1989). Confirmability aligned with the methodologies used to gather significant data for analysis (Shank, 2009).

Confirmability was a clear map of studies similar to the current study (Shank, 2009).

Guba and Lincoln defined audit trail a clear lens of the research study steps taken from the onset to the findings of the study.

Throughout the study, the supervisory committee ensured the minimum standards are met and guided me through the process. Additionally, any issues that may arise to ensure confirmability about the accuracy of the collected data with participants, the researchers relied on the participants' perceptions (Houghton et al., 2013). The researchers postulated the ability to follow the sequence of the data collection process and the conclusions achieved from the study was another means of confirmability (Miles, Hubermann & Saldaña, 2014). To obtain the lived experiences of the participants and the essential words, I utilized the telephone and audio recorder to capture their verbal language which provided clarity and validity of the participant's interview. The participants selected what method of recording best fit their needs. To clearly understand the participants, I engaged in none specific questions that are unstructured, but to gain clarity or to allow the participant the opportunity to expound on their experiences. The rigor of the systematic approach in qualitative research design and the process of data analysis involved the interpretation and the presentation of the data (Hays, Wood, Dahl, & Kirk-Jenkins, 2016). These researchers contended dependability and rigor characterized with honesty, and rationality (Hays, Wood, Dahl, & Kirk-Jenkins, 2016).

The rigor of the systematic approach in qualitative research design and the process of data analysis involved the interpretation and the presentation of the data (Hays, Wood, Dahl, & Kirk-Jenkins, 2016). These researchers contended dependability and rigor

characterized with honesty, and rationality (Hays, Wood, Dahl, & Kirk-Jenkins, 2016). The rigor established by the Hays et al., involved confirmability, the reader, and participants needed to determine the trustworthiness of the information provided in the study. In the researcher's journal and audio recording of the participant's points of view used to outline the steps taken provided the rigor and other researchers could transfer the data into a new design. The researcher's journal provided additional evidence illustrating not ethical procedures were not implemented. The implementation of the researcher's journal provided additional evidence illustrating ethical procedures.

Ethical Procedures

The process of conducting a research study was to implement ethical procedures to ensure the voice of the participants and not the voice of the researcher. The IRB has a responsibility to ensure the process was ethical, and the researcher followed the written guidelines as established by Walden University. As the researcher, I complied with the identified ethical procedures per Walden University. After IRB approval, I attached the approval number to the study to include the expiration date that accompanies the study.

Agreements to gain access to the participants included invitation letter (Appendix A), recruitment flyer (Appendix C), and the consent form for the large-scale study participants. Now, there are no ethical concerns that I saw in my research study. While conducting the audio-recorded interview, I treated all participants with professional courtesy in a business-like manner and utilized active listening skills to develop a rapport with the participants. The informed members decided to continue to take part in this study; the voluntary interview took up to 60 minutes. I recorded the interviews as well as

wrote field notes on a notepad while continuing to engage with the participant. Once the researcher completed the interview, the transcription of the interview took place which the participant verified to ensure the accuracy of the data collected. The participants at any time during the study have the right to withdraw due to the content of the study.

No foreseen ethical issues were noted to gain contact with participants as the proper protocol was followed by Walden University standards. I securely stored agreements from all participants with the ethical standards for five years. To ensure confidentiality of the results of the study, I informed the participants that Walden dissertation supervisory committee and I had access to the data collected. I secured and passcode locked all electronic data for five years and all the written documents from the interview, completed recordings, transcribed interview, and field notes in a locked filing cabinet. There was no foreseen associated risk identified for any participant in my study.

To ensure the participants partake in the study during a time when she was not at work unless the participant chooses to complete the interview; I scheduled the participant based on the participants' convenience and availability. Recruitment flyers provided to participants' and the informed consent form stating there was no monetary value for completing this interview process. The participants' efforts contributed to a positive social change by promoting professional senior executive women of colors perceptions on career advancement in the high technology field/industry. In the event, if a participant distributed emotional issues during the audio recording of the interview, in the recruitment package the participant received an available list of resources (see Appendix J) as a source for free services for women in management industry.

As the researcher, I have proactively managed any potential conflicts of interest, by utilizing the snowball sampling within an industry and individuals who I do not have any personal contact. To limit any psychological relationship or legal economic risk, I am conducting the interview via telephone based on the participant's choice of comfort. At no time, I could determine the participants psychological, or any economic standards, pregnancy, or physical risk. I believe by not disclosing the physical characteristics of the participants I am reasonably ensuring the participants comfort to disclose the needed data during the interview.

If at any time during the interview, if the participant requests to end the interview due to discomfort with the questions, I stopped the recording, and thank you, participant, for the information gathered and refer them to the recruitment package for any resources that may help them move forward as an individual. There was no monetary value for participating in this study. None of the participants reported any discomfort due to the interview questions.

Summary

The transcendental descriptive phenomenological qualitative study allowed for the understanding of professional senior executive women of color perceptions on career advancement in the high technology industry. The research revealed that women had increased their numbers in high-tech. The literature reviewed does not reflect this increase in senior level positions. In particular, women of color who have obtained senior level positions are unsure if their career advancement linked to their womanhood or the color of their skin. Based on the literature, women at all levels feel as though their

performance assessment is not as favorable when some men assess their skill sets, which lead to fewer women obtaining higher executive roles.

The premise of the study was a transcendental descriptive, phenomenological, qualitative design. The overall Chapter 3, I intend to delineate the primary roles of the researcher and the responsibilities for conducting research based on the standards and ethical procedures guided in the IRB process. In Chapter 4, I discussed the summaries of the demographics and the study results. I continued to conclude the overall responses from the participants based on the interview questions derived from the overarching research question and the sub-research questions in this transcendental descriptive phenomenological qualitative study. The chapter concludes with the overall responses from the participants based on the interview questions derived from the overarching research question and sub research question in this transcendental descriptive, phenomenological, qualitative study.

Chapter 4: Results

Introduction

This chapter focuses on data analysis and findings from the 15 interviews I conducted with professional senior executive women of color. The purpose of this transcendental descriptive phenomenological research study was to understand the perceptions of women of color on career advancement in the high technology industry in the eastern region of the United States. To address the study's purpose and the research question and subquestions, I conducted a qualitative thematic analysis based on interviews with the participants. I used Dedoose mixed method analysis and manual hand coding to assist with coding all the findings from the interviews. The overarching research question (ORQ) and subquestions (SQs) were the following:

- ORQ: What are the feelings, perceptions, and values of professional senior executive women of color on career advancement in the high technology industry?
- SQ1: What do women of color who are in senior executive positions value about the career advancement process in their organization?
 - SQ2: How do women of color experience career advancement as executives?
 - SQ3: What do women of color who are in senior executive positions feel about their organization's career advancement?
 - SQ4: How do women of color perceive their identity as leaders?

I have provided in this chapter an overview of the key results concerning the perceptions of professional executive senior-level women of color on career advancement

in the high technology industry. In this chapter, I describe (a) the field test, (b) the research setting, (c) demographics of the participants, (d) the data collection process, (e) the data analysis, (f) evidence of trustworthiness, and (g) the final results of the study. In Chapter 5, I provide a final discussion, along with conclusions and recommendations.

Field Test

In June 2017, I conducted a field test. The field test offered an initial view of the reliability and the validity of the tool administered by me with a sufficient number of participants to ascertain the thematic analysis for the study. A field test allowed me the opportunity to test the instrument with a small group of individuals with similar background knowledge of the targeted population and research topic (Simons, 2011). The structure of the field test ensured that all questions were understandable and relevant to the field test participants' responses (Angeli & Valanides, 2004). The field test volunteers consisted of a prior military veteran who had over 20 years of experience in high technology and the director of a nursing technology program at a local community college with over 30 years of experience in the medical field. These women of color resided in the eastern region of the United States while performing their duties in the high technology field.

The field test volunteers received a copy of the interview guide, the consent form, the demographic questionnaire, a resource list, and an invitation letter so that they could make a well-informed decision to take part of the study. The volunteers had an opportunity to gauge the time potentially needed to respond to the questions and to complete the interview thoroughly. The first field test participant questioned the choice of

wording in *Interview Question 7* (Do you feel your personal identity as a woman of color has changed since taking on a leadership role in the high technology field or industry? If yes, how? If no, why?). *Field Test Participant 1* asked if I should consider changing the term *personal identity* to *personal character*. *Field Test Participant 1* also asked for clarification on *Interview Question 1* (Describe your feelings as a professional senior/executive woman of color in the high technology industry. Please explain.) Specifically, she wanted to know the meaning of the term *feelings*. I provided her the definition of *feelings* according to *Merriam-Webster's Dictionary*, in which a *feeling* is described as an emotional state or reaction. In addition, she discussed Question 7, she stated by adding the term *character* would clarify the question. "Do you feel your personal identity [character] as a woman of color has changed since taking on a leadership role in the high technology field? If, yes, how? If, no, why?" I considered what she said and decided to add the term *character* to see how *Field Test Participant 2* would respond. *Field Test Participant 1* stated that the questions were well constructed.

Field Test Participant 2 stated that the questions were well thought out and therapeutic in a sense some areas you think about but not dwell on the topic. *Field Test Participant 2* discussed how the questions provided her with a better understanding of what she had experienced, but she did not allow others biases to slow her progression. She worked harder and excelled in obtaining the position she had at the community college level.

Once each participant viewed how applicable each interview guide questions, which provided a gauge as to the amount of time that might be needed to complete the

interview in the large-scale study. Based on the field test participants' responses, there were no major alterations to the interview guide questions. As recommended by Simon (2011), I used two women of color participants for the field test, due to 20% of the aggregated pool of participants for the large-scale study should be presented in a field test. I conducted the field test with each of the volunteers via telephone at an agreed-upon time. Based on the field test, I started the larger study without making any changes to the approved proposal. The recruitment flyer and invitation letter successfully attracted potential participants, and the informed consent form provided clarity regarding procedures as I recruited participants. Based on the field test, I expected participants to spend an average of 45 minutes on the study. I gathered 22 pages of rich, descriptive information that pertained to their shared lived experience. As described in Chapter 3, the field test was conducted separately from the main study.

As stated in Chapter 3, the field test was critical to obtaining the needed tool for the main study, and the data collected during the field test were not used for the final dissertation study. The two field test participants were volunteers with backgrounds similar to those of participants in the large-scale study. The interview guide was modified according to the suggestions of the field test participants.

Research Setting

My research study began on June 9, 2017, with the two volunteer participants in the field test study. I started the main study immediately after I had completed my field test study on June 11, 2017. To capture participants' thoughts, I conducted telephone interviews, using an audio recorder for transcription purposes only. I collected data from

professional women of color from various states in the eastern region of the United States, which encompasses some areas in Indiana; certain regions in Tennessee; certain regions in Kentucky; Georgia; South Carolina; North Carolina; Virginia; Pennsylvania; Connecticut; Rhode Island; Delaware; Massachusetts; Maryland; Washington, DC; Maine; New York; New Jersey; Alabama, and Florida. The participants selected the format in which they were comfortable completing the interview, which was by telephone. The participants chose interview times and days that worked with their schedules. I made myself available to conduct the interviews based on their schedules. As the researcher, I ensured that the interview area was quiet, and I articulated the questions clearly and precisely. I actively listened to the participants, and if their responses were unclear, I asked them to repeat and expound upon their responses.

In Figure 7, I use black dots depicting the participants as an indicator of the origins of the 15-professional senior executive level women of color in the eastern region of the United States. The demographics map illustrated below the 17 eastern states over the United States. The 15 participants derived from nine of the 17 states in the eastern region.

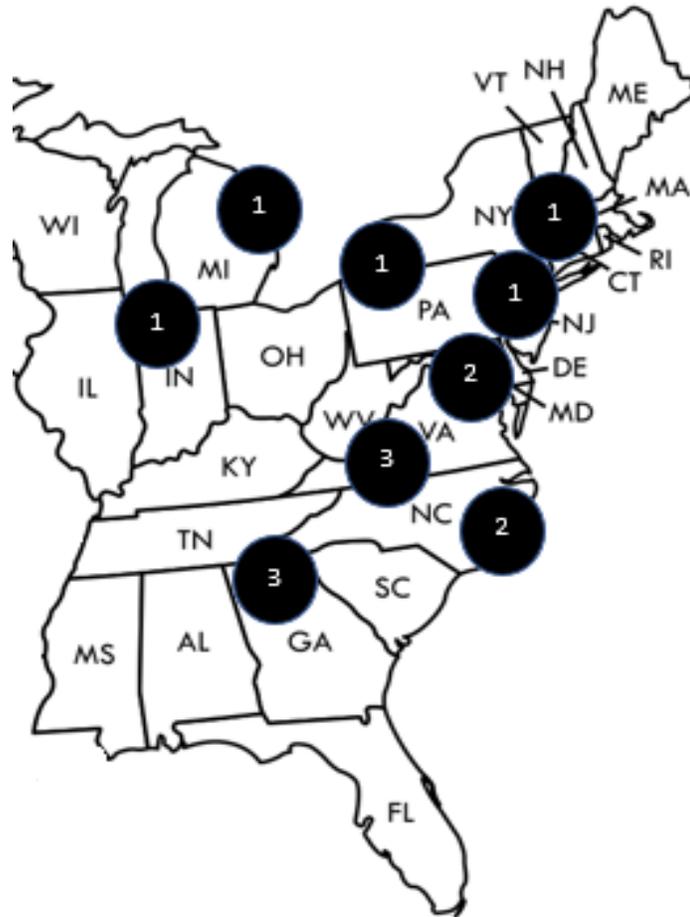


Figure 7. Demographics of participants.

Demographics

I gathered demographic data on the 15 participants, including the state of residence, ethnicity, and experience in the high technology industry. The participants' characteristics are listed in Table 5.

