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# Women Leaders in Information Technology: A Phenomenological Study of Their Career Paths

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Walden University
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Abstract

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## Abstract

In the United States, women remain underrepresented in senior level positions in the information technology (IT) field. Despite this challenge, a few women have successfully ascended into senior leadership in IT. Using the social cognitive theory as the conceptual framework, the purpose of this qualitative transcendental phenomenological study was to understand the lived experiences of senior women leaders in the IT field. The research question explored the lived personal and professional experiences of senior women leaders in IT to gain an understanding of their career advancement into senior leadership positions. Through the use of the modified Van Kaam method of data analysis, 6 major themes emerged from interviews with the 15 participants. The results indicated that self-efficacy, hard work, and mentorship may help women ascend into senior leadership in IT. This study may contribute to positive social change by promoting the understanding of the experiences and perspective strategies for increasing the career advancement of aspiring women leaders in a male dominated industry such as IT. An increased understanding of women senior leaders' experiences in IT could attract more women, leveling the playing field of men and women.

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# Dedication

To Anthony and Isaac: I hope one day you will read my work and be inspired to follow your own hopes and dreams. I love you both with all my heart.

# Acknowledgments

I would like to first thank my Lord and Savior, Jesus Christ for blessing me with the wisdom, strength, and perseverance to complete this dissertation. Without him, none of this would have been possible. To Jelaun Newsome, my loving and supportive husband, thank you for believing and encouraging me to go through this journey. Thank you for being my biggest cheerleader when I got discouraged and felt like giving up at times. I love you so much and I cannot thank you enough for your love and support.

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# Chapter 1: Introduction to the Study

There are many reasons why choosing a career in IT field is a suitable choice for woman. The unemployment rate for the IT field in 2013 was less than 3.6%, whereas the overall unemployment rate for the entire United States was 7.4% (U.S. Depart of Labor, 2017). In conjunction, the unemployment rate for women in IT was 4.2%. Computing related occupations is the fifth fastest growing segments of the professional workforce through 2022 (United States Department of Labor, 2016). Falling behind to management occupations, IT occupations have the second highest annual wages of all other professional occupational segments (U.S. Department of Labor, 2016).

Despite the positive advantages of working in the IT field, women are not personally attracted to the field of IT, which in turn is causing fewer opportunities for career advancement. Many researchers have argued the rationale for the limited of number of women in the IT field. Heilman and Haynes (2005) stated that men dominated senior leadership positions. Historical perceptions portrayed women as lacking key attributes required of an effective organizational leader including lower leadership aptitude, less effective leadership styles, and fewer attributes for organizational success (Heilman & Haynes, 2005; Leslie, Manchester, Dahm, 2017). At the present time, numerous issues prevent women from moving up into senior leadership positions (Leslie et al., 2017).

## Background of the Study

As one of the fastest growing fields in terms of number of workers and their

respective salaries, the computing and IT field is expected to grow by 12% from 2014 to 2024 (U.S. Department of Labor, 2015). During this time, 488,500 new jobs will be added from 3.9 million jobs to 4.4 million jobs (U.S. Department of Labor, 2015). This is an opportunity for employment for both men and women. Women held 57% of professional occupations in the workplace in 2015 (National Center for Women & IT, 2016). During this time, the number of computing jobs held by women was at a low 26% (National Center for Women & IT, 2016). This concludes that women are not advancing in the growth of computing jobs as they are in other professional occupations.

To represent a diverse workforce, organizations have implemented diversity programs to align with the implementation of Title XI and other employment laws. Gender diversity in IT is important because it expands the qualified employee pool, improves the bottom line, enhances innovation, promotes equality, and is representative of the organization's customer base (National Center for Women & IT, 2014).

In 1991, the Glass Ceiling Commission was asked by the U.S. Department of Labor to conduct a study to see how barriers applied to women and minorities to address the issue of discrimination and sexism (Cook & Glass, 2016). Cook and Glass (2015), reported that company boards that had more women in leadership positions saw increased profitability. These findings support the business model premise of my study that a diverse workforce of both men and women creates greater profitability for a company compared to a nondiverse workforce.

The term *glass ceiling* describes an invisible barrier that prevents qualified individuals, particularly women from advancing within an organization. A general stance on why women fail to advance into senior leadership positions in the IT field is due to the lack of talent in the recruitment pool due to years of employment inequalities compared with their male counterparts (Smith, 2014). The employment discrimination stems from the fact that the IT field is a predominately white male industry (Cook & Glass, 2014).

Women are often viewed to possess traits that align with compassion for others, whereas men are viewed as more dominant and authoritative (Lakshmi & Peter, 2015). Whether this is a stereotype that society maintains, it still exists and when women do not fit the stereotype and display assertion and control, it can be risky for them. Women who exhibit these behaviors may not be accepted in the same way as men are; they may be viewed as intimidating and alienating (Lakshmi & Peter, 2015). Assertion and control are leadership qualities that are viewed by individuals as important characteristics to possess to be an effective leader (Lakshmi & Peter, 2015). Women, who display assertion and control, risk possibly intimidating and alienating others. This issue makes it challenging for women to overcome in the workplace.

Leaders in the field of IT are failing to attract more women to the field and are having an even harder time retaining the women that are already working in the field (National Women Center & IT, 2014). With a shortage of women working in IT, the chances for these women are diminished for an organization for an organization

to consider women for senior level positions against a much larger pool of male applicants due to stereotypes. A gap in the literature exists from an organizational standpoint that does not address women in senior leadership positions in the IT field (Dubow, 2014). This study may assist filling a void in management and leadership by providing a better understanding of how women are able to advance to senior leadership positions in the IT field and what their needs may be.

## Problem Statement

The rise of global competitiveness has increased the demand of IT professionals (Major, Morganson, & Bolen, 2013). Although a demand exists for IT professionals across the board, a shortage of women workers exists in this field (Major et al, 2013). With fewer women accounted for in the IT field, this issue creates a limited number of women to obtain senior leadership positions in IT. Women held 26% of professional computing occupations in the United States in 2017 (National Center for IT, 2017). This low percentage of professional women working in computing occupations demonstrates the shortage of women in the IT field and of the reasons it lacks women senior leaders due to not having enough talent to recruit from (Jung, Clark, & Patterson, 2017).

A gap in the literature exists from an organizational standpoint that does not address women in senior leadership positions in the IT field and how they arrived in those positions (Dubow, 2014). The general problem that I addressed is that of the percentage of women in IT, still fewer women workers of that percentage who achieve senior leadership positions (National Center for IT, 2017). For women

trying to acquire senior level positions in a firm competing with a larger number of men makes it competitive for women. The specific problem that I addressed in this study is that no clear understanding exists of how women advance into senior level leadership positions in the IT field (Anderson, Edberg, Reed, Simkin, & Stiver, 2017; Berdousis & Kordaki, 2014; Dubow, Farmer, Wu, & Fredrickson, 2013). Exploring women who are currently in senior leadership positions in the IT field will provide an understanding of their career paths, which may help other women in the field who wish to enter senior level leadership positions.

## Purpose of the Study

My purpose in this qualitative transcendental phenomenological study was to understand the lived experiences of women senior leaders in the IT field to gain an understanding of their career advancement into senior leadership positions. In this study, I solely focused on women who work in the IT field and are in senior leadership positions. The phenomenon that all women participants had in common was career advancement in the field of IT. Transcendental phenomenological research focuses on the essence of the lived experiences of people with participants describing their own reality (Moustakas, 1994). In this study, I filled a void in management and leadership by providing a better understanding of how women can advance to senior leadership positions in the IT field. At the present time, little to no research exists on the advancement of women into senior leadership positions in the IT field (Smith, 2013). The implications for this study may also fill a gap in other advancement fields for women besides the IT field that might be applied to

those situations. The results of this study may assist other women interested in leadership positions in the IT field by describing the women leaders' career paths who currently are in leadership positions in the field.

## Research Questions

My purpose in this transcendental phenomenological study was to understand the lived experiences of women senior leaders in the IT field as it pertained to their leadership career path. The primary objective of researchers using classic transcendental research is to understand the lived experiences of an individual. Lived experiences can include an individual's lived space, lived body, lived time, and lived human relations (Willis, Sullivan-Bolyai, Knafl, & Cohen, 2016). In this study, the lived experience was with regard to the phenomenon of career advancement of women senior leaders in the IT field. Due to the primary focus of the lived experiences of the individual in transcendental phenomenological research, the research question for this study was as follows:

RQ1: What is the essence of the lived professional and personal experiences of women in their career advancement, which led to them to achieve their senior level positions in the IT field?

## Conceptual Framework

A conceptual framework is a system of concepts, assumptions, expectations, beliefs, and theories that supports and informs the research study (Leamy, Bird, Boutillier, & Williams, 2011). The conceptual framework explains in narrative form the main theories and/or concepts that will be the foundation of the study such as

key factors, concepts, variables, or presumed relationships among them. The conceptual framework for this study was based on Bandura's (1986) social cognitive theory (SCT). The concept of self-efficacy is an important facet within Bandura's theory. Bandura (1997) described self-efficacy as "the belief in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). Self-efficacy is the belief in one's ability to be successful in a given situation. Self-efficacy can be achieved through mastery experiences, modeling, social persuasion, and the physiological state of a person (Wood & Bandura, 1989).

In the IT field, women are the minority compared with men in the field (Machina & Gokhale, 2015). Women working in male dominated fields have to continuously prove that they are worthy to work with in the "good ole boys" environment. Some women may lack confidence in themselves to be successful in their jobs or careers in the IT field. In addition, some women may lack motivation to succeed into senior leadership positions because they may feel that they do not fit into the hierarchy of being in a male-dominated industry. All these factors may contribute to a lack of self-efficacy in women working in the IT field.

I based this study on the belief that women senior leaders in the IT field have a high sense of self-efficacy for career advancement. It is important to understand how women in senior leadership positions view their own self-efficacy as well as how they view the advancement of other women in IT. An individual's successful performance at accomplishing something strengthens their self-beliefs of his or her

own capabilities (Wood & Bandura, 1989). People need social persuasion to validate that they are doing things right and or successful (Wood & Bandura, 1989). The physiological state of a person greatly affects a person's self-efficacy (Wood & Bandura, 1989).

The social cognitive theory, detailed more in Chapter 2, is powered by influences, which are derived from behavior, cognition, and the environment (Dooley & Schreckhise, 2016). Bandura believed that an individual's own mind was an active force that created one's reality, processed information, performed behaviors, and acted on these behaviors (Dooley & Schreckhise, 2016). Reciprocity and feedback allows an individual to gauge if his or her own reality is a product of their environment (Dooley & Schreckhise, 2016).