Table 5

Participants' Demographic Characteristics

Participant	Ethnicity	State	Years in the industry
1	African American	GA	19
2	African American	MD	10
3	Caribbean American	CT	10
4	African American	VA	10
5	African American	GA	20
6	African American	MI	15
7	African American	NC	9
8	African	IN	10
9	African American	GA	10
10	African American	VA	20
11	Hispanic	VA	20
12	African American	PA	7
13	African American	MD	10
14	African American	NC	9
15	African American	NJ	20

Data Collection

I recruited the participants using LinkedIn, Yahoo Groups, and other appropriate social media. I provided the participant's information on the study's purpose and nature to gain their trust, explaining that their participation had the potential to promote positive social change for women of color in the high technology industry. Semistructured, open-ended questions were used that allowed the participants latitude in their responses.

All the participants received a recruitment packet via email. Once it was established that a participant met the study requirements, she could return an email with the statement "I understand and consent to participate." Each participant determined the best time for an interview, and I was flexible in my availability. At times, participants

rescheduled due to other obligations. However, all 15 women agreed to participate and completed their interviews.

Using the field test interview guide, I noted interviewees' experiences and perceptions. The interviews were conducted during scheduled times from 5:30 a.m. until 9:30 p.m. from June 10 to June 29, 2017. The interviews were up to 60 minutes in length. During one interview, the participant had to take another call. A day later, I contacted the participant to reschedule; when the participant returned my call, we completed the interview. I made myself available for the participant to complete her interview.

I explored topics with each participant that allowed me to attain rich, thick data that I might not have been able to compile if I had used a quantitative approach. The interview tool in Appendix H consisted of the interview questions, which had undergone a field test with two volunteers with backgrounds like those of the study participants. Due to the semistructured, open-ended design, each participant presented as much information as for her comfort level allowed. In this method of interviewing, there are no right or wrong responses. The interview guide allowed me the latitude to explore the data I gathered from the participants. A researcher should not have any preconceived expectations as to the responses a participant will offer in an interview; the researcher should provide opportunities for the conversation to flow in a natural way (Hesse-Biber & Leavy, 2010). Once I had completed an interview, I asked the participant if she knew of anyone who might be interested in taking part in the study who would meet the study criteria.

To prevent researcher bias, I used *epoche*, which involves viewing the phenomenon (experiences) from the perspective of the participants rather from the perspective of the researcher. Epoche takes place when transparency amongst the data collected through *consciousness* that disclose the experiences through the eyes of the participants in an open manner (Moustakas, 1994). Epoche provided an opportunity for me to view the phenomenon in a new way through others' experiences. To protect the privacy of participants, I incorporated data masking.

Data Masking

In reporting the results of data collection, I have protected the identity of the participants by using confidential, unique numeric identifiers to mask their names and the identities of any organizations that they mentioned during their interviews. I assigned pseudonyms for an extra layer of privacy protection.

In Table 6, I provide a unique identifier, a pseudonym, and the number of years in high technology for each participant. Once I had completed data masking, I moved on to data analysis. As outlined in Chapter 3, data analysis involved the use of Colaizzi's strategy and Dedoose software and the incorporation of manual hand coding.

Table 6

Data Masking

#	Unique numeric identifier	Pseudonym
1	12200601	Denise Morrison
2	13083701	Shirley Chisholm
3	16180201	Maggie Wilderotter
4	17155601	Anacaona
5	17121501	Zit Kala-Sa
6	141320501	Annie Lee Cooper
7	143102081	Ella Baker
8	15382615	Harriet Tubman
9	16515682	Diane Nash
10	16856812	Amelia Boynton
11	17682101	Madam C. J. Walker
12	12848671	Mary McLeod Bethune
13	11281465	Ruby Bridges
14	16766051	Dorothy Height
15	26748611	Audre Lorde

I saved the telephone interview file on my personal laptop with a secure passcode to ensure the privacy of the participant, along with the unique numeric identifier developed from the participant's state of residence, the time span of the interview, and the time at which the interview took place. The unique numbers were impersonal; to convey the humanity of my participants, I selected pseudonyms for them, using the names of historic women leaders representing many organizations and ethnicities.

Data Analysis

I conducted a qualitative thematic analysis of the data provided by the 15-senior professional executive level women of color in high technology. As discussed in Chapter 3, I applied Colaizzi's strategy for analyzing interview data. In addition, I incorporated a manual hand coding method and Dedoose computer software, which made it easier to

organize the interview data into themes and identify trends for possible synthesis to better understand the main phenomenon, including the core-essence of the participants', shared lived experience.

Dedoose software is like NVivo software. The interviews were transcribed by me into a text format and loaded into Dedoose as text files. The interviews were saved in a Word document format and uploaded into Dedoose. The format was viewed with fresh eyes to ensure epoche. I had no preconceived intentions or judgment as I began to read the post within Dedoose. In analyzing the interviews, Colaizzi's (1978) suggested seven steps, which I followed: transcribe, extract, interpret, categorize, describe, identify, and validate. The discussion as to how the steps were implemented is presented next.

The first step in analyzing the data in Colaizzi's data collection:

- transcribe which as the researcher; I must present the description of the phenomenon from the participants;
- extract the significant statement that related to all the participants;
- interpret allowed for the findings extracted based on the phenomenon;
- categorize the codes and theme with similar meanings,
- describe the phenomenon based on the data collected from the group;
- identify the experience the participants shared; and,
- validate the data collected by the participants.

The first step in analyzing the data in Colaizzi's data collection was transcribed which as the researcher, I must present the description of the phenomenon from the participants. Extract the significant statement that related to all the participants. Interpret

allowed for the findings extracted based on the phenomenon. Categorize the codes and theme with similar meanings; describe the phenomenon based on the data collected from the group. Identify the experience the participants shared. Validate the data collected with the participants.

The data were analyzed for this study from the lens of a blended conceptual framework developed from two theories and one model that illustrated in the conceptual framework in Figure 2. The design of the framework allowed exploration human resource leaders may not fully understand professional senior executive women of color perspective on career development within the high technology industry. The results from this study, I bracketed the data collection constructs aligned with the two theories and model (OCT, LPM, and KTCC) and coded by the categories that emerged from the interview questions with the women of color in high technology.

- Pacanowsky and O'Donnell-Trujillo (1982) OCT was aligned with first sub research question (SQ1), first interview question (IQ1), interview question three (IQ3), interview question six (IQ6), interview question thirteen (IQ13), interview question fifteen (IQ15), interview question seventeen (IQ16) all dealt with the construct of stories, ideologies, and culture of the organization.
- Charan, Drotter and Noel (2011) was aligned with the second sub research question (SQ2), and the third sub research question (SQ3), second interview question (IQ2), interview question five (IQ5), interview question eight (IQ8), interview question eleven (IQ11), interview question fourteen (IQ14), interview question fifteen (IQ15) all pertain to developing leaders.

- Krumboltz's theory of career counseling (2011) was aligned with the fourth sub research question (SQ4), interview question seven (IQ7), interview question nine (IQ9), interview question ten (IQ10), interview question twelve (IQ12) that deal with the construct of educational and occupational decision-making and the concept of learning.

The specific codes and categories allowed theme formation from the overarching research question and the four subquestions and 16 interview questions. The blended conceptual framework outlined in Table 2. The specific codes, implemented in this study consisted of eight major themes and 11 subthemes that supported and expanded the responses from the participants based on their shared lived experiences.

The major themes derived from coding of the data collection. The major themes were the perceptions and experiences which occurred most frequently in the coding process. In Table 7, I have depicted the overarching research question and four subquestions guided the emergence of the themes after the completion of the coding and categories. The overarching research question and subquestions were utilized as the themes related to the research questions as depicted in Table 7.

Table 7

Sample of the Theme Development Process

Research question	Participant quote	Codes	Formal themes
ORQ	Participant 5: One feeling of kind of like drive and motivation that results in pride in knowing just what we're capable of and that so many of us are showing the rest of the world..."	Opportunities Cultural values Acknowledge	Women of color obtaining opportunities
SQ1	Participant2: "...opportunity to do many different things that I don't see my peers of color doing."	Cultural values Opportunities Double-blind	Slowed to progression While building a network system
SQ2	Participant1: "I value faith, honesty integrity, and the abilities of those placed in or on my team to perform their jobs to the best of their abilities and if not, capable enough to reach out to me for support."	Faith, integrity, humble, teachable, value, mentorship	Competencies and accomplishments
SQ3	Participant5: "...about a year and a half, the site manager suggested that I try to go for a role in Product Management and he was really trying to help coach and mentor me through some challenges..."	Networking career progression Unstructured mentoring Created procedures	Create opportunities
SQ4	Participant 2: "I believe that that it provided me opportunities...now, organizational are really forced to look at the diversity within their departments and I think because of my ethnicity but that along with my expertise and my education and my background that those things together have provided me with the opportunities awarded so far."	Upward mobility Promotions Women of color experiences Influenced Positive social change	Opportunities provided

Although there were major themes, the subthemes allowed for other essential essences related to the experiences and the perceptions about the overarching research question and the sub research questions. If any discrepant cases occur, I treated the data

that might challenge the expectations or any emerging data. No discrepant cases occurred during the study process. I discussed the perceptions that occurred more than 30%. The responses that received at least 30% or more were included in its respective table.

Evidence of Trustworthiness

Credibility

Once the data collection processed ended, I reviewed the last literature review to ensure the credibility of the literature gap as well as verify any recent publications pertaining to human resource leaders on career advancement of professional executive women on color on the high technology topic. I did not locate any new information pertaining to this topic.

The establishment of credibility stems from several strategies (Tobin & Begley, 2004). The essential element of a qualitative study for data analysis is coding. Coding provided the opportunity to better understand the voluminous data gathered which guide the researcher to identify patterns, themes and relevant distinctions in a qualitative study. The patterns and themes formed the scope of the study or the inferred phenomenon. Hand coding was utilized to better understand the content of the shared experiences of the participant as the first round of analysis. Once the completion of hand coding, the data collection upload into Dedoose qualitative computer assisted in the second-round data analysis. Dedoose is a computer-generated qualitative and quantitative analysis software like Atlas ti and NVivo for the researchers' usage. By conducting hand coding prior to using Dedoose, as the researcher, the familiarity of the details of the data collected in this transcendental descriptive phenomenological qualitative study was better understood. As

suggested by Miles et al. (2014) hand coding and computer-aided software coding accentuated qualified triangulation. By utilizing hand coding and Dedoose software for coding allowed me to discover the legitimacy of the other, thereby purging any unnecessary error by a human.

Members checking was conducted after the 15 participants interviews for the main study. Members checking, I performed to authenticate the responses received from the participants to ensure that I captured the essence of their experience and to confirm the credibility of the data. The analysis of the interviews, triangulation of the current findings to endorse or refute the findings from the various studies as reported in Chapter 2.

Transferability

The detailed descriptions provided the process of the findings enhanced transferability for this study. The interview questions were presented and unaltered interview findings so that other researchers may generalize more studies to explore human resources leaders may not fully understand professional women of color perceptions on career advancement in high technology amongst other regions, perhaps the entire Western region of the United States. During the data collection process, I collected rich, thick, detailed data utilizing open-ended questions interview guide that enabled in-depth perceptions, experiences of the participants.

Dependability

As expressed in Chapter 3, dependability was achieved through establishing audit trails and triangulation. I utilized the field test which tested the interview guide and

member's checking. The interviews from the 15 participants were audio recorded, and the data analysis reports were compiled to justify the conclusions. Hand coding and Dedoose facilitated in Theory/perspective triangulation with Colaizzi's strategies enabled the organization of the interviews into the codes which facilitated to the emerging themes for potential synthesis and interpretation. Theory perspective triangulation refers to utilizing multiple theories or perspectives to decipher the data collected (Patton, 2003). Theory perspective provided the opportunity to understand how the conceptual framework aligned with the participants' perceptions. By conducting the field test study, two volunteer members further extended the dependability for the large study.

Confirmability

Qualitative researchers continuously must consider bias, by implementing bracketing, as recommended by Moustakas (1994), was critical in reducing the occurrence in the study. Secondly, reflexivity intrinsic in phenomenological analysis allowed me to constantly examine and remove any form of bias in data analysis. I achieved confirmability and reliability due to the researcher examining and rechecking which also included the use of member checking. By using epoche which is another form of ensuring confirmability of the collected data analysis and conclusions (Moustakas, 1994) of my study. By introducing *bracketing or epoche*, as the researcher, I was attentive to the phenomenon of the participants' perspectives (Moustakas, 1994).

Study Results

The section presented here contains the results of the data collection and analysis process. By utilizing open coding, I captured all the essential information from the data

collected that was relevant to the research questions. The focus of the research, stemmed from the overarching research question of this study: What are the feelings, perceptions, and values of professional executive women of color on career advancement in the high-technology on the Eastern region of the United States? The subquestion 1: What do women of color who are in senior executive positions feel about their organization's career advancement process? Subquestion 2: What do women of color who are in senior executive positions value about the career advancement process in their organization? Subquestion 3: How do women of color experience career advancement as an executive? Subquestion 4: How do women of color perceive their identity as leaders? Of the 562 important statements, I analyzed, 167 codes emerged from the data collected and 8 major themes and 11 subthemes emerged as illustrated in Figure 7 as a word cloud image.

The task for the study was identifying the comments that answer the overarching research question, that being stated which included the respective comments on the frequency and the least effective parts of the interview questions. By conducting the analysis in this format, the researcher would capture the "...participant language that facilitated code generation beyond what was "most" and least" effective..." (Bletzer, 2015, p. 12). The 15 participants' responses were similar in content or the intent inverted. However, the slight difference in the wordage from each participant was important in the outcome of the word cloud.