Various types of environments and social systems influence the human behavior (Kier, Blanchard, Osborne, & Albert, 2014). The environment of an individual plays a major impact on the development and behavior of a person. The social cognitive theory explains that factors such as economic conditions, socioeconomic status, and educational and family structures affect individuals directly (Kier et al., 2014).

Self-efficacy affects every aspect of human behavior. By identifying and understanding the beliefs a person holds regarding his or her power to affect situations, it strongly influences both the power a person actually has to face challenges and make decisions. The social cognitive theory is the foundation to

explain how self-efficacy is displayed throughout the career paths of the women senior leaders.

## Nature of the Study

This study consisted of a classic transcendental phenomenological approach. Qualitative research seeks to understand, describe, and explore by analyzing and comparing different accounts in various settings (Park & Park, 2016). This type of research is focused on applied and theoretical findings based on the given research question through field study in natural environments (Park & Park, 2016). Quantitative research is used to predict and control social phenomena (Park & Park, 2014). Researchers measure, evaluate, and make generalizations of a given population and encourage repetition of the study in quantitative research (Gray & Milne, 2015). A quantitative study cannot answer this research question due to the fact that the data output is numerical in nature and can be used statistically to derive to conclusions about the data. Whereas data collection for a quantitative study typically is collected with the use of a survey instrument, a qualitative study uses an interview as its primary form of data collection. For these reasons, conducting a quantitative research study was ruled out based on the stated research question of this study.

Selecting a transcendental phenomenological approach was the best option for this study because I explored the lived experiences of the stated phenomenon, which in this case was the career advancement of women senior leaders in the IT field. Phenomenology seeks to understand the life of human experiences as it is

lived (Moerer-Urdhal & Creswell, 2014). The phenomenon that I studied was the career advancement as experienced by women senior leaders in the IT field. The research rationale and research methodology for this study is discussed in further detail in Chapter 3.

A purposeful sampling approach was used to identify participants for this study. Sixteen participants were recruited; however, data from 15 participants was used for this study. I started solicitation and recruitment efforts with my current professional network to identify women who met the criteria. To participate in this study, the participants had to meet the following requirements:

1. Female senior leader currently working in the IT field (Senior level positions for this study include president, vice president, C-level positions such as chief executive officer (CEO), chief operations officer (COO), chief information officer (CIO), chief technology officer (CTO), vice president of IT (VP of IT) and director and managerial level positions).
2. Work in current role for 2 or more years.
3. Live and work in the continental United States.

The primary form of data collection for this study was a 1-hour telephone interviews that I conducted, as the researcher, with each of the participants. Each prospective participant was asked to review the "Participant Invitation and Consent Form" and reply back that they "consent" to being included in the study. With the permission of the participant, each interviews was recorded and transcribed for

transcription validation. The interview protocol included a semistructured interview and a demographic questionnaire. I conducted member checking by emailing participants a copy of their transcribed interview within 72 hours of their completed telephone interview.

Data collection for transcendental phenomenological studies is derived from first-person accounts during informal one-to-one interviews, which are transcribed and analyzed for themes, patterns, and contextual meanings (Roberts, 2013). The data analysis was completed using the modified Van Kaam method as recommended by Moustakas (1994), which is detailed further in Chapter 3. The researcher is key in analyzing and attaching meaning to the lived experiences and this study was through the transcendental view of the world. As the researcher, it was important that I set aside my personal feelings and bias to not influence participants or the conclusions of the study. In transcendental phenomenology, epoche is the process of setting aside one's prior judgment and knowledge in order to be open to understanding the phenomenon in a fresh, unbiased manner (Moustakas, 1994).

Transcendental phenomenology is one of two philosophical assumptions about experience and ways to organize and analyze phenomenological data (Moerer-Urdahl & Creswell, 2004). Compared with hermeneutic phenomenology, transcendental phenomenology focuses on meanings that analyze the human experience (Moustakas, 1994). Transcendental phenomenology reduction takes each experience and considers it in its singularity, in and for itself (Moustakas, 1994). Moustakas (1994) states "the phenomenon is perceived and described in its

totality, in a fresh and open way" (p.33). Transcendental phenomenology reduction allows the researcher to derive a textual description of the meanings and essences of the phenomenon, the participants that experience the phenomenon, and the vantage point of an open self (Moustakas, 1994).

## Operational Definitions

*IT*: The application of computers to store, study, retrieve, transmit, and manipulate data or information (Priya & Mahadevan , 2013).

*IT field:* For the purpose of this study, this includes employees with the following occupations: web developer, software developer, network and computer systems administrator, information security analysts, database administrator, computers systems analysts, computer support specialists, computer programmer, computer network architect, computer and information research scientist, IT project manager, chief information officers (CIO), chief technology officers (CTOs), chief operations officer (COO), chief executive officer (CEO), and vice president of IT (VP of IT) (U.S. Bureau of Labor Statistics, 2014).

*Gender discrimination*: The practice of treating or being biased of one particular gender unfavorably (Baker, 2014).

*Glass ceiling*: An invisible barrier which is mainly based on gender discrimination that prevents qualified individuals, particularly women from advancing within an organization (Berrey, 2014).

*Male-dominated industry*: Industries such as engineering, technology, manufacturing, logistics, and distribution, which traditionally hire men and are controlled by men (Sweida & Woods, 2015).

*Senior leaders*: Persons with a title of chief executive officer (CEO), chief operations officer (COO), chief technology officer (CTO), and director and managerial level title (Priya & Mahadevan, 2013; Woszczynski, Dembla, & Safar, 2016). These women are senior leaders because they are either in charge of a company, department, and or a group of people that they manage and lead.

## Assumptions

As with any study, specific assumptions existed for this research study. I assumed that participants would freely share and discuss their personal work experiences in a complete and factual manner. I also assumed that the qualitative methodology using a transcendental phenomenological approach was the best approach to explore the experiences of women senior leaders in the IT field. Last, I assumed that there would be some similarities in career experiences of the women senior leaders that could be incorporated into common themes and contribute to social change within companies.

## Scope and Delimitations

This study included 15 women senior leader participants working in the IT field for the past 2 years in the United States. Senior leadership positions include president, vice president, C-level positions such as chief executive officer (CEO), chief operations officer (COO), chief technology officer (CTO), director and

managerial level positions. This study was confined to the IT field only. Nonmanagerial women workers in the IT field were not considered for this study.

## Limitations

The sample size, research findings and issues of trustworthiness contributed to the limitations of the study. The honesty of the participants was the first limitation of the study. As the researcher, I had to trust that the participants were being truthful in sharing their lived personal experiences as women senior leaders in the IT field with me. To ensure that I accurately captured the lived experiences in their own words, I completed the process of member checking by having each participant review and verify their interview transcripts for accuracy.

The second limitation for this study was the purposive sample size of 15 participants located within the continental United States. A sample size of 15 was determined to be the point at which data saturation would be achieved. Data saturation is the point to discontinue collecting data (Saunders et al., 2018). Data saturation was achieved after the ninth participant, however; I continued on to 15 participants as originally proposed for the study. The first nine participants were easy to secure, however; the last 6 participants were difficult to secure.

The last limitation of the study was time constraints of the participants. Data collection was completed in 42 days. Coordinating around the participant's schedules and tasking into consideration different time zones made it challenging at times to complete the data collection process. A total of five prospective participants

expressed interest in the study; however, their work travels caused them not to be able to commit.

## Significance of the Study

This study serves to support positive social change and address the gap in literature of women advancing into senior leadership positions for which they are qualified for in the field of IT. In addition, the results of this study may address why women are not attracted to the field of IT. A qualitative study can address the gaps in literature by examining and describing a phenomenon. The phenomenon under study was the essence of the lived experience of career advancement of women. This study may help organizations in the IT field improve mentoring, leadership development, and more efficient career path strategies for women interested in senior leadership roles.

### Significance to Theory

As previously stated, the general problem that I addressed in this study was the limited number of women in senior leadership positions in the IT field. With few women being represented in the field, one can deduce that there are even fewer women who currently hold senior leadership positions. The specific problem that I addressed is that not enough is being done by organizations to attract women to the field of IT, which in turn is causing fewer opportunities for career advancement. Pretorius, Mawela, Strydom, de Villiers, and Johnson (2015) pointed out that having more women in senior leadership positions may make the industry appear more attractive to women.

This research study may uncover possible barriers to entry into the IT field as well as advancement once already working in the field. In addition, this research study may uncover possible ways to promote positive ways to provide career support to women in IT.

### Significance to Social Change

This study may fill a void in management and leadership by demonstrating a better understanding of how women advance to senior leadership positions in the IT field. At the present time, little to no research on the advancement of women into senior leadership positions exists in the IT field (Smith, 2013). The implications for this study may also fill a gap in other advancement fields for women besides the IT field that might be applied to those situations. The results of this study may assist other women interested in leadership positions in the IT field by describing the women leaders' career paths who currently are in leadership positions in the field.

## Summary and Transition

In this chapter, I provided an overview of the research problem, purpose statement, and research questions that will be addressed by this dissertation. I based this study on the belief that women senior leaders in the IT field have a high sense of self-efficacy for career advancement. It is important to understand how women in senior leadership positions view their own self-efficacy as well as how they view the advancement of other women in IT. In Chapter 2, I discuss both the social cognitive theory and self-efficacy as the basis for the study's theoretical and conceptual framework further in the literature review. Included in this chapter is an

overview of transcendental phenomenological research methodology and the data analysis approach that I further discussed in Chapter 3. I present the results of the study in Chapter 4 to include the demographic information of the participants. Last, in Chapter 5, I discuss the data results, conclusions, implications for positive social change, and recommendations for future study.

# Chapter 2: Literature Review

In this study, I examined the journeys that women senior leaders took in the information field to gain an understanding of their career paths and how they advanced into to their leadership positions. Understanding the journeys that women senior leaders took in IT provided insight into areas of management that were not previously addressed or understood. The gap in the literature from an organizational standpoint did not address women in senior leadership positions in the IT field (Dubow, 2014). The rise of global competitiveness has increased the demand of IT professionals (Major et al., 2013). Although a demand exists for IT professionals across the board, a shortage of women workers exists in this field (Major et al, 2013). With fewer women accounted for in the IT field, this creates a limited number of women in senior leadership positions in IT. Women held 26% of professional computing occupations in the United States in 2017 (National Center for IT, 2017). This low percentage of professional women working in computing occupations demonstrates the shortage of women in the IT field and the reason it lacks women senior leaders due to not having enough talent to recruit from.

My purpose in this transcendental phenomenological study was to understand the lived experiences of women senior leaders in the IT field to gain an understanding of their career advancement into senior leadership positions. In this study, I focused solely focused on women who currently work in the IT field and are in senior leadership positions.

In the literature review, I detail the rationale for the social cognitive theory and self-efficacy, which formed the conceptual framework for the study. A thorough review of the literature discusses women's perceptions of the IT field along with the pros and cons of working in the field. Being that the IT field is male dominated, a brief overview of women working in STEM and construction fields provided a comparison for review. Numerous barriers to advancement for women in the IT field and this was discussed in depth in the literature review. The rationale for the research methodology was discussed and how it tied in with the research question.

## Literature Search Strategy

Limited research regarding women senior leaders in IT exists. My search strategy for the literature review focused on women in general working in IT. The electronic databases that were searched were Business Source Complete/Premier, Computers & Applied Sciences Complete, Computing Database, Emerald Management Journals, Management & Organizational Studies at SAGE Full Text collection, ProQuest Dissertations & Thesis, Science Direct, and Thoreau. The search terms used included were *construction, dual earners, engineering, glass ceiling, IT and leadership, women, IT career and women, IT field and females, IT and gender differences, leadership, male-dominated, male-dominated industries, mentoring women, mentoring women and leadership, mentoring women and senior leadership, self-efficacy, self-efficacy and work motivation, self-efficacy and women, STEM, STEM fields,* and *working women*.

Search parameters such as peer-reviewed articles, full-text articles, and publication dates between 2014 and 2019 were used for the literature review search inquiry.

## Conceptual Framework

### Social Cognitive Theory

As stated in Chapter 1, the conceptual framework for this study was Bandura's (1986) SCT. The social cognitive theory is powered by influences, which are derived from behavior, cognition, and the environment (Dooley & Schreckhise, 2016; Lyons & Bandura, 2018). Bandura believed that an individual's own mind was an active force that created one's reality, processed information, performed behaviors, and acted on these behaviors (Dooley & Schreckhise, 2016). Reciprocity and feedback allows an individual to gauge if his or her own reality is a product of their environment (Dooley & Schreckhise, 2016).

Various types of environments and social systems influence the human behavior (Kier, Blanchard, Osborne, & Albert, 2014). The surroundings of an individual plays has a major effect on the development and behavior of a person. The social cognitive theory explains that factors such as economic conditions, socioeconomic status, and educational and family structures affect individuals directly (Kier, Blanchard, Osborne, & Albert, 2014).

The concept of self-efficacy is an important facet within Bandura's theory. Bandura (1997) described self-efficacy as "the belief in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3).

Self-efficacy is the belief in one's ability to be successful in a given situation; it can be achieved through mastery experiences, modeling, social persuasion, and the physiological state of a person (Wood & Bandura, 1989). The most effective way to develop a strong sense of self-efficacy can be developed through mastery experience (Wood & Bandura, 1989). Mastery experience is achieved when a person knows that they have performed a task successfully (Lyons & Bandura, 2018). The second most effective way to develop a strong sense of self-efficacy is through social modeling, which involves observing how other people successfully complete tasks (Lyons & Bandura, 2018). Modeling gives a person a sense of self-efficacy because they have seen how a task can be performed successfully if they follow what they have witnessed.

Self-efficacy is an essential concept in the social cognitive theory and is a strong predictor of competency. People with a high sense of self-efficacy are more willing to put in the effort needed to complete a task that they are interested as well as demonstrate persistence when presented with tough challenges. Being able to correct or improvise one's actions when faced with a challenge or setback is part of the social cognitive theory. Women with a high sense of self-efficacy are viewed as competent and emerging leaders.

In the social cognitive theory, Bandura suggested that making goals can influence a person's cognitive and emotional state based on the outcomes of reaching their goals. Bandura found that self-evaluative and self-efficacy tools are triggered by cognitive judgment through the motivating power of creating goals. A

goal is a guide and a motivator that can lead to a person's desired outcome. Goals have motivational effects that can increase one's self-efficacy and personal satisfaction (Lyons & Bandura).

In the IT field, women are the minority compared to men. Women working in male dominated fields have to continuously prove that they are worthy to work with in the "good ole boys" environment. Some women may lack confidence in themselves to be successful in their jobs or careers in the IT field. In addition, some women may lack motivation to succeed into senior leadership positions because they may feel that they do not fit into the hierarchy of being in a male dominated industry. All of these factors may contribute to a lack of self-efficacy in women working in the IT field.

My study was based on the belief that women senior leaders in the IT field have a high sense of self-efficacy in their leadership capabilities to advance in their careers. It is important to understand how women in senior leadership positions view their own self-efficacy as well as how they view the advancement of other women in IT. An individual's successful performance at getting something completed strengthens their self-beliefs of his or her own capabilities (Wood & Bandura, 1989). The physiological state of a person greatly affects a person's self-efficacy (Wood & Bandura, 1989). People need social persuasion to validate that they are doing things right and or successful (Wood & Bandura, 1989). Successful workplace performance evaluations and appraisals strengthen a person's self-efficacy (Lyons & Bandura, 2018).

Recent research supports findings from 30 years ago that validate positive associations of beliefs in self-efficacy and work performance (Dohn, Fago, Overgaard, Madsen, & Malte, 2016; Tansey, Iwanaga, Bezyak, & Ditchman, 2017; Cetin & Askun, 2018; Costley & Lange, 2018; Dagenais-Desmarais, Leclerc, Dondei-Shortall, 2018; Lisbona, Palaci, Salanova, Frese, 2018). Results of a study proved that being helpful to others, sharing, and being cooperative was negatively correlated with poor behavior that resulted in excuses, placing blame on others, or not completing tasks (Galvez, Lopez-Martin, Manso, & Valle, 2018). Employees with a high sense of self-efficacy are able to overcome obstacles and setbacks they experience in the workplace. They are able to take part in workplace opportunities due to the fact that they are engaged, mindful, and have a strong belief in their abilities (Galvez et al., 2018).

Self-efficacy affects every aspect of human behavior. By identifying and understanding the beliefs a person holds regarding his or her power to affect situations, it strongly influences both the power a person actually has to face challenges and make decisions. The social cognitive theory and particularly self-efficacy were utilized in this study to see how self-efficacy was displayed throughout the career paths of the women senior leaders.

## Literature Review

In recent years, it has appeared that discussing women rights and equality in the workplace has been a major topic of discussion, however; little has changed or been done to increase the amount of women in senior level positions especially in IT

(Dutta & Omolayole, 2016). An extensive review of the literature found that men dominate senior-level positions and that they are the "*ideal worker*" (Bierema, 2016). When thinking about leaders, women are viewed as *out of place* in this context. The literature review uncovered barriers to advancement, stereotypes, and various viewpoints regarding working women in the field of IT.

**Women's Perceptions of the IT Field**

A review of the research reveals that women around the globe other than the United States specifically pursue careers in IT because of the perceived high status associated with working in the field and for job stability (Pretorius et al., (2015). Pretorius et al. (2015) revealed that women currently working in IT concluded that women around the world share a perception that the industry is functional, logical, and consists primarily of programming and building hardware, which is viewed as being a *manly* job. In the United States, working in the IT field is viewed as a *geeky* job. In India, IT workers are not viewed as geeks, but highly intelligent and sophisticated individuals (Varma & Kapur, 2015). In addition, Pretorius et al. (2015) revealed that women found the IT industry to be male-dominated and are hesitant to work in this field due to the fact that it requires long hours. Pretorius et al. (2015), compiled a list of connotations that are associated with the IT industry that may be considered negative factors or a turnoff for women which includes:

- Continuous learning and change
- Chaos
- Challenging

- Tiring/burnout
- Difficult family-work balance
- Skillset requires more task-oriented, logical, and functional rather than people skills
- Frequent travel
- Male-dominated industry jargon
- High stress levels

Educating women about the diverse areas of IT and creating a better educational curriculum may entice women to enter into the industry. Pretorius et al. (2015) suggested that having more women in senior leadership positions may make the industry appear more attractive to women. Changing societal views on women as homemakers and caretakers will change overtime, which will allow women to join the IT workforce without having to worry about the long hours away from home.

Ojokoh, Adeola, Isinkaye, Abraham's (2014) research of finding out why women selected to work in IT also provided reasons why some women are not interested in the field. Women respondents replied that some of their peers that did not work in the field stated that IT involved too much programming, is stressful, requires too much mathematics, and is expensive (Ojokoh et al., 2014). Women tend to work in jobs where they can interact with others and feel a sense of accomplishment. The job functions in IT do not support this notion by women.

Indian researchers, who have compared and contrasted women in IT in India and the United states suggest that perhaps American women may not be attracted to the IT field due to the fact that there are few female teachers in science and mathematics in schools, which in turn causes for the lack of female role models (Varma & Kapur, 2015). The lack of women faculty in computer science in the U.S. emphasizes the attitude that the IT field is not for women and causes isolation (Varma & Kapur, 2015).

A recent study of US college students (Cheryan, Play, Handron, & Hudson, 2013; Saniz et al. 2016) revealed that they view computer scientists as being masculine with masculine-related characteristics. Computer scientists were viewed as being highly intelligent and nerdy, technological savvy, always on a computer, lacking social skills, unattractive in physical appearance that aligns with having a nerdy look such as being thin, pale, or wearing glasses (Sainz et. 2016). These stereotypes about computer scientist do not align with female gender roles in the United States. This stereotype may deter some women from considering computer science in the first place.

**Male Dominated Industry**

Women have advanced in the fields of law, medicine, business, and biology, but have yet to advance in IT (Dubow et al., 2013). Not only has it been researched extensively, but there is no question that there are more men working in the IT field compared to women (Beyer, 2014; Dubow & James-Hawkins, 2016; Ojokoh et al., 2014; Zweben & Bizot, 2016; Arnold, Summer, & George, 2014, Kishore, 2016, Mone,

2017). The past 10 years of research concludes that the IT industry remains a male-dominated industry that does not attract women due to gender role stereotyping, gender stereotyping, and misconceptions about the field (Ballard, Scales, Edwards, 2006; Lemons & Parzinger, 2007; Elnaggar, 2008; Wenling & Thomas, 2009; Craig & Lang, 2010; Drury, 2011; Mahmod & Dahalin, 2012; Major et al. (2013); Huang, & Aaltio, 2014; Machina & Gokhale, 2015; Long, Segalo, & Laidlaw, 2016; Jung et al., 2017).

Scholars have argued that this uneven gendered playing field could be due to the fact that women seek job positions that allow them to work and express themselves with others (Pretorius et al., 2015). Dubow et al. (2013) stated that women need to be supported by other women in order to gain interest in IT. Previous research found that women compared to men, report that they entered in the IT field because of a teacher, family member, or friend who encouraged them (Ashcraft, Eger, & Friend, 2012). This support is backed by research findings by Albert Bandura (1997) that showed that individuals need encouragement to help them face adversity. The encouragement and support are key factors for the retention of girls and women when they start to have doubts about belonging in IT (Dubow et al., 2013).