Word Cloud

In Figure 8, the word cloud image depicts the representation of the codes and thematic analysis with the frequency of chunks of statements or single word usage that

I will discuss the results of the study through the major themes and subthemes that emerged from the word cloud which answered the overarching research question and the sub research questions.

Major Themes

The overarching research question support emerged themes and will be depicted in the results section. The major themes for the overarching research question: women of color obtaining opportunities, increased workload in an overall male-dominated industry. The supportive subthemes provided an explanation for the overarching research question: the marginalization of women of color with discrimination (behavior) bias. In the next, section, I will discuss the results of the study. The overarching research question explored the feelings, perceptions, and values of professional executive women of color on career advancement within high technology industry within the Eastern region of the United States?

Major Theme 1

Obtained opportunities. Based on the findings from the interviews with the participants, I discovered the major themes women of color considered important was obtaining opportunities by increasing their workload within a male-dominated industry. I considered these three major themes as vital findings for this study along with the supportive three subthemes listed in Table 7. Participant 2 described her feelings, perceptions, and values from the perspective that the background she has allowed her the “...opportunity to do many different things that I don’t see my peers of color doing.”

Participant 5 explained how her feelings may appear a little contradictory, however, being part of a sisterhood is a great feeling: “One is a feeling of kind of like drive and motivation that results in pride in knowing just what we’re capable of and that so many of us are showing that to the rest of the world...what we already knew.” Participant 5 continued by stating as women of color in this field “We should not have to still be dealing with this...it’s kind of like a love-hate relationship...love the fact that we are achieving so much spite of all obstacles and that gives you a greater sense of accomplishment and pride and motivation.” Finally, Participant 10 echoed how she feels about being in this field: “I have a sense of accomplishment because I have been successful in this field.” Participant 15 expresses “I am honored to be in the field to be able to make a difference in the industry that I work in.”

Major Theme 2

Increased workload in an overall a male-dominated field. With the sense of accomplishments and sisterhood, several women of color discussed the male-dominated industry. Participant 10 spoke to the point of the representation of male dominance in the field “...the field is predominately white men...and the men have a tendency to...try and minimize the thoughts or input of the females, not just women of color, but females period...” Participant 14 discussed her feelings on interacting with male vendors created concerns for her in the high technology field: “My feelings, well when I have to deal with vendors, because mainly it is a mainly a male-dominated field....sometime they would talk down to me thinking I don’t know what I am talking about.” However, Participant 14 since being in the high technology industry it has been male-dominated style of culture

“...it can sometimes it can be overwhelming...” Participant 12 stated “With this being a male-type culture sometimes it can be overwhelming because there are times when we can be expected... to do a lot more than what is really required...” Finally, Participant 11 provided this insight as to being the only woman at the table: “...there’ve been times where I might be the only woman, ... So, being the only one at the table, it makes it difficult to compare because in my environment I’m surrounded by men.”

Women of color based on the findings have a shared experience of working hard to obtain the positions they seek which includes sometimes overlooked for positions. Participant 13 stated, “...to be honestly, I must say, I have to work hard...and have been passed over for a position because the only person who was aware that I wanted the position was my supervisor and he left the company and someone came into the position.” Participant 13 continued by stating: “...there are times when we can be expected to be...to do a lot more than what is really required and sometimes I wonder if it because I am a female....” Participant 9 “I felt that as a professional I always had to work harder and longer hours...” Participant 10 “WOMEN OF COLOR have to work extra...they have to ... not only have the degrees...but have the certification...” she continued by stating Participant 8 added, “I feel that I always have to be on my toes when it comes to my job.” Participant 3 “So, I think I have to try harder...” She continued by stating “...it’s almost like I have to do things ten times harder...have repetition when I submit something or there’s something I want to do.” Participant 6 denoted “...having to do more work just to show your intelligence...your competence...it gets old.”

Next, in Table 8, I have depicted the major themes and subthemes, addressing the overarching research question.

Table 8

ORQ: What Are the Feelings, Perceptions, and Values of Professional Executive Women of Color on Career Advancement Within the High Technology Industry Within the Eastern Region of the United States?

Major themes	Number of frequency	Percentage of frequencies
Opportunities obtaining	13	86%
Increased workload with an overall male-dominated field	10	66%

Although the major theme provided guidance from the data collected, the subthemes Table 9 depicted what appeared insufficient matter of lived experiences whereas the researcher, I am bound to include the collected data. Based on the major theme women of color increased workload, these same women openly discussed marginalization of women of color with discrimination (behavior) bias as depicted in Table 9.

Table 9

Subthemes of Overarching Research Question

Subtheme	Number of frequency	Percentage of frequency
Marginalization of women of color with discrimination (behavior) bias	11	73%

Subtheme 1: Marginalization of women of color and discrimination

(behavior) bias. Out of the fifteen women of color interviewed, 11 participants or the 73% discussed marginalization within their organization in some format or another. Participant 1 discussed "...my experiences and my work were often marginalized because I was always put into a certain category." Participant 1 continued by expressing her thoughts received from some co-workers: "... we're so happy that you're on our team because you don't sound black." Participant 10 "...somebody has to second guess what you are doing, or it is almost like it has to be validated by my counterpart before ...even the team will accept my work before the director accepts it...What do you think? Do you think what she is saying is accurate?" Participant 4 discussed how the level of intelligence measured by the complexion of your skin "...your level of intelligence is based upon the color of your skin, meaning that the darker you are the less intelligent you are and the less competent you must be to handle your job." Participant 11 viewed marginalization from dismissive behaviors: "I will say something and it will get dismissed and a white male will say the same thing and you're like, "Oh, that's a great idea." The information gathered allowed expansion into the subtheme of discrimination (behavior) bias.

Discrimination behavior bias as presented within this study as it pertained to 73% of the participant's sabotage, overlooked, glass ceiling, and lack of credentials. Participant 15 "...being out of the loop for important meetings trying to sabotage...your career...let's see, yeah lots of several negative experiences." Participant 11 "...sometimes my name gives off a perception that I'm a male...so, coming into an

interview, seeing people surprised...” Participant 1: “I felt like I was wanted in the room and when I say “wanted in the room” ...I always felt like I was at the table either because I had to be because there was a checkmark that somebody needed to check off for EEOC purposes or that they needed me to be there because they wanted me to be able to help someone else move up.” Participant 13 “I wonder if it because I am a female and because I am black, it can be overwhelming...it can be overwhelming...”

Major Theme 3

Slowed progress while building a network system. The third major theme on the first sub research question: What do women of color that are in senior executive positions feel about their organization’s career advancement process? I noted that the senior executive women of color expressed their feelings about the organization’s career advancement that potentially slowed their progression while these women built networking system. The major themes slowed progress while building a network system frequent nine times, or 60% of the total population for this study.

Participant 9 “I worked at the company for about twenty years, every two years I was promoted to a better position...” Participant 8 “...things are going well...I have been recognized for jobs well done ...” Participant 12 “I would study what was in the job description... and once those accomplishments have been recorded and the programs and projects have been completed and everything went to projection and everything turned out lovely, that it was awhile later the promotion would come.” Participant 8 “...you have to make it known this is what you want...if you are not going after it...[it] is not like someone is looking for you...it is not going to fall in your lap...” Participant 8, she

continued to discuss her experience with career advancement "...has been positive, [since] I started...as a "Tester" in the QA department..." As growth developed, several women expanded on the importance of building networking systems, which guided the study.

Participant 1 stated while performing her duties career advancement stemmed from mishaps of what the organization needed at the time. Participant 1 postulated her opportunities for career advancement did not happen. She continued by stating how members in the organization who would make those decisions conducted her assessments and talked about creating opportunities where individuals "...were going to do career assessments and they were going to start putting people in their best-fit position."

Participant 1 "I did the career assessment, but no one ever followed up with me about it." The career advancement took place due to 'selected' members did not have the qualifications and Participant 1 had the skills for the position.

Participant 2 discussed how career advancement took place in her current position "...advancement was very ambiguous..." Participant 2 discussed how the technology program her and other women of color developed the platform for the clients, during the process a new vice president obtained the role as the supervisor of a group of women of color. Participant 2 stated "...once the vice president was hired, this person was 'not a great fit' for us because we were all professional women and I would say that over half of us were minority...Asian, African American." Participant 2 had the feeling, that since the newly hired vice president was not a minority, his insights to develop these talented

women into future leaders "...tended to kind of stifle our creativity and our advancement for that moment."

Participant 9 "I was pretty much told I wasn't going to get to a higher senior level position, but they opened up other IT Project Management for a couple of women, you know white women." Participant 8 expressed her sentiments on her feelings on career advancement based on an issue she experienced while holding a leadership role:

Have you ever had anyone to intentionally tried to ruin your professional reputation? That was the first time I have ever had to encounter that and it was new to me...he worked very hard...to do...that...and I worked on a predominately elite male team...

Participant 8 continued by stating she left the role as a leader and "...personally I am not trying to climb the ladder...I had a really bad experience when I was a manager..."

The first sub research question: What do women of color that are in senior executive positions feel about their organization's career advancement process? I have noted that women of color believe that the organization's career advancement process would be implemented successfully when building networking systems occur. Participant 8 "...recommend that [you] start networking and not underestimate the value of networking ...building connections...for management..." Participant 2 "...they saw the opportunities and I was able to network beyond where I was currently..." Participant 15 "ABSOLUTELY! I believe in getting sponsors to help navigate your career..."

Participant 6 "...but I also [am] involved in different organizations like National Black MBA Association...Black Women in Technology...I network that way as well and I'm

able to keep upward mobility or stay on my career trajectory that way.” Participant 6 “they create networking opportunities and those kind of coincidental consequence...it’s nothing that was planned but I did get to network with others and LinkedIn has been very helpful in that too because their users or business users that I was working with when they moved on to a network I reached out...”

Participant 2 “...groundbreaking technology that we were implementing, so, I had the opportunity to share this with doctors, nursing staff and other organizations and I branched out in my network of influence, so that was a definite positive.” Participant 2 continued “...after being that regional manager, that created opportunities for me to help other institutions and they were very open to setting up criteria that would help their managers which also helped me as well as a consultant.”

In Table 10, I have depicted the major themes as well as the subthemes that support the major theme for the first sub research question and provided the number of frequency and percentage of frequency of the participants reported.

Table 10

SQ1: What Do Women of Color Who Are in Senior Executive Positions Feel About Their Organizations' Career Advancement Process?

Major theme	Number of frequency	Percentage of frequency
Slowed to progression for women of color while building a network system	9	60%
Overqualified for position	7	46%
Unspoken bias in organization	6	40%
Team members not playing fair (women of color not at full potential)	5	33%
Remain in same position	3	20%
Promote to non-technology positions out of technology positions	2	13%
Not taken seriously	1	6%
Crab Effect	1	6%
Unethical behavior Power play	1	6%

Major Theme 4

Overqualified for position. The first sub question formed the basis for the fourth theme regarding the career advancement for women of color in executive positions feel about how advancements take place from their perspectives. I discovered women of color

have expressed different views on career advancement that may provide human resource managers and organizational leaders with a better insight on women of color in senior positions. The major theme occurred seven times, or with 46% of the population.

Participant 8 "...so you have to outwardly you have to have the credentials, you have to be... basically, over qualified and it has to be visibly to EVERYONE that you are not be passed over for that promotion...it is basically a situation that you sure everybody knows that you are qualified for that position, that it is blatantly..." Participant 1 discussed if the position required a lower level degree or any type of degree, "...I needed to have a master's or they weren't even going to look at me."

Participant 2 elaborated on how higher level degrees are not options for everyone, "Now, on the flip side, there aren't a whole lot of people...men or women...that are getting the higher-level degrees...like Ph.D.'s in those levels so it really does, in that regard, levels the playing field because they have to look at who is qualified and so if you don't have any qualified people except your minority women then the choice is really limited so they kind of have to choose from the best for those positions...so it's kind of two-fold." Overall, I have found that women of color have obtained the higher-level degrees and credentials above the required skill sets needed to successfully obtain the positions in their field of high technology. The overall inferred experiences the 46% of the total population shared some form of self-imposed feelings they needed to be overqualified for the position.

Subtheme 1: Stagnant in upward mobility. The first subtheme that emerged was remaining in the same position. This experience occurred three times, or with at least

20% of the total sample population. Participant 9 explained she made a conscious decision to not work any harder to move up into higher levels of executive. She was no longer interested in "...to do the things that were required of executive..." Participant 9 went as far as highlighting the comfort level of some women of color once they obtain supervisory level at her company "...it was very unlikely they would get any higher position so they didn't strive for them..."

Participant 11 discussed how positions are not easily obtained the higher you climb the hierarchy ladder:

...we have about three or four levels. Those are limited for women...the 33 women that have those roles...so, senior executive positions are...the higher you go up, the less positions you have. The ones...those roles are filled...those people don't transition out, so, those ones...they become a director...there's no more director positions open...

Subtheme 2: Promoted out of technology position to nontechnology positions.

The second subtheme that developed from promoted out of technology positions to non-technology positions. Participant 15 discussed how her organization appeared to strategically promote women of color:

... I have seen, it is very strategic, not strategic from a standpoint that I want diversity for the innovation ... but I want to have that perception of that am doing the right thing ... and all this time of "the advancement" in the position of little to know give me all 'something of the technical value' ... that less than taking a high skill technical and placing them in a leadership role getting them promoted but

promoting them outside of their skill set more of a soft skill set like let's put you over ... let you run something non-technical.

Major Theme 5

Competencies with confidence. The second sub question formed the basis for the fifth theme refined what do women that are in senior executive position value about the career advancement process in their organization. I recognized that women of color did not value the career advancement process in their organizations, but what each woman provided as guidance to their teams through the career advancement process. The major theme competencies with confidence occurred seven times, or 46% of the total population.