The National Center for Women & IT (NCWIT) was charted in 2004 as a non-profit community of approximately 900 universities, companies, and non-profits, and government organizations. NCWIT's mission is to capture the interest of young girls and provide support to women already working in the field. Despite the on-

going efforts of organizations such as NCWIT and professional trade associations like Women in IT, there is still a shortage of women working in IT across the board (Dubow et al., 2013).

The literature reviewed discussed women in other male-dominated industries such as bike messengers (Ferguson, 2017), higher education senior leadership (Anyikwa, Chiarelli-Helminiak, Hodge, & Wells-Wilbon, 2015; BlackChen, 2015; Davis & Maldonado, 2015; Block & Tietjen-Smith, 2016; Johnson, 2016), accounting (Anders, 2015; Barry, 2017; Cimirotić, Duller, Feldbauer-Durstmüller, Gärtner, Hiebl, 2017), engineering, and construction (Arena et al., 2015; Francis, 2017; Ibáñez, 2017; Navarro-Astro, Roman-Onsalo, Infante-Perea, 2017). Science, technology, engineering, and Math fields (STEM) with an emphasis on the engineering field and the construction field were discussed further to detail the barriers that women in these fields faced and to show the progress that they have made so far in their fields.

**Construction Industry**

Women in the construction industry face similar barriers to advancement such as women working in the IT and engineering fields (Olofsdotter & Rasmusson, 2016; Ibáñez, 2017). Ibáñez (2017), stated that women in the construction industry like women working in other male-dominated occupations work in a culture of disrespect or hazing and are expected to work just as hard as men to not appear weak or incompetent. Qualitative research conducted by Wright (2014) consisted of women employees working in the construction industry found that employers

continue to view construction work as a man's job. Participants of the study reported that their employers did not allow women workers with young children to work the same hours from start to finish just like their male counterparts, employers stated that they preferred to hire lesbian construction workers because they work just as hard as men and do not think about getting pregnant (Wright, 2014). This type of thinking by an employer puts women who are not lesbians at a disadvantage because they are viewed as not being strong work candidates if they have or are considering having children.

Women in the construction industry face gender stereotyping, hostile work environments, employer prejudice, long work hours, and lack of facility support such as separate male and female bathrooms or private areas for women to pump milk if needed (Wright, 2014). According to Cha (2013), there is a negative association with occupations that have low women proportions and long work hours. Long work hours associated with male-dominated type work continue to exclude women with children from these positions furthering gender segregation (Cha, 2013).

**STEM Fields**

Research regarding the under-representation of women in the engineering field cannot be discussed without also discussing science, technology, engineering, and math disciplines and careers. The Bureau of Labor Statistics (2014) reported that the fastest growing careers nationally are in STEM. With the increased employment opportunities in STEM fields, there is still an underrepresentation of

women pursuing these jobs due to the minimal support and encouragement of young girls (National Science Board, 2012). More research is needed for the support of women interested in STEM careers Cadaret, M. C., Hartung, P. J., Subich, L. M., & Weigold, I. K. (2016).

The underrepresentation of women in STEM college majors and careers is a continuous discussion among scholars (Blosser, 2017; Cadaret et al., 2016**;** Kodate, N., Kodate, T., Kodate, T., 2014). There are varying viewpoints to why women are underrepresented in science and math fields. One viewpoint suggested that women cannot handle the extensive amount of science and math classes needed for to obtain an engineering degree. Other scholars have argued reasoning's to why women chose not to enter into STEM fields. Blosser (2017) argued that women are not equally represented across

Despite the fact that 57% of women compared to 43% of men graduate from college, there is roughly around 18% of women who graduate with engineering and computer science degrees (National Science Foundation, National Center for Science and Engineering Statistics, 2013). In conjunction to the low STEM graduate rates, Chen (2013) reported that women are more likely than men to switch from STEM majors to non-STEM majors. Cadaret et al., (2016) reported that this phenomenon of women switching from STEM to non-STEM major is a new occurrence that needs to be researched more in depth.

**Women in IT**

There is a different perspective from women around the globe regarding the field of IT. Varma and Kapur (2015) stated that the lack of women seeking IT positions should not be viewed as a global phenomenon because women in India view the IT field as an attractive field to work in compared to women in the U.S. The notion that the IT field is a male-dominated industry is society-specific and not universal (Varma & Kapur, 2015). In the past 15 years, India has seen an increase in women receiving advanced degrees in computer science compared to the United States (Varma & Kapur, 2015). Obtaining a degree in computer science and working in the IT field is perceived by the Indian culture as women friendly and are considered as acceptable jobs by their peers and families. Women in India with computer science backgrounds are viewed as intelligent being that they are able to handle the technical aspects of the job, work on complex projects, and use advanced problem solving skills (Varma & Kapur, 2015). Women working in IT positions are well paid and have vast employment opportunities compared to other fields in the country.

Varma and Kapur's (2015) research found that women in India liked working in IT because they can work in a "white-collar position at a desk in a secure indoor office, possibly with air conditioning and coffee" (p.58). The Indian female students that participated in their study stated that issues with recruitment and retention of women in IT is not due to the field itself, but from their patriarchal society that favors men (Varma & Kapur, 2015). In India, working in IT is not a field for male

geeks, which is sometimes the perception in the United States, but is viewed by both genders as a prestigious high-paying job (Varma & Kapur, 2015). In India, women who work in IT benefit from having high social status and independence of having a high salary position, which overshadows any preconceptions of teachers and gender discrimination (Varma & Kapur, 2015). Varma and Kapur's (2015) research findings differ greatly from the low enrollment and graduation figures of women in the United States, which views a degree in computer science as a field suited for a man.

In Nigeria, working in IT is a very popular field to work in despite having issues with recruiting more women to the field. Nigerian women are very autonomous and do not have to deal with societal pressures of working in stereotypical careers such as homemakers, teachers, or administrative roles such as secretarial positions (Ojokoh et al., 2014). Women are attracted to the field of IT in Nigeria because it involves interesting work that allows for them to learn new things, solve complex problems, and allows for continuous education, which makes them appear knowledgeable and up-to-date on new technologies (Ojokoh et al., 2014).

**Gender And Leadership**

Leadership is having the ability to influence and motivate others to do something. In the workplace, leaders try to influence and motivate their workforce to reach organizational goals and objectives. At the present time, women account for 16.6% of board seats, 14.3% of executive officer positions, and 14.3% of CEO roles in Fortune 500 companies (Catalyst, 2017; Grant & Taylor, 2014). These alarming statistics prove that women are still underrepresented in senior-level positions.

Rincón, González, and Barrero (2017) stated that it is a fact that women are underrepresented in senior leadership positions in the western world. Due to the fact that the IT field consists of primarily males, there are very few women senior leaders in the industry as it is. Exploring what makes women attracted to the information field and how can they advance into senior level positions becomes a relevant question.

Women are faced with the challenges of trying to advance in their careers while being paid less than men and having to work twice as hard to prove themselves worthy in addition to balancing a family life (Bierema, 2016). There are many variables that connect in a working woman's life such as identity, socialization, culture, family life, socioeconomic status, education, race, ethnicity, sexual orientation, and religion (Bierema, 2016; Hoyt & Murphy, 2016). Once a women enters into a leadership position, she will often times experience the challenges of trying to not come off as too masculine while also trying to demonstrate a firm commitment to the organization (Bierema, 2016).

Previous arguments have stated that men are better suited for management (Pons Peregort, Calvet Puig, Tura Solvas, & Muñoz, 2013; Hoyt & Murphy 2016; Rincón et al., 2017). In addition, it has been argued that if there were more women in the pipeline, more women can be promoted into leadership positions (Pons Peregort et al., 2013). According to Reid (2015), the ideal leader is a male who is completely dedicated to his work, puts his work over his family, and personal needs. Bierema (2016) stated that women are at a disadvantage before they even interview

for a senior-leadership positions due to the "*ideal worker*" image. It is hard for society to view women as ideal worker due to the fact that women are traditionally expected to be the caregivers of the family. This expectation puts women at a disadvantage of moving into a senior level position because if they are taking care of their families, they cannot possibly work long hours and show commitment to the organization the same way that men are able to (Eagly et al., 2016).

Grant and Taylor (2014), argued that women hinder themselves from advancing into leadership positions because they do not know how to effectively communicate their accomplishments. Their research discovered six communication essentials that can help women project confidence when interviewing for leadership positions (Grant & Taylor, 2014). These communication essentials include starting strong, staying succinct, dimensionalizing content, owning voice, controlling movement, and projecting warmth (Grant & Taylor, 2014). Grant and Taylor (2014) suggested that executive coaching can help women learn and prepare how to communicate and portray themselves as effective leaders when interviewing for senior leadership positions.

Another argument for women having difficulties advancing into senior leadership positions is due to gender stereotypes (Hoyt & Murphy, 2016). When women are faced with being too communal or too agentic, they will often times experience social identity possibilities which could result in judgments, stereotypes, opportunities, restrictions, and treatments that are directly related to one's social identity (Hoyt & Murphy, 2016). As defined by Hoyt and Murphy (2016), stereotype

threat is a threat of being judged and treated unfairly in settings where negative and unfavorable stereotypes about one's identity applies in a real-life setting. Women trying to advance into senior leadership positions face a variety of stereotype threats.

Hoyt & Murphy (2016), analyzed the phenomenon of stereotype threat for women in leadership. This study analyzed models of stereotype threat, which focused on indications of stereotype threat, the consequences of stereotype threat, moderators of stereotype threat appraisals and responses (Hoyt & Murphy, 2016). The main stigma of stereotype threats for women in senior leadership positions are decreases in motivation and engagement (Hoyt & Murphy, 2016). Women who work in predominately male dominated industries such as STEM fields are more likely to experience stereotype (Hoyt & Murphy, 2016).

Women are labeled as communal with characteristics such as friendliness, unselfishness, sympathetic, and able to express themselves whereas men are viewed as being agentic with assertive, masterful, independent characteristics (Saniz, Meneses, Lopez, Fabregues, 2016). Women leaders will often find themselves in a dilemma if they are too communal, which causes them to be criticized for being ineffective leaders or not being female enough if they are too agentic (Eagly, Gartzia, & Carli, 2014; Hoyt & Murphy, 2016). Compared to men, women are viewed as being more friendly and approachable, caring, and genuinely concerned for others (Saniz et al., 2016). Men are viewed as being assertive, competent, and independent (Saniz et al., 2016). Women who exhibit assertion and control may not be accepted in the

same way as men are; they may be viewed as intimidating and alienating instead (Lakshmi & Peter, 2015). Assertion and control are leadership qualities that are viewed by individuals as important characteristics to possess to be an effective leader (Lakshmi & Peter, 2015). Women, who display assertion and control, risk possibly intimidating and alienating others. A person's physical appearance, personality traits, behavior, and occupation are factors that are used in our society to make inferences about men and women (Saniz et al., 2016). This issue makes it challenging for women to overcome in the workplace.