In Table 11, I have depicted the major theme(s) and subthemes regarding career advancement process in their organization on women of color responses to the sub question.

Table 11

SQ2: What Do Women of Color Who Are in Senior Executive Positions Value About the Career Advancement Process in Their Organization?

Major themes	Number of frequency	Percentage of frequency
Competencies with confidence	7	46%
Confidence in your abilities to perform your role	6	40%
Work ethics	2	13%
Community	2	13%
Supportive environment	1	6%
Constant positive changes	1	6%
Stability in process	1	6%

Based on the shared experiences women of color in the high-tech industry or field, I found that organizational leaders are not privy to the various feelings of these women on career advancement. Participant 1 stated in her organization she valued her “...faith, honesty, integrity, and the abilities of those placed in or on my team to perform their jobs to the best of their abilities.” Participant 1 continued by presenting how openness and being approachable for others to feel comfortable to reach out to me for guidance.” Participant 2 “...humbled and teachable...that means that you do not have this attitude that you know it all and you cannot learn from others...I value integrity.” Participant 2 affirmed the leaders developing the career advancement process will need to

“...treat others well...treat others the way that we want to be treated...” Participant 3 value about the process the “relationships. I value integrity and communication. I mean, I value that we all communicate...even though we don’t agree but we’re communicating effectively.” Participant 4 value the knowledge gained from the process and “...I value loyalty...commitment and I value knowledge.” Participant 5 discussed “...I definitely value confidence especially when you are a person of color and you’re having to deal with so many things that are trying to put you down.” Lastly, Participant 9 discussed what she valued about the career advancement process as women of color “The most important thing I value is...other people ...and the leadership [members who] are doing what they need to do to make the work happen...”

Participant 11 emphasized the importance of the younger employees in their movement through career advancement. Participant 11 continued by expressing “... the career advancement process when younger people have the opportunity to explore their new skills.” The great ideas that derive from “...my younger employees, which I love because they always have these great ideas and innovative ways kind of balance them out...” during their career advancement in our organization as expressed by Participant 11.

The women in this study shared experience of accomplishments referred to their ability to perform their roles as leaders in their organization. The overall frequency of this major theme appeared seven times, or 46% of the total population. Participant 5 specified what is important to her “...achievement is critical to me. I’m all about results and action.” Participant 8 “...well we had a situation and we had to organize and manage a

project, [a] great project and task and she was really [liked] how I did that ...so ...at the time I was a contractor...she at the time she offered me a job...” Participant 9 “...Will with the position in that company, I worked there for about twenty years, every two years I was promoting to a better position, ...I got to a management position.” As stated earlier in this paragraph, each woman’s approach to accomplishment varies, but the underline concept was similar as stated by my next participant. Participant 15 “... I am very honored to be in the field and to be able to make a difference in the industry that I work in.”

Subtheme 1: Work ethics. The first subtheme that contributed was the work ethics. This experience occurred two times, or 13% of the total population. Participant 4 discussed the importance of working with competent members: “I value quality of work and I value professionalism. I value ethics...I do not like working with someone who has no idea what it is that they’re doing...” Participant 9 relies on her credibility, knowledge and skills in her organization.

Subtheme 2: Community. The second subtheme contributed to developing how the community views the organization. This insight developed from developing the community by engaging with the middle schools to encourage young girls or children into the STEM fields. Participant 10 support in the lower level schools is important by teaching more programs along the STEM fields. Participant 11 stated “I talk to the middle school classroom or talk to a high school classroom...I prefer middle school because I feel like you can influence them into doing things in high school and they will carry out through college...” Participant 11 believed “Everyone teach one.” Participant 11

concluded if you can capture the attention of one child she may have accomplished her goal.

Major Theme 6

Networking internally and externally increased progression, which created opportunities. The third sub research question denoting how women of color view their experience in career advancement as an executive may possibly impact organizations at various levels. I found that women of color in senior level positions asserted their experiences on career advancement as executives varied, but the one common aspect these women shared created opportunities. The major theme occurred twelve times, or 80% of the total population of women.

Overall, the sixth theme characterized the how the women viewed opportunities within their organizations as well as external opportunities provided as executives. Participant 2 determined based on her experiences as an executive, “we have a group of professionals here and there were several minorities among that group of six people that was building this program from the ground up...which created external opportunities as an executive.” Participant 3 discussed how as some prior military personnel, “...the career path and as long as you do what you are supposed to do, you will succeed.” Participant 3 compared how military executives and civilian executives experience career advancement differently.

Even more profoundly, Participant 3 continued by expounding from her perspective now as a civilian in the high technology industry: “it’s almost like there is a career path but there’s not anyone helping you obtain ...you have to do it for

yourself...you've kind of got to know...it's kind of like who you know because you can be like the smartest person or you know your job but if a certain person doesn't like you, you're not going to get anywhere." Participant 6 she clarified how "the company focused on the technical career development, the trouble is they don't push as much emphasis on the professional career development." Participant 6 continued by alleging her experiences as an executive meant utilizing "LinkedIn [which] has been very helpful in that ...because the users or business users that I was working with when they moved on to a network I reached out to them so I was able to feel relationships outside of my current position...outside of my company."

Next, in Table 12 it contains the major themes and subthemes that addresses the third sub research question.

Table 12

SQ3: What Do Women of Color Who Are in Senior Executive Positions Value About the Career Advancement Process in Their Organization?

Major themes	Number of frequency	Percentage of frequency
Cultural awareness of women of color	7-15	46%
Ability to progress on your merits	5-15	33%
Need supportive environment	3-15	20%
Stereotyping	3-15	20%
Inappropriate communication from male leaders directed at women of color	2-15	13%
Insecure with self-ethnicity	2-15	13%
Prove yourself (Self-imposed bias)	2-15	13%
Companies strategically hiring women of color in nontechnology positions	1-15	6%
Discrimination	1-15	6%
Underqualified staff (nepotism)	1-15	6%

Participant 7 discussed how she was happy about the new job "...managers and every leadership positions, create opportunities where we can actually, set on committees, learning your research fields, fit the properly trained staff or manager whoever get the higher up position they are already familiar with the tools." The various roles Participant 7 performed in her past company, Computer Science manager, Business Administrative manager, and Computer Faculty member provided her with knowledge from many realms of high technology. Participant 8 viewed her experiences as an executive from educational standpoints where her organization provided trainings, however "... the webinar trainings were mandatory... it is very watered down, you know- check this box so we can move on." Participant 8 continued by stating she could obtain positions due to unqualified staff members, "...they have a lot of underqualified people at my current job." Participant 9 viewed the human resource (HR) office as a source to opportunities as an executive, but you need connections, "The HR department in the company I worked for always had a ladder of progress where you could promote to the next level position, but really the promotion in the environment It was who you knew and who was willing to give you a chance." Participant 12 experience aligned with Participant 9 as for the Human resource department "...always kept everybody informed of opportunities, different types of training, work sessions, seminars, and webinars and ...they always have open to us..."

Participant 11 highlighted "So you have to be under somebodies' wing, per se, of influence to be able to be in those types of positions to allow for you to get the experiences that you need to be able to get those type of promotions." Participant 11

explained that the higher your level the least amount of opportunity for promotions, "... the higher positions ... things you're recommended for and not positions that you apply too..." Participant 10 extended on what Participant 11 expounded

...depending on the promotional level that a woman of color is trying to be, is having the right experiences, the right exposure and the right people as your mentors in order to be promoted to higher executives. Without that mentorship or without those experiences, there's only so far, a woman is going to get.

Participant 2 stated "I feel that my ability has been very lucrative..." as a leader. Participant 3 also included there is no limitation as a leader "...I don't think I have experienced where it has limited me. Everything that I have applied for I've done or I've been able to get." Participant 4 generalized "I feel I have great opportunity...a great chance of doing it..." Participant 7 discussed how she perceive her abilities as a leader "I am not the type of person I make my own opportunities. I do not wait for something to fall in my lap." Participant 10 asserted I am giving opportunities, however, "... I have been given an opportunity everything that the female or the women of color is put forth it is always CHALLENGED...somebody has to second guess what you are doing, or it is almost like it has to be validated by my counterpart before uhmm even the team will accept before the director accepts it." Participant 12 advocated I would receive opportunities, but "...I would be transferred somewhere else..."

Major Theme 7

Cultural awareness of women of color while progressing with your merits. As an expansion on sub research question three, the importance of cultural awareness

appeared as important for progression for this population of women. This major theme occurred seven times, or 46% of the population for this study. Participant 11 discussed the importance of conscious awareness as to how she is careful as to "...what she portrays and how the information could potentially be perceived by others." Participant 12 determined that "Caucasian society lack the clarity SOMETIMES [to] understanding people of color due to stereotyping and when they actually work with people of color only at time you may understand what is portrayed on TV is not the ideal person of color." Participant 13 conveyed the message "Not all white people in the society view blacks in the same manner, it is like me stating all whites and other ethnicities are the same it would be wrong. I have issues with some blacks myself who portray themselves in a light that is not correct based on my standards. Participant 13 "...society must learn about various cultures in order to have a better understanding of others who are different than who you are comfortable with."

Based on the sub research question, progression referred to how these women of color asserted how they increased their upward mobility or the lack of progression. Participant 9 contributed information of her lack of progression "I didn't think that company provided any progress for any women of color...for a company with over eight thousand people you know there where very few women of color as supervisory level, let alone executives in that organization and it had been that way for many years and it is still that way till today." Participant 11 accentuated in her interview:

...when you get to the senior level managers and higher, so, our ladder is...you can either be a senior manager, director, VP...oh, and executive VP...so, we have

about three or four levels. Those are limited for women...the 33 women that have those rolesso, senior executive positions are...the higher you go up, the less positions you have.

Participant 12 concluded her organization provides career development so moving to the next level in the executive level you have steps to take which there are systems in place for you to track your career path you are interested in seeking. Participant 12 stated the ability to have a "...blueprint... the tool provided ...steps you needed to take to advance up the career path." Although, Participant 12 provided experiences of success with progression; Participant 14 discussed her lack of progression with the organization she is employed "my place there are no policies in place for career advancement and I think that should be changed and as a matter of fact, it's kind of ironic I just mentioned this last week..."

Participant 6 claimed "...networking opportunities and those kind of coincidental consequences...It's nothing that was planned, but I did get to network with others..."

Finally, Participant 2's believed that

...opportunities for placement is really dependent on who is at the top, unfortunately, and I think that even though doors are open...I think, pretty much, it's still a male dominated field at the top level which kind of trickles down to the hiring process for fulfilling those positions.

Subtheme 1: Marginalized their capabilities. The first subtheme that emerged involved the marginalization of women of color capabilities to perform their duties. This experience occurred four times, or with 26% of the target population. Participant 4 noted

marginalization “your level of intelligence is based upon the color of your skin, meaning that the darker you are the less intelligent you are and the less competent you must be to handle your job.” Participant 9 assessed due to conversations with other executive on women of color in senior executive progressing into higher positions; the executive disclosed there are obstacles that will hinder this population ...difficult for me with the ‘good ole boys’ network and if I hung in there maybe things would get better...”

Subtheme 2: Need supportive environment to develop. The second subtheme emerged built on the fact that you need a supportive personal and professional work environment. This perception occurred three times, or 20% of the total population. Participant 12 postulated the organization provided a support system “for example if your attended graduate school to work on your job description, and if you are working in a field that will help you advance in your field they will support that...definitely I have seen that everywhere I have worked.” Participant 15 stated for career development once you obtain senior level positions, “...nothing there specifically for women of color.”

Major Theme 8

Changes took place with their personal identity. The fourth sub research question concerning the opportunities provided due to being a leader; identity changes took place. I acclaimed that the women of color perceived their identity as leaders hinged on their personal views of themselves as women of color first and foremost. These women viewed their identity as leaders from different aspects of how they obtained opportunities.

The experiences of the changes that took place occurred seven times, or 46% of the target population in this study. The women of color perceived their identity differently. Participant 1 admitted "...I think it has changed and I think it's changed...I'm always looking a step ahead where in the past I was always really focused on what I was doing at that moment and mastering at that moment..." Participant 2 affirmed her identity changed because she "...looks at herself differently. I feel that ...it makes me a stronger person." Participant 2 continued because "... I realize that as a woman of color there are not many in the area at the level that I am...I need to always keep myself available to help and mentor others..." Participant 3 acknowledged "It has changed." Participant 3 continued by stating "...I have to catch myself sometimes...I don't want to assume the guise of angry black female..." Participant 4 continued, "...being confident of knowing what I know and not being afraid to express myself."

Table 13 depicts the major themes addressing the fourth sub research question.

Table 13

SQ4: How Women of Color Perceive Their Identity as Leaders

Major themes	Number of frequency	Percentage of frequency
Changes that took place in their personal identity	7	46%
Diligent work	3	20%
Undervalued in their organizations	3	20%
Business persona	2	20%
Performed the roles but lack the title	2	20%
Self-imposed bias	2	20%
Mentor women in IT	2	20%
Society standards of beauty	1	6%
Presumption of opportunities	1	6%
Inappropriate behavior from supervisor	1	6%
Limited progression	1	6%
Confidence	1	6%
Role model	1	6%

Participant 5 discovered her identity as a leader has not changed and she perceived herself as "...I am who I am and you know I'm proud of who I am as a black woman." Participant 5 believed she has not changed, and as a leader she described her identity as being proud of her ethnicity and being a woman of color. Participant 5 discussed how she pride herself "...no matter what situation, I'm not changing, maybe...having to adapt it to my environment in order to at lead get the most positive outcome, but never modifying who I am."

Participant 6 perceived her identity as someone who would like to be viewed as "...role model. I am a Big Sister in Big Brother/Big Sisters." Participants 6 continued by explaining the importance of you presenting a positive image to the young girls she mentors at Big Sister and other young women of color. Participant 6 continued by including her view "...I've always had to be a bit of a different person at work because I live in an area that's not as diverse and so for some people, their only reference of African American women comes from TV and that's not a realistic reference..."

Participant 7 stated her perception of her identity:

Definitely...it has given me more opportunities to really transform myself and work with more leaders especially more women at this IT company because the women some of the women I have trained from the entry level to the top-level executives have even started their own businesses...

Participant 8 has adopted a personal persona: "...it is an unspoken rule to adopt a persona...it's [a] business world not just the field of technology just business in general..." Participant 9 described how she as a leader is a caring person "I am a caring

person in general and so one of the things I felt unfair...a lot of the closed door decision that executive would have I would not be a part of...where [in] the office with the impact with the changes within the organization positions not promoting people and personal attacks on people and for me it gave me an insight on what really goes on at the [higher] executive level of management and the kind of conversation they have about people.”

Participant 9 discussed the changes she experienced as a leader “...primarily was because I just made the decision to stick with my morals and values, and I wasn’t going to treat people like that...I wasn’t going to respond in...that sort of thing...”

Subtheme 1: Diligent work. The first subtheme that emerged involved conducting their duties in the best professional ethics by working towards their goals. This perception occurred three times based on the total population of 15 women of color. Participant 5 admitted that “...I feel like my faith tells me that I will get to where I’m supposed to be. I may not like all the things that I encounter in getting there...and not let any obstacles slow me down or not let any of the milestones along the way get me too complacent...” Participant 6 “...I’ve been dealing with rejection...from day one. I graduated at the top of my class in high school and I purposefully went to a traditionally white university. I feel like I’ve trained for this. I’ve been preparing for this since day one...”

Subtheme 2: Undervalued in their organizations. The second subtheme occurred three times out of the population or 20%. Participant 3 stated she felt undervalued since her educational level does not include a Ph.D. or that she is not what she viewed as “...elite white males... they don’t want to hear what I have to say.”

Participant 8 stated a higher-level executive employed her, and after working in the organization for many years, a new hire became her supervisor. The newly hired manager asked Participant 8 "...What qualified me to be in this position that I was in? "...I felt that was very offensive...that he would ask me that...it was not only the question but the tone in which he asked the question..." Participant 8 continued by proclaiming, "...that was the first time I have ever encountered that and it was new to me...I worked on a predominately elite male team, and some of them worked [for] me as my subordinates and my peers."

Triangulation

Triangulation took place in this study by implementing hand coding, member's checking, and the usage of computer-assisted management software, Dedoose. Member's checking is also triangulation. Triangulation is a method researcher implement to help establish the validity of the study by analyzing the research questions in several data sources (Amankwaa, 2016). Amankwaa included triangulation was used to enrich the understanding of the study. Triangulation goals are to extract and interpret the deeper meanings of the participants' responses (Robert Wood Johnson Foundation, 2008). Hussein (2015) alleged triangulation often used for qualitative researchers to validate the phenomenon. The commonalities of the group and not that of the individual cases provided the researcher with the supportive data to obtain triangulation (Durif-Bruckert et al., 2015).

As discussed in Chapter 3, I have established triangulation by performing the following procedures: identifying the commonalities of the data collected by the group of

women of color, conducting member's checking, manual hand coding and computer-assisted analysis to reduce any human error, and Colaizzi's seven step analysis process (Amankwaa, 2015; Hussein, 2015; Edwards & Welch 2011). All the above methods, I executed by analyzing, coding the data, initially by hand, computer-assisted analysis and Colaizzi's seven step analysis for triangulation. The participants had an opportunity to investigate the accuracy of my interpretations of their experiences during member's checking.

Many researchers have included triangulation as a procedure in their studies. Based on the research, there are four different types of triangulation according to Denzin (1978) and Patton (1999). The four types of triangulation: (a) method triangulation, (b) investigator, (c) theory triangulation, and (d) data source triangulation as postulated by Denzin (1978) and Patton (1999). In this study, data source triangulation provided the researcher the human phenomena needed in the data collected from the participants (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014).

Research Questions

This section summarized answers to the research questions. In Figure 9, I have listed the major themes that emerged from the data collected which represents shared lived experiences.

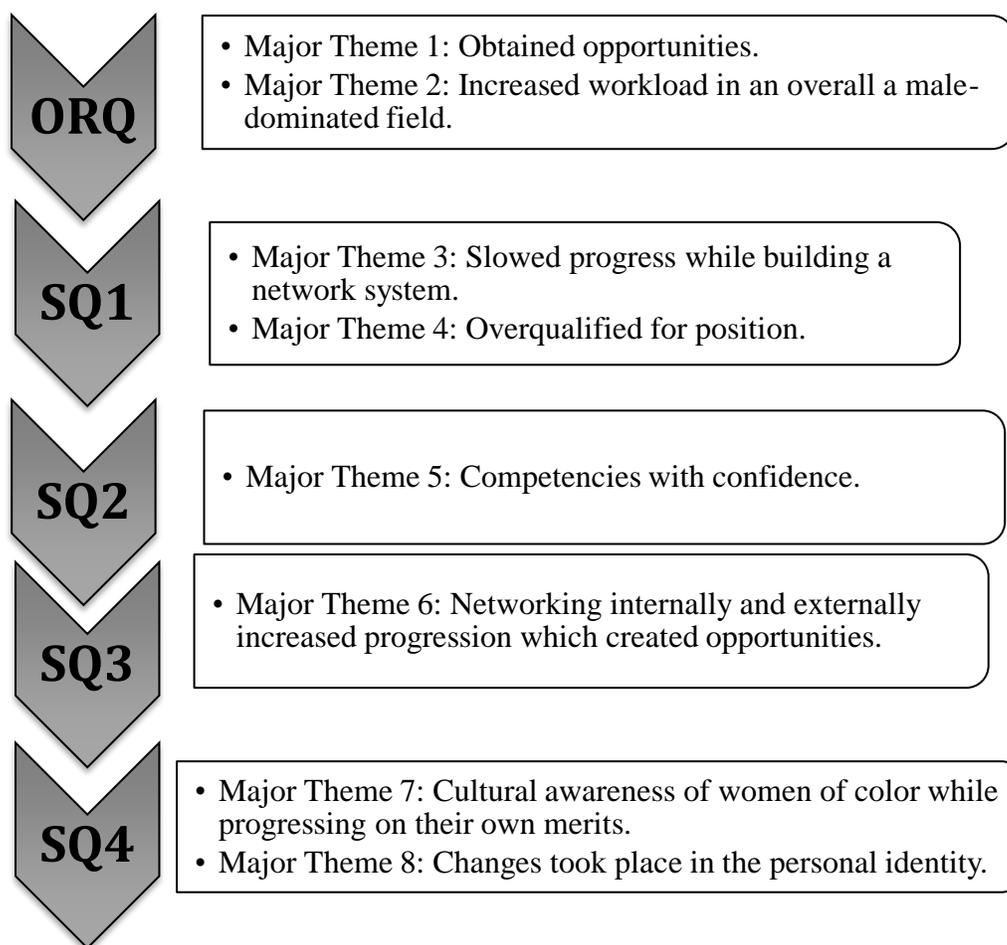


Figure 9. Themes based on research questions.

As I demonstrated in Figure 9, based on the major themes, I recapped the major themes discovered from the overarching research question (ORQ), sub research question 1 (SQ1) related to the organizational cultural theory (OCT), sub research question 2 (SQ2) related to the leadership pipeline model (LPM), sub research question 3 (SQ3) also related to the leadership pipeline model (LPM), and sub research question 4 (SQ4) related to the Krumboltz's theory of career counseling (KTCC). After the figure, I have provided a narrative for each question explaining the major themes in more detail.

Overarching Research Question

In response to the overarching research question, relating to the feelings, perceptions, and values of professional executive women of color on career advancement within the high technology industry on the Eastern region of the United States, the participants varied in their feelings, perceptions, and values. However, the overall number of participants 86% shared an experience of obtaining opportunities within the high technology industry. The opportunities obtained occurred in a happenstance manner, in unstructured career development and legal actions against the organization. Although the responses differed in the categories, the intent of the replies, they were similar. In my eyes, the opportunities may have varied the women were able to obtain upward mobility. The base of these themes stemmed from the overarching research question demonstrated (Figure 9).

Subquestion 1

In response to sub research question 1 that related to what women of color that are in senior executive positions feel about their organization's career advancement process, the women of color in this targeted population provided insights of their lived experiences on their feelings on their organization's career advancement process. Of the 15 participants who took part in this study nine viewed their career advancement as no structured career advancement in place for upward movement. Several women proclaimed their leaders discussed openly in regard to establishing a career advancement, but other potentially other projects took precedent. Women of color in this targeted population spoke openly about the lack of career advancement, but there were a few that

had positive outcomes with career advancement within their organization. I think progression would increase if organizational leaders implement career advancement policies or steps to maneuver to obtain one position to the next which includes skill sets and education needed.

Subquestion 2

In response to sub research question 2 that related to what do women of color that are in senior executive positions value about the career advancement process in their organization. The participants in this study placed value not on the organization's career advancement process, but more on their respect and diligence to help the members of their teams to obtain career advancement. The 15 participants in this study 46% replies based on their experiences with the career advancement process. So, the respondents value integrity, humbleness and remaining teachable to obtain the skills needed to accomplish their goals which include the ability to remain approachable.

Subquestion 3

In response to sub research question 3 that related to how do women of color experience career advancement as an executive. The participants reported their experience as executives on career advancement differed. These women have the experience where they created opportunities and developed networking internally and external means of progression. These women also discussed inappropriate language from male supervisors, to include marginalization of the capabilities as leaders, stereotyping, and few mentioned a support system needed to 'vent.' Overall, these women in this study

contended they created opportunities a supportive system must be in place to lessen the stressors in this industry.

Subquestion 4

In response to sub research question 4 that related to how do women of color perceive their identity as leaders, the participants reported they perceive their identity as leaders from the perspective of opportunities provided due to their ethnicity without as many limitations. The major theme opportunities provided occurred eight times or 53% of the target population in the study. Some women have stated due to their ethnicity, and potentially the roles they have obtained has provided them with the leadership functions. These women understand that as leaders, their abilities, 'she consistently' competed against others and worked to overcome inequalities.

Participants' Responses

The participants for this study were women of color who worked or employed in high technology industry or field. The participants' responses offered qualitatively similar and consistent with the specification of triangulation. The women at one point in their career held management positions, a minimum of 25 years of age and at least five years experience in the field. The average time most of the women have been in high technology from 7-20 years. These women represented in this transcendental qualitative phenomenological approach cumulative years of experience estimated around 195 years of knowledge. The women of color were derived up and down the eastern region of the United States from private sectors and large corporations. These women shared the same phenomenon on career advancement in the high technology. The positions held by these

women ranged from Senior Computer Analyst managers to principal employees at a technology company in the eastern region of the United States.

Summary

Chapter 4 provided an overview of the related key results of women of color perceptions on career advancement in the high technology that led to the conclusions. The overarching research question: “What are the feelings, values, and perceptions of professional senior executive women of color on career advancement in the high technology?” allowed the findings from a thematic analysis of the data collected from the 15 participants. By utilizing transcendental descriptive phenomenological qualitative approach, the themes emerged, and I viewed the themes from a fresh perspective. Out of the data collection, and data coding eight major themes and 11 subthemes emerged.

In chapter 4, I described the field test, research setting, demographics, data collection, data analysis, evidence of trustworthiness, word cloud, results, triangulation, the participant's profile, and the summary. Next, Chapter 5 will provide final discussion on the interpretations of the findings, limitation of the findings, methodological, conceptual and or/empirical implications, recommendations, implications, researcher's reflexivity, positive social change, summary, and the conclusion of the study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The perceptions of women of color on career advancement in high technology have not been addressed in the existing literature; therefore, it has been difficult for human resource leaders to fully understand this population of women. Further research on the perceptions of women of color concerning career advancement could increase the number of women of color (Carter-Sowell & Zimmerman, 2015) in the high technology industry. By presenting information on the perceptions of executive women of color, this study may provide human resource leaders with resources they need to increase the representation of women of color in the high technology industry (Carter-Sowell & Zimmerman, 2015; Dai, De Meusue, & Tang, 2011; Kay & Gorman, 2012).

The purpose of this transcendental descriptive phenomenological study was to understand the perceptions of executive women of color on career advancement in the high technology industry through the lens of a qualitative approach. A descriptive approach enabled me to obtain meaningful, rich, and exhaustive details that were unique to the journeys of professional senior executive women of color as leaders in the high technology industry (Carter-Sowell & Zimmerman, 2015; Kay & Gorman, 2012) in the eastern region of the United States. Human resource development leaders need information on gaps in skills, knowledge, and performance (Li, Wai-Lung, Lam, & Liao, 2011) to resolve the underrepresentation of women in high technology management. The existing literature presented lacked information on the perceptions of women of color concerning career advancement (Cater-Sowell & Zimmerman, 2015). The rationale for

this study was unlike quantitative studies, the study conducted was not based on variables that would potentially verify the research questions in the study. However, the phenomenon of the shared lived experiences of the participants which aligns with a qualitative approach.

I used hand-coding and Dedoose analysis software to organize and manage the data in a thematic analysis, which allowed for themes to emerge. The overarching research question was the following: What are the feelings, values, and perceptions of professional senior executive women of color on career advancement in the high technology industry? To better describe the perceptions of the participants, this query gave rise to the following subquestions:

- SQ1: What do women of color who are in senior executive positions feel about their organization's career advancement process?
- SQ2: What do women of color who are in senior executive positions value about the career advancement process in their organization?
- SQ3: How do women of color experience career advancement as executives?
- SQ4: How do women of color perceive their identity as leaders?