Implicit leadership, based on the implicit leadership theory is the preconceived notions of what people think it means to be a leader. Preconceived notions regarding leadership are often times based on personality traits, behaviors, and social identities (Carnes, Houghton, & Ellison, 2015; Hoyt & Murphy, 2016; Foti, Hansbrough, Epitropaki, & Coyle, 2017). The implicit leadership theory is compatible with the previously mentioned "*ideal worker"* image by Bierema (2016). Leaders are typically viewed as being white and male. These preconceived notions automatically result in biased perceptions of people who do not fit the image of a leader such as for minorities and women (Hoyt & Murphy, 2016).

Scholars such as Heilman's (1983 & 2001) lack of fit model and Eagly and Karau's (2002) role congruity theory of prejudice toward female leaders have both expressed the concept that women do not fit the image of the ideal leader. The female gender stereotype is much different from the leadership role (Eagly & Karau, 2002 & Heilman, 2001). Gender stereotypes are generalizations about the

characteristics of men and women that are viewed by society than can include descriptive and prescriptive components. One of the most significant gender stereotypes in terms of leadership is that "women take care" and "men take charge" (Baker, 2014; Eagly & Heilman, 2016; Hoyt & Murphy, 2016; Vongalis-Macrow, 2016).

Gender stereotypes unfortunately can cause negative effects on a woman's career, which can contribute to the shortage of women senior leaders in various occupations (Hoyt & Murphy, 2016). Women who experience the harmful effects of gender stereotypes early in their careers may not aspire to reaching leadership positions or possibly even change fields to an occupation that is more accepting or tolerant of women (Edmunds et al., 2016; Hoyt & Murphy, 2016). The phenomenon of women switching careers midcareer is currently being witnessed in the IT field (Way, 2015). Although Way's (2015) phenomenological study of 10 women who left their IT careers midcareer did not specifically address gender stereotypes, it did, however; find that women were leaving the IT field midcareer due to burnout, poor work-life balance, and lack of meaning in their work. Further study on the factors for women leaving IT careers in midcareer could provide further insight that should be conducted to further analyze these factors.

**Barriers to Advancement For Women**

There are many barriers to advancement that hinder women from obtaining senior leadership positions in their chosen field (Elprana, Felfe, Stiehl, Gatzka, 2015; Rincon et al., 2017). The lack of women in senior positions makes it even more

difficult for other women to enter into senior level positions (Howe-Walsh & Turnball, 2016). This, in itself, is a major barrier to advancement that although is obvious, it can easily be overlooked as a barrier. With this being said, it is hard for women in the IT field to advance into senior leadership positions when there are few women currently holding these positions now.

The work-family role conflict is a major barrier that inhibits women trying to obtain jobs and for women trying to advance in to senior leadership positions in their chosen field and particular in medicine, engineering, and technology (Uzoigwe, Low, & Noor, 2016). Uzoigwe et al., (2016) stated that factors such as long work schedules, extensive overtime, being on-call, having young children, being part of a large family, taking care of aging parents, and living in a household where both spouses work, gender role ideology, job demand, and work overload all affect the work-family role conflict experienced by women. Quantitative research of 42 medical doctors, 54 engineers, and 77 IT professionals in Nigeria by Uzoigwe et al., (2016) concluded that work factors affect the work-life role conflict more so than family factors. Many people would assume that having to care for young children would affect a women's career advancement, however; in Nigeria, families live in extended family systems. In this type of family environment, married couples live in the same house as their parents and potentially aunts and uncles, and siblings. This type of family system minimizes childcare dilemmas for women as they have relatives at home that can care for the children.

Although it has been researched extensively in both academia and in business, the glass ceiling phenomenon is still a major barrier for women especially in IT (United States Glass Ceiling Commission, 1995; Berry, 2014; Cook & Glass, 2013; Ezzedeen, Budworth, & Baker, 2015; Fernadez & Campero, 2017; Hennessey, MacDonald, & Carroll, 2014; Hurley & Choudhary, 2016; Jafarey & Maiti, 2015; Javdani, 2015, Ng & Sears, 2017; Omran, Alizadeh, & Esmaeeli, 2015; Sabharwal, 2013; Sahoo & Lenka, 2016; Subramaniam, Khadri, Maniam, & Ali, 2016). There are numerous arguments that suggest that the glass ceiling exists because of the difference in the needs of men and women (Liu, 2013; Alsono-Almedia, 2014). The reason for this argument derives from the fact that women may not be interested in ascending the corporate ladder because they may be content with their job functions that allow them to interact with others (Liu, 2013). The overall human connection is more valuable than possessing power that comes with being in a senior leadership position (Liu, 2013).

Glass ceiling barriers can be divided into two categories: personal challenges and work challenges (Subramaniam et al., 2016). Personal challenges would consist of family obligations and demographic factors whereas work challenges would consist of long work hours, work culture, or advancement opportunities. In a study of 300 working women by Subramaniam et al., (2016), women reported that they feel secure and accepted when their organizations are understanding of personal and work challenges that affect them. This creates a positive organizational culture that significantly affects career advancement. Women who feel valued and

appreciated are more prone to becoming interested in senior leadership positions, desire to move up the corporate ladder, and obtain additional education to make them more competitive in the workplace (Subramaniam et al., 2016).

Barriers to advancement for women exist on various levels of society such as individual, organizational, and societal (Diehl, 2014; Liu, 2013). Liu (2013) and Eagly and Carli (2007), argued the concrete wall, the glass ceiling, and labyrinth are three challenges that that prevent women from moving upwards in their careers. Balancing work and family responsibilities is a barrier that prevents women from advancing on an individual level (Diehl, 2014; Socratous, Galloway, & Kamenou-Aigbekaen, 2016). Organizational barriers include tokenism - or being the only one, being excluding from informal networks, lack of mentorship opportunities, lack of sponsorship salary inequalities, gender discrimination, and workplace harassment (Diehl, 2014; Ibanez, 2017). On a societal level, barriers to advancement include a woman's culture, the stereotype that leadership is deemed as masculine, and gender stereotyping (Diehl, 2014).

Workplace practices such as a biased human resources department, selection, training and development, appraisals, and selection can work against women (Liu, 2013). Previous peer-reviewed research proves that women are more likely to be excluded from management training programs, as leadership roles are deemed as being masculine (Araujo-Pinzon, Alvarez-Dardet, Ramon-Jeronimo, Florez-Lopez, 2016)

A research study by Diehl (2014) captured the adversities and barriers that women in senior leadership positions in higher education faced throughout their careers. Just like the IT industry, the higher education field also lacks a great deal of women senior leaders. The results of this study concluded that there is an opportunity for growth for those who are able to overcome adversity and other barriers to advancement. Having perspective allowed the women participants to turn negative situations into positive ones so that they could move forward with their career aspirations and goals (Diehl, 2014). Some senior leadership positions require an individual to be in the public spotlight. Diehl (2014), concluded that women senior leaders who were able to maintain their privacy to a select few in their personal and professional networks were able to maintain their power and influence at work.

Very few studies have been conducted to explore how women, themselves, feel about the glass ceiling. Resignation, acceptance, resilience, and denial are factors that were identified by Smith, Crittenden, and Caputi (2012) that relate to women's attitudes regarding the glass ceiling phenomenon. Having resignation was one of the key reasons why women give in to organizational and societal barriers that hinder them from advancing in their careers (Smith et al., 2012). Some women acknowledge that organizational barriers exists, however; they accept the fact that they do not need to be in a senior leadership positions and never move up in their careers because they gave up (Smith et al., 2012). Some women do not acknowledge that the glass ceiling exists because they possess resilience that allowed them to

persevere in ascending into higher positions (Smith et al., 2012). All in all, glass ceiling barriers go against the common notion that education, dedication, and hard work will lead to a better life in the American society.

**Mentoring**

Angel, Killacky, and Johnson (2013) stated that the shortage of mentoring as one of the main factors for the deficiency of women advancing into senior leadership positions. Over 70% of Fortune 500 companies use mentoring to recruit, advance, and maintain their talent pools of men and women (Kovnatska, 2014). Mentoring is commonly defined as a professional relationship with someone who has experience (mentor) that trains and assists a new professional (mentee) by providing knowledge and insight that will allow the mentee to grow professionally and personally. Tareef (2013) stated that mentoring relationships form when a more skilled professional acts as in a supporting and consulting role to another person who is less experienced in the field. The concept of mentoring can be witnessed in Greek mythology in Homer's Odyssey (Kovnatska, 2014). Mentor was an elder teacher to King Odysseus who was entrusted his household to him while he was fighting in the Trojan War. During this time, Mentor became a teacher and advisor to King Odysseus' son Telemachus. Overtime, the word mentor evolved to mean teacher, friend, and advisor.

Mentoring is often intertwined with corporate management training programs, however; management training programs are more focused on learning skills for the specific job that they will be doing as well as learning about the

company they are working for. As a mutual relationship, mentoring takes place over time with scheduled interactions set by the mentor and mentee (Haggard, 2012 & Ambrosetti, 2014).

The three main types of mentoring that can support a person's personal and professional aspirations are peer mentoring, family support mentoring, and collaborative mentoring. Research demonstrates that there are numerous advantages to peer mentoring, which eventually leads to increased leadership opportunities. Mentees have stated that they possess a higher sense of confidence in their abilities due to being mentored by a professional in their industry (Bynum, 2015). Also, mentees have reported that they have a better understanding of industry applications and insight as well as a much better understanding to personal and professional career growth and aspirations (Bynum, 2015).

Peer mentoring is very common in the workplace as the mentor or even the mentee can seek out someone who is in a similar job position or is around the same age. Sharing professional and personal similarities can make it easier for the mentor-mentee relationship to connect with each other. Having a peer mentor can provide comfort to the mentee who may be new to a job function, department, or organization as a whole. This type of relationship can provide moral support when trying to balance personal and professional responsibilities (Bynum, 2015, Russo et al., 2017).

Out of the three types of mentoring structures, women have identified that family mentoring provides them with the most encouragement and support

(Bynum, 2015). Women who are married reported that the support of their spouse helped them in dealing with separation and isolation when starting new job positions (Bynum, 2015). Family members may not understand the tasks of a job, but they are able to provide encouragement and support (Russo, et al., 2017).

Mentoring has evolved to take place in-person face-to-face, over the telephone, or even virtually with the use of web-based communications applications due to time constraints and working in a more globalized society. A more globalized society allows for a new concept, collaborative or group mentoring. Collaborative mentoring allows for more than one professional to mentor the less experienced mentee. This type of mentoring allows for the diversity in working with various mentors. The mentee is able to get a wide variety of viewpoints and support from having more than one mentor. Collaborative mentoring consists of collaboration, shared decision making, and systems thinking (Bynum, 2015; Kochan & Trimble, 2000). Mentees who have taken part in collaborative mentoring are said to possess dominant traits of transformational leadership (Kuchynkova, 2013). Women are reported to be more prone to be transformational leaders compared to men.