The findings were captured from 15 participants who were professional senior executive women of color in high technology management. The following themes were identified:

Theme 1: Obtained Opportunities.

Theme 2: Increased workload in an overall male-dominated field.

Theme 3: Slowed progress while building a network system.

Theme 4: Overqualified for the position.

Theme 5: Competencies with confidence.

Theme 6: Networking internally and externally increased progression, which created opportunities.

Theme 7: Cultural awareness of women of color while progressing on their merits.

Theme 8: Change took place in their personal identity.

Interpretation of the Findings

The overarching research question and subquestions provided the boundaries for the study. The overarching research question and the four subquestions guided the study, allowing the emergence of various patterns and themes discovered from the interview guide relative to the participants' shared lived experiences. The overarching research question addressed the feelings, perceptions, and values of the professional executive women of color as a group in high technology management. Two major themes relevant to the participant's organization experiences emerged from the concepts of feelings, perceptions, and the values of the participants. For the first subquestion, which focused on assessing the feelings of women of color on the career advancement process from the standpoint of their shared experiences, two major themes emerged. The second subquestion, which focused on assessing what women of color value in the career advancement process in their organization, produced one major theme. The third subquestion, which focused on how women of color experience career advancement as

executives, yielded one major theme. Finally, from the fourth subquestion, which focused on how women of color perceive their identity as executives, two major themes emerged.

Overarching Research Question

The overarching research question was the following: What are the feelings, perceptions, and values of professional executive women of color on career advancement within the high technology industry within the eastern region of the United States?

Major Theme 1: Obtained opportunities. Based on the findings from the interviews with the participants, I discovered that the major thing that women of color considered important was obtaining opportunities. The participants stated that they had obtained opportunities within their companies. The first theme supported Key et al., (2012) there are more women overall entering the workforce, therefore the emergence of women success could increase. Increased representation of women in the workforce provided opportunities for women in general. The women obtaining opportunities earned their roles due to hard work, strategic planning, and careful understanding of what was expected (Laud & Johnson, 2012). The first major theme is supported by a report from the Office for National Statistics (2013) indicating that the more women in the United Kingdom entered the workforce, the more their opportunities increased. On the contrary, Brennan and McCafferty (1997) speculated that the opposite is true, suggesting that fewer women really obtain opportunities in male-dominated industry and the business process lacks women's insights and worldview.

Additionally, Joshi, Son, and Roh (2015) postulated that women's presence increased in the workforce, but the gender gap for women in executive leaders' roles

must include women's evaluation assessed in the same manner as their male counterparts. Although women in general are obtaining opportunities in their organizations, their representation has not increased at the top level (Schoen & Rost, 2015). In the global workforce, India's workforce, women in high technology are represented in higher level positions than in the United States (Shwetha & Sudhakar, 2014).

Key et al. (2012) noted that despite the success women in general have achieved, women of color experience different treatment than their White counterparts. Key et al. investigated in the differences between White and non-White women's experiences of leadership attainment and reported that in an organization, the "pecking order" for leadership roles differs for these groups of women.

Major Theme 2: Increased workload in an overall male-dominated field. The second major theme that emerged from the data analysis was that women of color increased their workload in an overall male-dominated field to obtain higher level positions. Laud and Paterson's (2013) study aligned with the second theme, in that it indicated gender differences in upward mobility and women believe the hierarchy ladder navigation process into the upper echelon of the executive suite does differ from some men. The view that women have of themselves based on the literature review on career advancement provided personal perspectives and how women in some work environment impact their perceptions of themselves as contributing members (Szelényi, Denson, & Inkelas, 2013). In a male-dominated industry, women who demonstrate leadership may not have an impact on the organization (Walker & Aritz, 2015). Although women may have an overwhelming impact in organizations, Derks et al. (2015) argued if women take

on a Queen Bee phenomenon effects, which describes how women assimilate their behaviors to “fit” into a male-dominated organization, and their perspectives are not valued.

Overall, the literature review did not align with the notion that when women of color (or women in general) increase their workload in organizations, their ability to obtain higher level positions improves. The new information discovered in this study may allow for others to understand that for women of color, working longer hours and obtaining higher level degrees may lead to obtaining higher level positions.

Subquestion 1

The first research subquestion was the following: What do women of color who are in senior executive positions feel about their organization’s career advancement process?

Major Theme 3: Slowed progress while building a network system. The third theme in my study was that women of color are slow to progress when building a network system. The frequency of slowed progress while building a network system for the overall population appeared about 60% for the study. Based on the literature, the alignment of participants’ perspectives based on the literature, the networking system women build stems from external factors and not the internal factors, conflicts, or the choices made by the women (McVay, 2013; O’Neil et al., 2011).

Although my literature review included discussion of the impact of social behaviors within an organizational climate, my participants’ perceptions and feelings about their organizations’ career advancement process did not align with the findings of

Pacanowsky and O'Donnell-Trujillo (1982) as to how members within a team or organization communicate with each other. The participants' responses aligned more with the same standards in the literature review as for as an invisible social force base (Hogan & Coote, 2014). The social force base includes how members interact with other members, which includes understanding stories and ideologies (Pacanowsky & O'Donnell-Trujillo, 1982).

Some participants remarked that the performance reviews they received within their organizations successfully demonstrated their high skill levels, but their career progression did not reflect this. Participant 6 reflected, "I feel like I plateau sooner than others ... and what's frustrating is that I always get good performance reviews ... and performance appraisals." Participant 13 described how project managers or the project lead attempted to hinder her promotion, yet she "obtained the promotion and was either moved to another team ... with a promotion." Participant 4 explained, "...you're still not going to be treated equal and you are adding extra stress than your counterparts ... your nonminority counterparts." Participant 6 maintained that having two master's degrees (a technical degree and an MBA) had afforded her an advantage "because I'm dragged back and forth with the IT and the business side, with what I do now. So that's an advantage for me coupled with my background to be able to present a more holistic view of things."

Subquestion 2

The second subquestion was the following: What do women of color who are in senior executive positions value about the career advancement process in their organization?

Major Theme 5: Competencies with confidence. The fifth theme in the study was that women of color in senior executive positions felt that demonstrating competencies with confidence was the key to success in their organization's career advancement process. The women of color felt they should not endure different boundaries i.e. work-related tasks due to ethnicity while striving for upward mobility as postulated by Thatchenkey and Sugiyama (2015). Moreover, leaders within the high technology industry should work with women of color and women in general to identify the factors that slowed women's progression into senior executive positions. Leaders need to understand the gender inequality that women face in the workplace (Derks et al., 2015). The literature indicates that the perspectives of women are not valued in male-dominated industries (Derks et al., 2015). Of the total population in my study, 73% of the women agreed that their perspectives were not valued. Women felt that they had been dismissed when they provided suggestions, whereas European men would receive acknowledgment and validation for the same statements.

Furthermore, Lacey and Grove (2014) proclaimed that the behaviors of some women impact the performance of other women, which supports the seventh theme of competencies with confidence. However, there were several supportive sections within Chapter 2 on feminist theory and how women perform as executives. The participants in my study shared an experience on how their skill sets are not utilized to support their advancement, but the advancement of others as discussed by Participant 1 stated,

I always felt like I was at the table either because I had to be because there was a checkmark that somebody needed to check off for EEOC purposes or that they

needed me to be there because they wanted me to be able to help someone else move up.

In analyzing the data, I noted a trend not discovered in the rich literature collected. Participants in my study explained how only knowledge distribution within the organization takes place, the acceptance of the knowledge from not only European Americans but also other women of color skill sets supersede the knowledge of the African American women in some of the organizations. The women noted that other groups of women of color were more successful than African American women, even when the latter had higher levels of education and experience. Participant 8 discussed how her European American male supervisor had attempted to sabotage her position as a manager in a personal manner. Participant 15 described how, as a higher-level executive, she had experienced communication issues when members in her organization intentionally excluded her from critical staff meetings. Participant 4 discussed how an African American woman “appeared not to like her blackness.” Participant 4 continued by stating, “She appeared to have suppressed it unless she was in an all-Black environment, and then it appeared that she was struggling to fit in.” Participant 4 recalled several different instances in a mixed setting where she would side with whoever was White was the one for the job and not even considering the Black and when she was questioned about it her response was: Well, a lot of times the Black candidate really doesn’t have all of the qualifications that they stated.

I did not find literature with relevant insights on career sabotage and hostile work environments affecting women in color.

The competencies with confidence theme reflected how the participants in this study felt about their skill sets. In contrast, the literature indicates that women of color often lack confidence or experience self-doubt (Archard, 2013). Such lack of confidence was not seen in participants in the current study; perhaps due to the guidance and insights the participants' experiences within their organization, the competencies excelled their confidence. Forty percent of the women in this study demonstrated confidence in their abilities to obtain higher level positions despite obstacles. Departing from other literature indicating a lack of confidence, O'Neil, Hopkins, and Birimoria (2015) asserted that the problem is not a lack of confidence, but a lack of opportunities.

The supportive literature provided clear insights on the subject matter, however, Participant 5 stated that was very different from the literature; I felt important for my study's expansion of the literature. Participant 5 stated "...we're all gifted and talented when we're born. It will manifest itself in different ways but we're all gifted so, we all should be...wanting us all to win." Based on my literature review and as I read various current articles, none of the literature supported women of color declaring the lens of "gifted and talented when we're born." Based on the lack of literature to support this perception of women of color in high technology, this is also a gap in the literature.

Subquestion 3

The third subquestion was the following: How do women of color experience career advancement as executives?

Major Theme 6: Networking internally and externally increased progression, which created opportunities. This theme generated from the feeling of women of color

value about their career advancement process in the organization confirmed Sabharwal (2013) findings, which revealed networking opportunities for senior executive women need to access their male counterparts. Researchers supported the findings, women in this current study, network internally and externally to progress, however, expressed in the literature review, women who obtain the higher-level positions have fewer networking opportunities unlike their male counterparts who obtain higher level positions and continue to build networking opportunities as supported by (Allen et al, 2016; Shuji, Fainshmidt, Nair, & Vranceva, 2014; Sabharwal, 2013).

Participant 15 concluded that while she has worked as a higher-level executive, she has viewed "...very strategic, not strategic from a standpoint that I want diversity for the innovation...but I want to have the perception of that I am doing the right thing..." meaning removing the technical person from a leadership role to a non-technical leadership position.

Subquestion 4

The fourth subquestion was as follows: How do women of color perceive their identity as leaders?

Major Theme 8: Changes took place. This finding from how do women of color perceive their identity as leaders the changes took place from various insights supported by Janssen, van Vuuren, and deJong (2013) findings of personal and professional growth towards upward mobility. Additionally, (Jackson & Charleston, 2012; Johnson, Brown, Carlone, & Cuevas, 2011; Margolis, Goode, & Bernier, 2011) supported the findings in this current study with respect to the atmosphere due to gender identity that women of

color endured when they seek upper mobility at the hands of some European American men. Also, researchers supported how a few of the women of color perceive their identity as leaders from the concept of intersectionality due to the multiple layers, some of the women questioned if the issues of “inappropriate behavior and challenging the skills” to name a few took place because they were women or because of their ethnicity (Crenshaw, 1989; O’Neil, Hopkins, & Billimoria, 2015). The findings from this current study aligned with their concept of intersectionality, but these women also maintained their identity as women of color.

Participant 2 contributed to the expansion of the literature gap, that the negative experience of “... your organization did not see the experience that you actually had to offer them.” Again, this information as it pertains to this study fills the gap in the literature as to how organizational leader may perceive women of color in high technology, therefore some women of color may view themselves in this manner.

Interpretation of Findings in the Context of the Conceptual Framework

Overarching Research Question

The overarching research question was the following: What are the feelings, perceptions, and values of professional executive women of color on career advancement within high technology industry within the Eastern region of the United States?

Major Theme 1: Obtained opportunities. I utilized a blended conceptual framework of organizational culture theory (OCT) developed by Schein (2010); leadership pipeline model (LPM) developed by Charan, Drotter, and Noel (2011); and Krumboltz’s social learning theory of career counseling (KTCC) developed by

Krumboltz et al., (1976) which facilitated in the emergence of this theme that aligned with the study's conceptual framework. Duke and Henry-Edet (2012) postulated when all members within the organization develop their skills, growth, and opportunities which devised the organizational culture uniqueness women of color endure based on the attitudes from their personal and professional environment. Marchand et al., (2013) also agreed that the culture within the organization constructs how the behavior within the departments impacts various members.

Additionally, Duke and Henry-Edet (2012) espoused the importance of developing subcultures within the organization increased the performance. Hence, the inclusion of women of color skill sets allowed the leaders to view the organization's management talent development tools (Winiarska-Januszewicz & Winiarski, 2014). However, to better understand the development of leadership and management skills, the 70-20-10 learning rule provides an individual development plan for high talent employees that encompass mentorship Winiarska-Januszewicz and Winiarski (2014), which based on the findings, mentors are important in navigating the careers of women of color in high technology.

While viewing the literature, the common theme in the literature on organizational cultural theory, facilitated in developing the theme 'obtained opportunities' when women in organization presence increased and women develop growth, expected behavior of employee's values and belief system (Gregory, Harris, Armenakis, & Shook, 2009; Joshi, Son, & Roh, 2015; Schoen & Rost, 2015; Shwetha & Sudhakar, 2014) which provided the content for the first major theme for this study. Based on those findings, I inferred to

mean women obtained opportunities not only by increasing their presence, but when the behavior within the organization as an entity with job satisfaction, and positive relationships. Although Zheng et al (2016) contend there is a shortage of women in the high technology industry, universities will need to prepare students to fill the position could contribute to opportunities for this population in my study.

Subquestion 1

The first subquestion was as follows: What do women of color who are in senior executive positions feel about their organization's career advancement process?

Major Theme 3: Slowed progress while building a network system. The women in this study have very different perspectives of their organization's career advancement process, however, the alignment of this theme provided the clarity from the conceptual framework organizational cultural theory (OCT). OCT could potentially facilitate in how this population views how the employee's performance impacts the organization (Wiwiek, 2016); as well as the needs of the organization Duke and Henry-Edet (2012). As the researchers view the employee's performance and the needs of the organization, Taplay, Jack, Baxter, Eva, and Martin, (2014) supported the findings of the current study from the standpoint that members learn from their organizational culture over time in which they are exposed. Due to the increased relationships within the organization, the performance within the NGOs clients had a stronger linear relationship (Duke & Henry-Edet, 2012). Hence, the full development of all members of the organization facilitates growth.

Based on the findings addressed by Hogan and Coote (2014) postulated the various layers of culture visible in organizations innovation are the least visible way to view values and open communication provided the inference to a portion of the third major theme slowed to progress. Also, by viewing the impact of the behavior within the organization from the lens of social learning, positive results within the culture of the organization impact the members (Rivard, Lapointe, & Kappos, 2011) added the second portion of the third major theme. The lived experiences of the participants in this current study believed they were slow to progress within their organization, however, they developed a networking system stemmed from Hogan and Coote; Rivard, Lapointe, and Kappos studies. The researchers discussed the layers of culture visible in the organization's innovation is least visible, and the social learning of positive results potentially increases the behavior of the member as postulated by Hogan and Coote; Rivard, Lapointe, and Kappos.

Subquestion 2

The second subquestion was the following: What do women of color who are in senior executive positions value about the career advancement process in their organizations?

Major Theme 5: Competencies with confidence. Within this conceptual framework of leadership pipeline model, based on Winiarska-Januszewicz and Winiarski (2014) the development of a skill set via providing employees the opportunities to increase their educational skills and their ability to demonstrate the skill sets within the organization was found to align with the findings from this current study. Although there

are researchers who feel that the Leadership pipeline when viewed from job analyses from the manager's behavior, Kaiser (2011) when viewed the literature discovered there were no definitive studies that supported manager's behaviors within the organization. Furthermore, Hess, Barss, and Stoller (2014) agreed that the importance of leaders with the skill set and the competencies at the different levels increase the talent pipeline. Although there have been few studies on the increase of leadership pipeline the acceptance of the rewards derived from the implementation increased the standards of the organization (Hess et al, 2014).

Based on the literature review, several authors eluded to increasing educational skill sets of participants, developing internal talent pool, developing training needed for members. I inferred from those concepts, the third major theme of competencies. Competencies emerged when women demonstrated in their ability to ensure they had obtained the needed education, and skill sets, as well as they, are approachable by their young women of color in the organization. The participant's ability to share their knowledge with others on their teams.

Subquestion 3

The third subquestion was the following: How do women of color experience career advancement as executives?

Major Theme 6: Networking internally and externally increased progression, which created opportunities. The experiences this set of women endured as executive aligned with the importance of leadership pipeline model framework within the organization as supported by Charan et al (2011). Dai, De Meuse, and Tang (2011) also

supported the advancement of women in general in the organizational hierarchy. Winiarska-Januszewicz and Winiarski (2014) agreed with the findings to retain talent employee's the environment will need to foster developmental training as well as networking opportunities to accelerate into the pipeline. The sixth major theme networking internally and externally increased progression which created opportunities, I inferred from Winiarska-Januszewicz and Winiaraka's study that expressed critical issues of the internal and external talent pool that impact the future leaders within the organization. Based on Winiarska-Januszewicz and Winiarka's study opportunities existed due to potential employees are critical to the future leadership of the organization which, I inferred opportunities were created based on establishing what the women need to thrive in the organization.

Subquestion 4

The fourth subquestion was the following: How do women of color perceive their identity as leaders?

Major Theme 8: Changes took place in their personal identity. The theme emerged aligned with Krumboltz's theory of career counseling (1976) that determined the choices one makes in the careers the environment will influence your behavior and how you view the decisions. Krumboltz's (2011) agreed that observational learning and positive modeling of your environment reinforces how you view your career planning and the behavior you observe. Krumboltz, Foley, and Cotter (2013) discussed career counseling adds to the career occupation with some meetings with leaders for changes to take place. Based on Krumboltz's theory of career counseling which stemmed from

Bandura's study social learning theory (1977), I inferred the individual's behavior formulated the basis of subjective observations of their environment allowed the eight-major theme to emerge changes took place in their personal identity based on *environmental conditions*.

Limitations of the Study

This study was a transcendental, phenomenological descriptive qualitative design, which provided advantages and disadvantages based on what the problem and purpose of the study. In this journey, I have collected, audio recorded the data collection, analyzed the data, and interpreted the results based on Colaizzi's seven steps of analysis. Although great details were in place to reduce bias, the analysis and results of qualitative data due to human error potentially could create a weakness, even in a subtle manner. To reduce researcher's bias, members checking once the transcription process allowed the participants to view the information provided as well as opportunities to make any adjustments if needed.

The relevance of this current study aligned with the problem statement and the purpose of the study from the standpoint: Human resource leaders may not fully understand professional senior executive women of color perceptions on career advancement within high technology management. The research focused on the feelings, perceptions, and values of professional executive women of color on career advancement within high technology industry in the Eastern region of the United States. The potential implications for positive social change from these findings may provide information

about women of color feelings and perceptions on career advancement in high technology fields or industry to increase the presence of this population in senior executive roles.

Another limitation of this study was that participants from a different coast or a predominate demographic may or may not hold the same comments in regard to professional senior executive women of color perceptions on career advancement in high technology. The results from this study could be used by researchers to view a different population which provides the triangulation data. Furthermore, the responses from these participants' one could expand into a deeper insight on the disadvantage of not fully utilizing women in general to their full potential.

Methodological, Conceptual, and/or Empirical Implications

Within this study, there were no methodological, conceptual, and/or empirical implications. The professional senior executive women of color identified for this current study in high technology on the Eastern region of the United States. To better understand the gap in the literature, as well as expanding the research this population was warranted for probing into the gap in the literature. Women of color perceptions on career advancement in high technology as covered in Chapter 2 dealing with the perspectives of human resource leaders may not fully understand women of color perceptions and may not encourage social change for amplifying women of color in senior executive positions.

Recommendations

After I have completed the understanding of the perspectives of women of color on career advancement on the Eastern region of the United States, I recommend that future researchers complete a comparison analysis between various ethnicities in a mixed

method approach. The researchers could view women of color from a segment within the Northern Eastern region and compare the insights from our Southeastern region women of color in the United States to determine if the locale determines the responses of the participants. By including the views of vice presidents and principles within technology organization will broaden the responses.

Finally, a mixed method study on conducting “faceless interviews” within any organization and track the outcomes of the women of color to determine the correlation between the job requirements versus the skills, experience, networking systems, and the education of the woman of color that obtained a second callback, but not the position. Organizational leaders, human resource managers, women of color pursuing high technology senior executive positions, could potentially benefit from the results of this study. The limitation in Chapter 1 could also be addressed in future studies.

Implications

The study I conducted utilized a qualitative data analysis method which analyzed the results of 15 participant interviews in the main study. Based on the thematic analysis, I developed eight major themes (Table 14) as well as 11 subthemes in supporting of the overarching research question: What are the feeling, perceptions, and values of professional executive women of color on career advancement in the high technology industry within the Eastern region of the United States? The four sub-research questions:

- SQ1: What do women of color that are in senior executive position feel about their organization’s career advancement process?

- SQ2: What do women of color that are in senior executive positions value about the career advancement process in their organization?
- SQ3: How do women of color experience career advancement as an executive?
- SQ4: How do women of color perceive their identity as leaders?

The implication of the third major theme and major theme 6 pertains to networking, could implicate a potential positive internal cultural and strategy that might support women in high technology through establishing learning modules for women in general to learn how to network with women inside the organization by cross-training as established by Krumboltz's theory of career counseling. The participants who are in the position to observe their environment enhance the career development planning (Krumboltz, 2011).

The findings from the data analysis claimed the perceptions of professional senior executive women of color felt their presence and opinions are not valued or heard within the corporate boardrooms or while conducting meetings when men are the dominant member in the room. These women shared as women of color their workload increased but as a group, they complained but continued to perform their duties with honor and respect. What these women as a group valued about their career advancement process in their organization, the ability to support their team members and maintain an open dialogue to increase the competency skills of other women on their team. The concerns these women expressed were the ability for lower performing managers who were not as qualified obtain management positions but relied on the women of color education and

skill set to move up the ladder. Based on the literature overall, women in general lack confidence (Archard, 2013) was not a concept my participants discussed which society tend to believe about women. Women, in general, are willing to work with all members to accomplish not only the goals of the organization but allow these women a level playing ground to obtain positions they feel they have earned.

Based on the overall study, women of color are seeking the same opportunities as their European counterparts as well as level opportunities to men in general based on education, experiences and not on nepotism. These women stressed to understand why do their qualifications do not allow them the same opportunities? However, the opportunities that some women obtain are lateral promotions into soft non-technical roles. The major *'take away'* from this study, women have confidence, however, at times, they are overshadowed by working in a male-dominated industry where their voice is not always heard. What can women, in general, do to increase their voice? Based on my opinion, women, in general, will need to learn to work together and not view another woman regardless of ethnicity as competition, and not fall into the Queen Bee phenomenon effects because they work in a male-dominated industry. If we look at society some individuals might say women outnumber men in the workforce, therefore when we work as a networking system, we have power in numbers. Learn from each other via culture and the experiences of women of color, in general, could provide quality knowledge which may increase the profits of the organization when an open dialogue take place and assumptions are removed.

Researcher's Reflexivity

During the research study, as a transcendental descriptive phenomenological qualitative researcher, I learned how this approach allowed for not only the essential essence, but the experiences at each of the 15 participants viewed career advancement as a group of senior executives. The perceptions, experiences, feeling, and values enabled opportunities to understand the sensitivities in which some experienced from their lived and shared perceptions. I found that the engagement within the literature before discussing the topic with these women, as the researcher, I listened carefully to each woman taking careful notes which allowed for clear views to analyze the group of women's perceptions as a 'whole' and not view them as individuals. The blended conceptual framework not only guided my study but created the boundaries to understand better technical terms expressed by the participants.

The iterative nature of a transcendental descriptive phenomenological qualitative approach allows the phenomena described from the participants' stories. By immersing into the data as the researcher, the phenomenology aspect of the stories allowed interpretation from a philosophical view due to the nature of the lived experiences of the participants. As the researcher, I viewed all the stories based on the moment in which the phenomena occurred from an intersubjective level of transcendental ego or how the stories '*showed*' itself in consciousness.

Ultimately, I have decided I would like to continue the various forms of qualitative research approach, so to engulf into the richness of the conversations that allows the depth of the participants' knowledge and 'voice' to expound on what society

may assume about women in general in the leadership roles. I would consider continuing research as my form of a recommendation to practice what the participants discussed. I am drawn to the openness of conversations with my participants while sharing their insights and concepts of true leadership.

Finally, I would have to state, the greatest experience of the study was the education offered from the participants' views into the stories of their journey's as professional senior executives in high technology. I felt honored to have gained their trust where these women felt comfortable enough to share their authentic experiences which allowed them to think back on their journeys' as well as present their vulnerabilities as women of color in a male-dominated industry without any judgments. At the end of the conversations, most of the women said thank you, "This was therapeutic!"

Positive Social Change

The potential positive social change impact from the results of this research study would include disseminating the results to various organizational leaders, recruiters of high technology, human resource managers, non-profit organizations who support women of color or women, in general, in the high-tech industry, and various leadership and human resource journals. Human resources leaders could work with senior level women of color to develop learning modules specifically for women on career advancement as suggested by Participant 15. The human resource manager could devise a confidential unique numeric identifying process, no personal identifying characteristic are known other than the experience, education, and skill set. The individual's name will not appear on the application, only a unique numeric identifier. Once the applicants have

been narrowed down in the actual hiring process, at the interview the identity is revealed. By, implementing these potential strategies, women may have a better opportunity by reducing bias and increase their opportunities in general to obtain higher level positions. If women, in general, are not hired for the position, the human resource will track the process to determine if there is a potential undermining of hiring women and more specifically women of color into executive positions. The outcome of that tracking system, organizational leaders, could potentially implement benchmarks to reduce any bias that limited the hiring of women and develop better strategies for the interviewing process and create training to develop the skill sets for women further if that was the reason for the organization hiring a man over a woman.

The results of this study might extend the literature by addressing the gap in the literature on the perceptions of women of color in high technology through the utilization of peer-reviewed journals and books. My study support women of color by allowing professional senior executive women of color shared living experiences on career advancement in high technology to potentially fill the gap in the literature. These women had a shared experience of obtaining opportunities while increasing their workload in an overall male-dominated field as the first and second major themes. A few of the women in this study left the industry due to a lack of progression and EEOC lawsuits. However, women, in general, are discouraged in this industry, but by reading this study, these women could understand they are not alone and networking creates opportunities (internal and external changes). The findings discovered from the shared lived

experiences of this target population may allow for better understanding of these women unspoken feelings, experiences, and values in the high technology field or industry.

I have learned these women worked hard to earn their titles, and respect of their peers and other members within the organization by working as a team member through any issues or barriers these women have endured. These women also understand that their titles are not what makes them a great leader, but their ability to remain 'teachable.' What I have learned by conducting this study, women, in general, do not understand their value in corporate America due to the lower number of women disseminated throughout the small segment of higher-level positions. However, if women, in general, were to develop a networking system that links executive women together in some form or fashion which also creates opportunities for these same women to mentor young girls who have a desire to enter the high-tech industry.