Although there has been a little to no research regarding the mentoring of senior women who work in the IT field, other male dominated fields such as higher education administration is advocating for the positive benefits of mentoring for women who aspire to reach higher education leadership positions. In order for higher educational institutions to be relevant, they must try new forms of

leadership, which may require them to consider new leaders such as women (Block & Tietjen-Smith, 2016; Hannah, Muhly, Schockley-Zalaback, & White, 2015).

Block and Tietjen-Smith (2016) argued that there is a shortage of women senior leaders and in particular, in the higher education administration field because there is a lack of same-gender role models to be mentors. This argument coincides with a previously mentioned argument by Howe-Walsh & Turnball (2016), which stated "the lack of women in senior positions makes it even more difficult for other women to enter into senior level positions". In simpler terms, one can deduce that women are not going to be attracted to a particular job or field if there are not other women doing this type of work. The social cognitive theory concludes that people will mimic and follow behaviors that they have learned in their social environment. It is difficult for women to gravitate to the field of IT if there are not other women in higher numbers doing this type of work.

**Research Methodology**

When considering the choice of research methodology to go with, whether it is qualitative or quantitative, various factors such as the logic behind each method was critical. The research methodology is much wider than the research approach that will be used for the study (Vagle, 2014). This research study utilized a qualitative methodology with a transcendental phenomenological approach. Qualitative research seeks to understand and explore by analyzing and comparing different accounts in various settings (Park & Park, 2016). This type of research is

focused on applied and theoretical findings based on the given research question through field study in natural environments (Park & Park, 2016).

Quantitative research is used to predict and control social phenomena (Park & Park, 2014). Researchers measure, evaluate, and make generalizations of a given population and encourage repetition of the study in quantitative research (Gray & Milne, 2015). For these reasons, conducting a quantitative research study was ruled out based on the stated research question of this study: What is the essence of the lived professional and personal experiences of women in their career advancement, which led to them to achieve their senior level positions in the IT field? The research question seeked to understand and explore human behavior, which are characteristics of qualitative research that allowed the researcher to conduct interviews for the understanding of attitudes and opinions.

Phenomenology seeks to understand the life of human experiences as it is lived (Moerer-Urdhal & Creswell, 2004). The phenomenon that was studied was the career advancement of women senior leaders in the IT field. Transcendental phenomenology is one of two philosophical assumptions about experience and ways to organize and analyze phenomenological data (Moerer-Urdahl & Creswell, 2004). Hermenutical phenomenology studies the lived experiences as they are revealed in consciousness. This type of phenomenology is more descriptive than interpretive like transcendental phenomenology (Vagle, 2014). Compared to hermeneutic phenomenology, transcendental phenomenology focuses on meanings that analyze the human experience (Moerer-Urdahl, 1994). Transcendental phenomenology

reduction takes each experience and considers it in its singularity, in and for itself (Moustakas, 1994). Moustakas (1994) states "the phenomenon is perceived and described in its totality, in a fresh and open way" (p.33). Transcendental phenomenology reduction allows the researcher to derive a textual description of the meanings and essences of the phenomenon, the participants that experience the phenomenon, and the vantage point of an open self (Moustakas, 1994).

**Data Analysis**

Moustakas (1994) recommended the modified Stevick-Colaizzi-Keen method and the modified Van Kaam method for data analysis of phenomenological studies. The following steps are included in the modified Stevick-Colaizzi-Keen method as recommended by Moustakas (1994):

1. Consider the importance of the description of the experience from each statement
2. Record all important statements
3. List each invariant meanings of the experience
4. Relate and cluster the invariant units into themes
5. Synthesize the invariant meanings and themes into descriptions
6. Reflect on your own textural descriptions
7. Create a textural-structural description of the meanings

The following steps are included in the modified Van Kaam method as recommended by Moustakas (1994):

1. List and group all completed transcripts that are obtained during data collection
2. Cluster the data into invariant constituents and relevant themes
3. Identify invariant constituents and relevant themes in order to organize the groupings transcribed from the interviews
4. Form textural-structural descriptions of the meanings and essences of the experience merging both the invariant constituents and themes
5. Use the themes to determine the meaning of the lived experiences that involved the key findings and recommendations for the study.

The modified Van Kaam method allows for the data to be reviewed as a whole compared to the modified Stevick-Colaizzi-Keen method that analyzes each statement individually to produce themes and patterns. The modified Van Kaam method will be used to analyze the data for this study.

## Summary and Conclusions

This chapter provided a detailed review of the literature on IT field, male dominated industries, STEM careers, and women in leadership. The review included a discussion of the social cognitive theory and self-efficacy, which was the conceptual framework used for the study. The literature supported the rationale and reasoning for this research study. An extensive review of the literature supported that women and especially women in the IT field are underrepresented in senior leadership positions.

Women and men have different leadership styles and traits. It has been argued that women are underrepresented in senior level positions due to their leadership styles (Hoyt & Murphy, 2016; Rincón et al., 2017). Men are prone to prioritize their leadership approaches primarily by focusing on the task at hand, whereas women tend to focus more on people and relationships. Male task-focused leadership was viewed as more prominent and visible by others whereas female people-focused leadership was viewed as a supporting role (Rincón et al., 2017). On the other hand, researchers have suggested that effective leadership involves a combination of traits from both men and women such as inspiring and motivating people, ability to persuade others, empathy, integrity, risk-taking, and intelligence (Hoyt & Murphy, 2016; Rinón et al., 2017).

This study filled a void in management and leadership by demonstrating a better understanding of how women are able to advance to senior leadership positions in the IT field. At the present time, there is little to no research on the advancement of women into senior leadership positions in the IT field (Smith, 2013). The implications for this study may also fill a gap in other advancement fields for women besides the IT field that might be applied to those situations. The results of this study may assist other women interested in leadership positions in the IT field by describing the women leaders' career paths who are currently in leadership positions in the field.

Chapter 2 provided an exhaustive review of the literature, which uncovered barriers to advancement, stereotypes, and various viewpoints regarding working

women in the field of IT. The construction and STEM fields were analyzed in the literature review to demonstrate similarities women face in other male dominated fields. Chapter 3 provides a more detailed explanation of why a qualitative study was selected over a quantitative study, a clear understanding of how the participants were selected, how the data was collected and analyzed.

# Chapter 3: Research Method

My purpose in this transcendental phenomenological study was to understand the lived experiences of women senior leaders in the IT field to gain an understanding of their career advancement into senior leadership positions. I focused on women who currently work in the IT field and are in senior leadership positions. I begin this chapter with providing the rationale for selecting the research design followed by a detailed discussion of the transcendental phenomenological approach. Next, the role of the researcher and the research methodology are addressed. The research methodology includes participation selection logic, sampling strategy, instrumentation, interview script, demographic questionnaire, and procedures for recruitment, participation, and data collection. The chapter concludes with an address of issues of trustworthiness and ethical procedures.

## Research Design and Rationale

My purpose in this transcendental phenomenological study was to understand the lived experiences of women senior leaders in the IT field to gain an understanding of their career advancement into senior leadership positions. The primary objective of classic transcendental phenomenological research is to understand the lived experiences of an individual. Lived experiences can include an individual's lived space, lived body, lived time, and lived human relations (Willis, Sullivan-Bolyai, Knafl, & Cohen, 2016). In this study, the lived experience was in regard to the phenomenon of career advancement of women senior leaders in the IT industry. Due to the primary focus of the lived experiences of the individual,

transcendental phenomenological research seeks to answer the research question, which was:

RQ1: What is the essence of the lived professional and personal experiences of women in their career advancement, which led to them to achieve the senior level positions in the IT field?

Selecting a transcendental phenomenological approach was the best option for this study because it enabled the exploration of the lived experiences of the stated phenomenon, which in this case was the career advancement of women senior leaders in the IT field. Lebenswelt (lifeworld) is a concept, which means the world of everyday lived experiences is the primary foundation of phenomenological studies (Anosike, Ehrich, & Ahmed, 2012). The phenomenological design was used to analyze an individual's lifeworld as the participant shares their experiences with the phenomenon under study (Gill, 2014).

Hermeneutic phenomenology and transcendental phenomenology are two philosophical assumptions about experiences and ways to organize and analyze phenomenological data (Moerer-Urdahal). The primary focus of hermeneutic phenomenology is the interpretation of the meanings of the lived experiences of the participants (Gill, 2014). Gill (2014) stated that a participant's culture and traditions develop the basis for understanding lived experiences. An interpretive approach to studying human existence refutes the likelihood of fully isolated reflection and thereby disputes Husserl's (2012) idea of bracketing presuppositions to articulate an essence.

Compared to hermeneutic phenomenology, transcendental phenomenology focuses on meanings that analyze the human experience (Moerer-Urdahl, 1994). Transcendental phenomenology reduction takes each experience and considers it in its singularity, in and for itself (Moustakas, 1994). Moustakas (1994) stated "the phenomenon is perceived and described in its totality, in a fresh and open way" (p.33). Transcendental phenomenology reduction allows the researcher to derive a textual description of the meanings and essences of the phenomenon, the participants that experience the phenomenon, and the vantage point of an open self (Moustakas, 1994). Transcendental phenomenology has the characteristics of descriptive, finding essences, using a reduction method, and intentionality (Giorgi, 2010).

The narrative approach was not a suitable fit for this study because it focused on stories told by the participant about their experiences they faced throughout his or her lifetime. This type of study is suitable for studies that involve biographical research with the assumption that people organize their lived experiences into stories (Hamilton, Cruz, & Jack, 2017). Due to the extensive storytelling needed to collect data, the narrative approach is typically limited to one or two participants. After reviewing the components of the narrative approach, the transcendental phenomenological approach was a more suitable option because more participants can be selected to provide insight into their lived experiences compared to a sample size of one or two participants.

Ethnography focuses on groups with a shared culture or patterns (Sohn, 2017). This approach is commonly used in the fields of anthropology and sociology. Data collection is typically conducted in the natural settings of the participants. The ethnography approach did not work for this study because it required a great deal of time in the field and failed to answer the research question concerning the lived experiences of women senior in the IT field.

Being that there was not a real-world case available to analyze, a case study could not have worked to understand the lived experience of women senior leaders in the IT field. Case studies are common in the field of psychology. Participants may include a company, group, program, or an issue (Tsang, 2013). Data collection is obtained by conducting numerous interviews, field observation, and analyzing internal documents, artifacts, and reports (Tsang, 2013).

Last, the grounded theory approach was not suited for this study as the goal of this type of study is to develop a new theory grounded in the research. A researcher using the grounded theory must adopt a naturalistic and interpretive stance to the world (Staller, 2012). The grounded theory approach requires a large population size and ends with a grounded hypothesis that undergoes additional testing, which can be qualitative or quantitative (Cunliffe, 2011).

The transcendental phenomenological approach was selected for this study because it is best suited to assist in answering research question: What is the essence of the lived professional and personal experiences of women in their career advancement, which led to them to achieve their senior level positions in the IT

field? A quantitative study cannot answer this research question due to the fact that the data output is numerical in nature and can be used statistically to derive to conclusions about the data. Whereas data collection for a quantitative study typically is collected with the use of a survey instrument, a qualitative study utilizes an interview as its primary form of data collection. The transcendental phenomenological approach enabled the researcher to be able to conduct semistructured interviews to learn about the participant's lived experiences.

## Role of the Researcher

My role as a researcher during this study was to be an interviewer and observer while being fair and objective during the entire process. I recruited the participants for this study through my personal LinkedIn network. I choose potential research participants who I have not personally worked with, managed, or have been in charge of a department that may have included the participant.

Epoche is the process of setting aside one's prior judgment and knowledge in order to be open to understanding the phenomenon in a fresh, unbiased manner (Moustakas, 1994). It was important that I set my own personal feelings and bias aside so that it did not affect the data collection or data analysis. In order to set my personal feelings and bias aside during the study, I used journaling to document my personal reflections with each participant. Journaling is used by researchers to eliminate bias during and after interviews (Spowart & Kairn, 2014).

# Methodology

## Participant Selection Logic

In this study, the participants were purposefully selected based on the fact that they would be able to answer the research question. In purposive sampling, subjects are selected based on certain characteristics (Patton, 1990, pg. 169-186). Participants for this study had to meet all of the following requirements in order to participate in this study:

1. Female senior leader currently working in the IT field (Senior level positions for this study include president, vice president, C-level positions such as chief executive officer (CEO), chief operations officer (COO), chief information officer (CIO), chief technology officer (CTO), vice president of IT (VP of IT) and director and managerial level positions)
2. Work in current role for 2 or more years
3. Live and work in the continental United States

Polkinghorne (1989) recommended that 5 to 25 participants be interviewed who have all experienced the phenomenon however, there is not any one set number of participants other than suggested sizes. A target sample size of 15 was determined for my study to reach data saturation, which is the point at which participants start repeating the same or similar responses to interview questions. Data saturation is the point to discontinue collecting data (Saunders et al., 2018). Fusch and Ness (2015) posited that the quality of the research is affected if data

saturation is not reached. I will know that data saturation has been reached when participant's experiences themes during the data collection process start to repeat themselves. Participants were recruited via private chat messaging through my personal LinkedIn network.

Other sampling strategies that were considered for this transcendental phenomenological study were quota sampling and snowball sampling. For quota sampling, participant quotas are set in advanced so that the researcher can target a set population for data collection. Snowballing sampling relies on current participants to recommend potential participants to the researcher. This sampling strategy was not suitable for this study because there was a great deal of uncertainty in knowing if there will be enough participants to interview.

Selecting a purposeful sample was the best fit for this study to answer the research question: What is the essence of the lived professional and personal experiences of women in their career advancement, which led to them to achieve their senior level positions in the IT field? A purposeful sample enabled me to select participants that were most affected by a specific issue (Valerio et al., 2016).

Upon IRB approval from Walden University, I sent LinkedIn messenger invites to prospective participants to the study (see Appendix A). Prospective participants were identified and solicited within my professional social media networks in LinkedIn. On LinkedIn, I reviewed the job fields of the women that were already included in my personal network. I contacted the first 30 women via the LinkedIn message system with an invitation to participate in the study (see

Appendix A). Thirty is a random number that I picked knowing that some individuals may or may not reply to the invitation. Once seven days had passed, I sent out new invites to a new group of prospective participants if no replies were made from the previous messages that were sent out. A message reply back from a participant stating " I consent' informed me that they wanted to be included in the study. Once consent was received, I documented the participant's email address in my research records and then scheduled an interview with them within 24 hours.

Data saturation was initially estimated to be reached at 15 participants, but it was actually reached after the ninth participant. I accepted a total of 15 women senior leader participants in order to follow the projected estimate of participants for the study. After the 15th participant had been recruited and interviewed, I informed all women who expressed interest in the study that the recruitment process had concluded.

**Instrumentation**

Phenomenology research studies use the personal interview to collect data from participants. This type of interview gives the researcher the ability to collect data using a duplicative, open-ended approach that encourages the participant to describe their experiences in a semistructured manner (Moustakas, 1994). Compared to a survey questionnaire interview that allows for consistent replies throughout the responses, the interview protocol for a transcendental phenomenological interview is the setup of a conversation between researcher and research participant with the overarching question asked and if the answers are not

addressed from the open-ended questions spontaneous probing questions by the interviewer.

The researcher sought to obtain a detailed description of the experience and understand the significance of the phenomenon through the eyes of the participant (Leedy & Ormrod, 2005). By doing so, the researcher avoided asking questions that would automatically classify the phenomenon into pre-defined categories or themes while remaining exposed to firsthand and unforeseen influences that came up during the interview (Polkinghorne, 1989).

For transcendental phenomenological studies, conducting a face-to-face interview, which has a high response rate of up to 80%, is an acceptable way to gather data to answer open-ended questions to explore the phenomenon being studied and obtain other new information (Singleton & Straits, 2005). Due to the lack of funding to be able to interview each participant face-to-face in-person and time constraints, I signed up for a free video conferencing account with Skype with the sole purpose of interviewing participants who choose a video interview over a phone interview. Conducting interviews over the telephone is a low cost option compared in-person face-to-face interviews, which could include travel, administrative expenses, and participant compensation expenses. A disadvantage of the use of a telephone interview is that participants may be hesitant to discuss personal information if they are not in an environment where they can see and build a rapport with the researcher (Singleton & Straits, 2005).

**Interview Protocol**

In order to guide the interview conversation, a few prompts were created in accordance with the procedure defined by Moustakas (1994) and Polkinghorne (1989). An interview protocol was created and used by the researcher (see Appendix B) for the interview process. The interview protocol consisted of an introduction to the study, six demographic questions, research question, and conclusion. The research question produced a detailed description of the participant's experience of the phenomenon. The protocol was used in the same sequence and manner for each participant. The purpose of the interview protocol was to ensure a systematic approach to each interview conducted between the researcher and the participant. By using an interview protocol, I ensured the organization of the data collection and that each participant was receiving the same information each time an interview was conducted.

**Procedures for Recruitment, Participation, and Data Collection**

The population for this study included women leaders working in the IT field. Fifteen women participants were interviewed for this study. There was a list of requirements that participants must have met in order to qualify to participate in the study. The first requirement was that the participant had to be a female senior leader currently working in the IT field with a job title of president, vice president, C- level positions such as chief executive officer (CEO), chief operations officer (COO), chief technology officer (CTO), director and managerial level positions. The second requirement was that the participant must have worked in her current role

for two years or more. Lastly, the participant must have lived and worked in the continental United States.

Upon IRB approval from Walden University, I sent out LinkedIn email invites to prospective participants to the study (see Appendix A). Prospective participants were identified and solicited within my professional network on LinkedIn. The goal for this study was to have at least 15 women senior leader participants. I started the participant recruitment process by contacting at least 30 women with the rationale that some people would decline, not reply to the email invite, or reply but did not qualify.

**Data Analysis Plan**

Data collection for all of the participant interviews was conducted via a one-hour telephone. No one opted to complete their interview via Skype. All participants gave their consent to have the audio recorded with the use of a tape recorder. A secondary tape recording device was available in the event that the first recording device malfunctioned. Data collection for transcendental phenomenological studies is derived from first-person accounts during informal one-to-one interviews, which are transcribed and analyzed for themes, patterns, and contextual meanings (Roberts, 2013). In order to make sure that the data collection process was effectively facilitated, I ensured that every participant was scheduled for a particular date and time slot to complete their interview. Each participant was emailed or messaged a copy of "Participant Invitation and Consent Form" to review (see Appendix B).

The researcher is key in analyzing and attaching meaning to the lived experiences and this study was through the transcendental view of the world. Transcendental phenomenology reduction takes each experience and considers it in its singularity, in and for itself (Moustakas, 1994). Moustakas (1994) stated "the phenomenon is perceived and described in its totality, in a fresh and open way" (p.33). Transcendental phenomenology reduction allows the researcher to derive a textual description of the meanings and essences of the phenomenon, the participants that experience the phenomenon, and the vantage point of an open self (Moustakas, 1994).

Once the telephone interviews were completed, I transcribed the audio recordings with the use of NVivo 12 Transcription software. I completed the member checking process by emailing each participant a copy of their written transcript of their telephone interview for them to review and verify. Once the interview transcripts were approved by each participant, I uploaded them to Nivio 12 for data coding and analysis. I read through each interview transcript multiple times to become familiar with the data that was collected (Stuckey, 2015).

The data analysis was completed using the modified Van Kaam method as recommended by Moustakas (1994). This method enabled me to look for patterns and themes to draw conclusions regarding the participant's experiences to address the study's research question. I was able to provide textural and structural guidelines before using the NVivo 12 qualitative software program. The following steps were taken in order to analyze the data using the modified Van Kaam method:

1. Listed and grouped all completed transcripts that were obtained during data collection
2. Clustered the data into invariant constituents and relevant themes
3. Identified invariant constituents and relevant themes in order to organize the groupings transcribed from the interviews
4. Formed textural-structural descriptions of the meanings and essences of the experience merging both the invariant constituents and themes
5. Used the themes to determine the meaning of the lived experiences that involved the key findings and recommendations for the study (Moustakas, 1994, p.121)

## Issues of Trustworthiness

In transcendental phenomenological research, validity is measured by the ability of the researcher to convince readers that the research findings are accurate (Polkinghorne, 1989). The researcher has to prove that there is a synthesis of raw data that was collected in the field to meaningful themes. This synthesis of data must be displayed in a general structural description.

Validity was achieved when the researcher convinces readers that common themes and examples collected support the structural description (Polkinghorne, 1989). Interviewer influence on participant description, transcription accuracy, bias in transcription analysis, traceability between general fundamental descriptions an specific accounts of the experience, and generalizability of the structural description

to other situations are all issues that need to be addressed to ensure validity (Polkinghorne, 1989).

I went through a process of self-reflection or bracketing before each interview in order to channel assumptions that could influence my ability to think objectively while conducting the interviews with the participants. This process of self-reflection allowed me to address any preconceived notions and bias I may have had before each participant interview. Using the semistructured interview questions during the interview process allowed for an open discussion with the participant, which allowed them to detail their personal and career experiences using their own voice (Polkinghorne, 1989). While interviewing participants, I ensured that my responses were managed so that they were not interpreted as swaying the participant to provide responses regarding their experiences that were not true.