Women, in general, could potentially learn that other women have their same feelings, perceptions, and values of their career advancement and determine, the overall perceptions of women of color conveys to all women, despite ethnicity. Furthermore, women, in general, may view the results of this study may apply to all women and women, in general, not only as professionals, but the population of women may advocate positive social change for increased equalities within the workforce.

The next positive social change that could facilitate in increasing women of color and women, in general, is the education of young girls of color. There are not for profit organizations, sole mission or purpose is to inspire young girls of color to visualize their futures which also include the development of social change. The not for profit

organization, *Girls for a Change*, could utilize the results of this study to empower young girls of color that facilitate with self-value by understanding they can accomplish their goals. Since technology is one of the higher paying industries and lowest unemployed industries, this is an ideal field of interest for young girls of color to obtain a better understanding of what is needed to progress in this industry.

Recommendations for Practice

The recommendations for the practice of my transcendental descriptive phenomenological qualitative study could provide prospective involvement to advance intelligence, systems, procedures, and positive social change connotations within management, human resource, leadership behavior, and leadership development. The dissemination of the results could be via presentation, publication of each chapter, conferences, work with policymakers to change recruitment process, and training within organizations. Women and minorities perceptions of career advancement in leadership may enhance a better understanding of how the past research conveyed women in general as leaders (Davis & Maldonado, 2015) in addition to women of color correlated with intersectionality or the double-blind bias (Crenshaw, 1989).

Summary

The purpose of this transcendental descriptive phenomenological qualitative study was to understand how human resource leaders may not fully understand the perceptions of women of color on career advancement in high technology management on the Eastern region of the United States. I conducted a study on a total of 17 women of color in the high technology industry or field. The two field test participants had a similar background

of the main body study participants but did not take part in the larger study. Within the primary study emerged eight major themes and 11 sub-themes to support the overarching research question as well as the subquestions.

In Chapter 5, the studies' methodological, conceptual, and or empirical implications, limitations, the best recommendations, and the implications for future research studies. The existing literature highlighted the conclusion of Chapter 5. Chapter 5 provided a summary of the main points of discussion. The overall study added to the body of literature by incorporating the perceptions of the studies population; which potentially facilitated in filling the gap in the literature by providing a response to the overarching research question with the supportive sub research question of how human resource managers will affect women of color in the high technology field.

The women of color in this study provided new surprising insights, but also what these women viewed from their lens of opportunities, bias due to potentially being a woman and or women of color. One concept, I noticed in the study, most of the women almost felt comfortable with working harder to obtain higher levels, than what they viewed from European women or men. Although, the women felt the need for them to work harder was wrong, or to obtain a higher level of education, or to work longer hours. None of the women made any statements in regard to the power women, in general, could implement to create a positive social change within their organization. As a society, women may need to focus on any potential issues within their control first so not to potentially self-imposed excessive workloads.

Conclusion

The key findings in this transcendental descriptive phenomenological qualitative study extended the knowledge in the discipline of management to potentially enable organizational leaders and human resource managers to better understand the perceptions of women of color on career advancement in high technology. These findings, as stated in Table 14, provided significant examples and viewpoints of the participants in this study.

Table 14

Themes and Key Findings From Study

Themes	Research questions	Theories	Findings and concerns reported by participants to increase their presence
1-3	ORQ	OCT, LPM, KTCC	Opportunities, male-dominated, marginalized, discrimination bias
4-6	SQ1	OCT	Undervalued, unspoken bias, networking, stagnant
7-9	SQ2	LPM	Community, stability, supportive environment
10-13	SQ3	LPM	Professional, honest, executives' challenges, policies, talent leader, diversity training, increase diversity, support system, clear advancement, milestones, hiring process
14-15	SQ4	KTCC	Network opportunities, sexism, overqualified, stakeholders voice, underutilized skills, workload, promotion, culture, overcoming barriers, challenge skills, develop opportunities

The key findings presented in Table 14 represented the results from the women of color participants to understand the perceptions of the professional senior executive were provided based upon the alignment of theories and the overarching research question and

the subquestions. The lived experiences of the participants may contribute to strategies women of color may implement to identify their perceptions on career advancement in high technology. The findings in this study may potentially contribute to organizational leaders understanding what women of color endure through their journey into senior executive leadership positions. By understanding the results from the overarching research question and subquestions, organizational leaders, human resource manager, recruiters, and consultants may better understand women of color perceptions and offer insight within the management field of organizational leadership.

The insights may potentially contribute to the development of job descriptions that are gender neutral, increase trainings for women of color, increase diversity training within organizations, maintain qualified candidates by completing assessments that better 'fit' the descriptions, control expenses for recruitment and replacement of employees, create viable tools to reduce bias in the hiring process. Based on the shared lived experiences of the participants and the possible benefits, the perception of women of color on career advancement in high technology is an important contribution to the literature.

Finally, the results may potentially add insight for improved conditions and behaviors women of color experience in the high technology industry or field. As Participant 15 stated, to increase women of color in the high technology industry, it will take a leader who has security in himself as a person and leader to make the 'real' changes needed and one change would be conducting a faceless interview to leverage the playing field. Are we ready for the change?

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Appendix A: Invitation Letter

Date: April 2017

Dear Prospective Research Participant,

I am Angela Charles, a Ph.D. student in the Management program at Walden University, conducting a research study on the perceptions of professional senior executive women of color on career advancement in high technology fields on the Eastern region of the United States.

I am seeking professional senior executive level women of color participants to interview. Participation in this study is voluntary. The scheduled interview may take up to 60 minutes. The interview process takes place on the telephone and audio recorded. At any time during the interview, the participants may decline if she feels uncomfortable with any portion of the content in the interview process. At no time, you are giving up any legal rights. You will not have any penalties or risk associated if you decline. For clarity, there may be a need for a follow-up for a limit of 20 minutes at your availability.

The IRB approval number from Walden University for the study is 06-09-17-0384122 and will expire on June 8th, 2018. If you have any questions or concerns, at any time before, during or after the interview, please feel free to contact me at (xxx)xxx-xxxx. If you are interested in participating in the study, please contact angela.charles@waldenu.edu or (xxx) xxx-xxxx.

Respectfully,

Angela Charles, MSM
Ph.D. Management-Leadership and Organizational Change
Walden University
College of Management and Technology
Angela.charles@xxxxxxx.edu
(xxx)xxx-xxxx

Appendix B: Field Test Invitation Letter

Date April 2017

Dear Potential Field Test Participant

I am Angela Charles, a Ph.D. student in the Management program at Walden University, conducting a research study on human resource leaders may not fully understand professional senior executive women of color perceptions on career advancement within high technology fields in the Eastern region of the United States. The purpose is to understand professional senior executive women of color experience on career advancement in the high-technology field.

The field test participants, I am seeking will facilitate in validating the Interview Guide tool for the research questions. The same Interview Guide Tool presented for the field test will be used in large scale study if no significant changes are needed. The field test participants will have a similar background of professional senior executive level women of color. The interview time span may last up to 60 minutes. The members will need to be fluent in English, have worked or employed a minimum of five years in the high-technology field as a manager, executive, director or higher level who resides in the Eastern region of the United States. The field test participant is voluntary. At no time, you are giving up any legal rights. You will not have any penalties or risk associated if you decline. As the field test participant, you will have the opportunity to discuss the questions and provide feedback at the conclusion of the interview.

The IRB approval number from Walden University for the study is 06-09-17-0384122 and will expire on June 8th, 2018. If you have any questions or concerns, at any time before, during or after the interview, please feel free to contact me at (xxx)xxx-xxxx. If you are interested in taking part of the field test, please reach out via angela.charles@waldenu.edu or xxx-xxx-xxxx.

Respectfully,

Angela Charles, MSM

Ph.D. Management-Leadership and Organizational Change

Walden University

College of Management and Technology

Angela.charles@xxxxxxx.edu

(xxx)xxx-xxxx

Appendix C: Recruitment Flyer

Doctoral Research Study

Dear Prospective Participants,

I am Angela Charles, a Ph.D. candidate at Walden University studying Leadership and Organizational Change, conducting a research study titled Women of Color Perceptions on Career Advancement in High Technology Management. The purpose is human resource leaders do not fully understand professional executive women of color perspective on career development within the high technology industry.

I am seeking women of color participants to interview by Zoom webinar using only the audio capability of the conference call, who have worked as a manager, director, and above, and five years in the high technology field. The interview time frame may last up to 60 minutes. At any time during the interview, the research participant can decline to move forward if uncomfortable with the interview process. Also, for clarification of the essential essence of your words I might need to follow up no more than 20 minutes. There is no penalties or risk if at any time you decide to discontinue the interview. There is not compensation for participation and your participation is strictly voluntarily

The Institute Review Board (IRB) approval number from Walden University for this study is 06-09-17-0384122 and expires June 8th, 2018. If you are interested, or know of others, please contact me.



Sincerely,
Angela Michelle Charles, MSM
Ph.D. in Management Candidate
Walden University
College of Management and Technology
Angela.charles@xxxxxxxxx.edu
(xxx) xxx-xxxx

Appendix D: Demographic Questionnaire

Directions: Please answer the following demographic questions below.

Your Name: _____

1. What is your age range? Are you 25 years old and over? _____
2. What is your ethnicity? _____
3. What is your marital status? _____
4. What is your highest level of education obtained? _____
5. What is your current employment status? _____
6. How long have you worked in the high technology industry? _____
7. How many years have you worked in an executive position? _____
8. What is your title in your organization? _____
9. Do you have a sponsor? _____
10. Are you a sponsor of a women of color? _____
11. Do you reside on the Eastern region of the United States? _____
12. What state in the Eastern region do you reside? _____

Appendix E: National Institute of Health Certification



Appendix F: Interview Questions

Introduction: Please state your name of researcher, title, research purpose and IRB approval number. Obtain demographic information, highest level of education completed, socio-economic income status, length of time in the high technology industry and age of participant. Inform participant the interview may last up to 60 minutes. Administer ice breaker conversation, if needed.

Interview Questions

Some of the verbiage may need to be explained based on the educational level of the participant, socio-economic income status, or age of the participant.

1. Describe your feelings as a professional senior executive woman of color in the high technology industry.
2. How did your organization's career development program managers and the human resource department create opportunities toward your success as an executive? Elaborate please
- 2a. How did your organization's career development program managers and the human resource department limit opportunities for you towards your success? Elaborate please.
3. Describe your experiences with career advancement in your organization as a professional senior executive woman of color in the high technology field or industry?
4. What are some of your positive or negative experiences you have had as a professional senior executive woman of color in the high technology field regarding to continued promotions?
5. Do you feel your organization's human resource policies on career development for senior executive allows for a continued progression into the leadership pipeline for higher positions for all employees in the same manner? If, yes, how? If no, why?
6. Do you feel your personal identity or your character as a woman of color has changed since taking on a leadership role in the technology field or industry...and if yes, how? If no, why?
7. Based on your personal knowledge of other professional women in your field, do you feel that your experiences as a professional senior executive woman of color in the high technology industry or field have differed from women of other ethnicities within your industry? And if so, please explain
8. What are your perceptions on how career development programs or policies in your organization support continued advancement of professional executive senior level women of color? And please explain.

9. How do you perceive your ability to rise to the senior executive levels compared to other women's abilities or opportunities?
10. Do you feel that your ethnicity provided you with or limited your opportunities? And please explain.
11. Describe your views on women of color 'placement' for promotions.
12. As an executive leader, what do you value as a woman of color executive?
13. How would you propose to the leaders of your organization how to include talented women of color and increase their opportunities into leadership roles?
14. Now you brought a point up on how Caucasian society may view women in that field. How do you believe some Caucasians may view women of color in the high technology field?
15. Do you think organizations would benefit from a program for women of color? Could benefit from that type of training for advancement? IF so how, if not why?
16. Do you feel people do not want to become sponsors? If yes, why? If no, why?

Conclusion: Is there anything you would like to add to your story on career advancement in the high technology field that pertains to women of color that we have not discussed?

Thank the participant for their participation and time as a research participant. Thank the participant for their support and contribution to positive social change by promoting women of color perceptions on career advancement in high technology.

Debrief: Provide the participant with a description of what happens next and how they will be contacted for a follow-up and verification. Include how the data collected will be protected.

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Appendix I: Copyright and License for Advancing Leadership Pipeline

Title:	Advancing Leadership Pipeline Through the Development of High-Potential Employees
Author:	Alicja Anna Winiarska-Januszewicz, Jacek Winiarski
Publication:	Journal of Intercultural Management
Publisher:	De Gruyter
Date:	May 30, 2014
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Appendix J: Supportive Resources List

Careers. Org
4300 Horton St,
Emeryville, CA 94608
510-761-5805
The Women's Center Career Counseling
In Northern Virginia:
133 Park St NE
Vienna, VA 22180
(703) 281-2657 (TTY: 711)
Fax: (703) 242-1454
questions@thewomenscenter.org

In Washington, DC:
1025 Vermont Ave NW, Suite 310
Washington, DC 20005
(202) 293-4580
Fax: (202) 293-4583

Counseling Services for Older Adults
P.O. Box 3120
Oakland, CA 94609
24 Hour Crisis Hotline: 1-800-273-8255
Website: http://www.crisissupport.org/senior_counseling

Crisis Services Your Safety First
24-Hour Hotline
716-834-3131

Women's Resource Center
113 W. Wayne Ave.
PO Box 596
Wayne, PA 19087
(610) 687-6391
info@womensrc.org

Note: The interview will be conducted via the internet with no visual connection. I am only utilizing audio services to capture the voice of the participants. In the event, any women of color participant experiences' any form of emotional issues due to the interview, for any unforeseen problems unknown by the researcher a list of counseling and business resources for free services will be provided.