I ensured the accuracy of the transcription of the audio content to written form by doing the following:

- I developed a version of the transcription using NVivo 12
- I reviewed every written transcript for accuracy and completeness against the audio version when applicable. If there were any words that were unclear, they were marked for follow-up that took place with the participant.
- A completed interview transcript was prepared and shared with the participant. The participant was able to make changes, edits, deletions of sections, and or opt out of the study if desired.

- Only approved data by the participant was included in the study

**Credibility**

The credibility of a study is one of the most important aspects of trustworthiness. Credibility ensures that the researcher is connecting the research findings with the real world in order to prove the research study's findings. There are many techniques that can be applied to establish credibility. Triangulation and member checking are the two important techniques used by me in this study.

Triangulation is a technique that allows the researcher in a qualitative study to use various sources in order to obtain a more detailed understanding of a phenomenon. These sources can include theories, observation, and data analysis. The use of triangulation can help a researcher understand misleading aspects of a phenomenon. There are four types of triangulation, which include data triangulation, theoretical triangulation, researcher triangulation, and methodological triangulation. I used data triangulation for this study.

Member checking, which is also known as participant or respondent verification is the process of interviewing, reviewing, and verifying data collected from a participant. This process ensures that researcher's voice and bias are not included in the data collection. Member checking can take place at the very beginning of an interview and end of an interview. By using this technique, I ensured that they were truly capturing the phenomenon as explained by the participant.

**Transferability**

Transferability in qualitative research refers to how the results of a research study can be transferred outside the study. In other words, transferability suggests that the results of a particular study can be applicable to similar situations and phenomenon. Qualitative studies are typically not generalizable as there is no statistical data available. Compared to a quantitative study, qualitative research studies typically have smaller sample size populations that make it difficult to imply generalizations about the research results.

**Dependability**

The dependability of a study refers to the consistency of a study. The researcher documented and detailed each step of the research process of the study so that another researcher could duplicate the study and produce the same results. Proper documentation of the research process and data collection ensured dependability.

**Confirmability**

It was important during the research process and especially during the data collection and data analysis phases that the researcher kept her own personal bias out of the study. The confirmability of the study verified that the results of the study were influenced solely by the participant's voice and not by the researcher's own personal bias. In order to produce confirmability, the researcher proved and successfully linked the data collection, data analysis and research conclusions together.

## Confidentiality and Ethical Procedures

This research study commenced upon approval of Walden University IRB. The certification number is (05-06-19-0485770). Prospective participants who met the research requirements were emailed a copy of the "Participant Invitation and Consent Form". Once they replied back " I consent" to being included in the study, I replied back to them within 24 hours to schedule their telephone or video conferencing interview. Before the interview started, each participant was asked if they consented to being audio recorded for research purposes. Participants were informed at the beginning of the interview that they were able to withdraw from the study verbally or in writing at any time without penalty. All participants' personal information and identities were kept confidential and not shared with anyone else. All data collection items such as written interview notes by the researcher and audio recordings were kept in a locked box. After 5 years, these items will be destroyed and shredded. Last, the participant's identities were replaced with generic identifiers such as Participant 01, Participant 02, etc. when reporting the results of the study.

## Summary

Chapter 3 included a description of the research design and method for the study. The transcendental phenomenological approach was selected as the best option for the research design based on the nature of the study and research questions. Participants for the study were selected using a purposeful sampling strategy, which relied on the personal judgment of the researcher. Participants were

recruited using LinkedIn. The data was analyzed using the modified Van Kaam method. Chapter 4 presents the findings of the study followed by Chapter 5 that includes the conclusions and recommendations for future study.

# Chapter 4: Results

My purpose in this transcendental phenomenological study was to understand the lived experiences of women senior leaders in the IT field to gain an understanding of their career advancement into senior leadership positions. This study solely focused on women who work in the IT field and are in senior leadership positions. The phenomenon that all women participants had in common was career advancement in the field of IT. Transcendental phenomenological research focuses on the essence of the lived experiences of people with participants describing their own reality (Moustakas, 1994). Due to the primary focus of the lived experiences of the individual in transcendental phenomenological research, the research question for this study was:

RQ1 – What is the essence of the lived professional and personal experiences of women in their career advancement, which led them to achieve their senior level positions in the IT field?

The remainder of this chapter details the research setting, participant demographics, data collection, data analysis, evidence of trustworthiness, study results, and summary.

## Research Setting

Due to the geographical location of the researcher and participants recruited, the research interviews took place via telephone. Participants were given the option to complete their interview using Skype, but no one chose this as an option. The telephone interviews averaged approximately 28 minutes in length.

## Demographics

The composition of the 15 participants is detailed in Table 1. Two participants held vice president positions, three participants held C-level positions, four participant held director level positions, and six participants held positions in middle management. Each participant was assigned a participant number ranging from P01 to P15. The participant numbers were created to protect the identity of each participant.

Table 1

*Participant Demographics*

| **Participant** | Managerial level | Years of experience | State | Ethnicity |
|---|---|---|---|---|
| **P01** | Middle manager | 4 | PA | Two or more races |
| **P02** | Middle manager | 13 | NC | Black |
| **P03** | Chief operating officer | 20+ | GA | Caucasian |
| **P04** | Middle manager | 12 | NC | Black |
| **P05** | Vice president | 20+ | NC | Two or more races |
| **P06** | Middle manager | 7 | CA | Caucasian |
| **P07** | Vice president | 18 | TN | Caucasian |
| **P08** | Director | 20+ | TN | Caucasian |
| **P09** | Cyber security information officer | 15 | PA | Caucasian |
| **P10** | Chief information officer | 20+ | GA | Caucasian |
| **P11** | Middle manager | 8 | NC | Black |
| **P12** | Director | 20+ | NC | Black |
| **P13** | Middle manager | 20+ | PA | Black |
| **P14** | Director | 18 | TX | Caucasian |
| **P15** | Director | 13 | CA | Asian |

# Data Collection

## Data Collection Recruitment

Once approval was granted by Walden University Internal Review Board (IRB: 05-06-19-0485770), I started the participant recruitment process. LinkedIn was the primary source for recruiting participants. Each participant who was deemed to have met the research requirements was sent an invitation (see Appendix C) via the messaging feature on LinkedIn. A total of 143 recruitment messages were sent directly from my personal LinkedIn account to prospective participants. Of the 15 total participants for the study, 7 women were recruited from LinkedIn and the remaining 8 participants stated that they had heard about the study through word-of-mouth.

As previously mentioned in chapter 3, it was determined that a total of 15 participants would be needed in order to reach data saturation. Data saturation was reached after the 9$^{th}$ participant. There were a total of 16 participants that were recruited and interviewed for this study, however; the data analysis included data from 15 participants. One participant was disqualified from the study as it was revealed during the interview that the participant had transitioned from a man to a woman. The researcher determined that the transgendered participant should be disqualified from the study based on the correspondence with the participant. The disqualified participant ascended into senior leadership primarily as a man. His transition to a woman occurred after holding the leadership position. The

disqualified participant could have shared her unique experience both as a man and as a woman, but that would be outside of the scope of this study.

**Data Collection Technique**

Data collection for this study took 42 days to complete, which was longer than the 30 day time frame that I originally estimated. Before each telephone interview, I practiced epoche by clearing my head of any biases, prejudices, and setting aside my own personal experiences in order to not directly affect the study. The interview protocol (see Appendix B) was used for each interview, which included an introduction, demographic questionnaire, interview question, and conclusion. The interviews ranged from 15 minutes to 68 minutes with an average of 28 minutes.

Participants were given the option to complete their research interviews via telephone or Skype. All 15 participants chose to complete their interviews via telephone. Each participant gave me their verbal permission to record the audio for the interview. Research notes were handwritten in a notebook during each participant interview and locked away along with the audio recorder after each interview. The transcription was completed once all data from the 15 participants had been completed. I utilized the services of NVivo 12 Transcription software to transcribe all of the data. Once the transcriptions were completed, I emailed each individual participant a copy of the transcript for their review and approval as part of the member checking process. Only one participant came back with changes to her transcript. Participant 02 requested to have the name of her company removed

from the transcript to further protect her identity and the company that she worked for.

## Data Analysis

Once the data was transcribed and I was able to review each participant's transcript, I started notating common data groupings that appeared from the participant's responses. The textural descriptions were created from the preliminary groupings based on the modified Van Kaam method of data analysis as recommended by Moustakas (1994) in order to provide a textural and structural guidelines before using the NVivo 12 qualitative software program. The following steps were taken in order to analyze the data:

1. Listed and grouped all completed transcripts that were obtained during data collection
2. Clustered the data into invariant constituents and relevant themes
3. Identified invariant constituents and relevant themes in order to organize the groupings transcribed from the interviews
4. Formed textural-structural descriptions of the meanings and essences of the experience merging both the invariant constituents and themes
5. Used the themes to determine the meaning of the lived experiences that involved the key findings and recommendations for the study (Moustakas, 1994, p.121)

### Data Coding

Each transcribed interview was uploaded into NVivo 12. The software program allowed me to have order and structure of my data. The software aided me in my understanding of the data through the development of nodes, cluster coding similarity, and word frequency. The NVivo12 software managed the coding of the data by isolating it into components that were counted based on their occurrence of themes. The software program grouped the data into categories, themes, and eliminated redundant components of data.

The coding in NVivo 12 was accomplished by assigning section headings for participant responses to the questions as a normal standard text. Critical terms that stood out from the transcribed interviews were used to develop emerging themes to the lived experiences of the participants. The NVivo 12 report revealed relevant themes from the data once the coding was completed. Six major themes were identified from the completed data analysis. Emergent themes with over 30% frequency by participants were labeled as major themes. There were no discrepancies during the data analysis process.

## Evidence of Trustworthiness

### Credibility

I was able to accomplish credibility as a researcher and for this study through reaching data saturation, subjectivity, triangulation, and supervision of my dissertation committee. When I was faced with the possibility of disqualifying a participant for the study that had shared that she had ascended into senior

leadership as a man, I consulted with Walden University IRB and my dissertation committee for advice on how to proceed with the study. I used bracketing to channel and eliminate all personal biases. Data saturation was reached after the 9th participant, but a total of 15 participants were interviewed as previously proposed.

Triangulation was successfully achieved through the assortment of telephone interviews from various participants from different backgrounds as stated in Table 1. Participants ranged from different levels of management, lived and worked in various states, and numerous ethnicities were represented.

The member checking process was completed within 24-48 hours of each participant's completed interview for accuracy. Only one participant (Participant P02) came back with revisions and deletions of their written interview.

**Transferability**

Prior to each interview, participants were given a Participant Invitation and Consent Form (see Appendix A), which detailed the background information of the study, procedures, voluntary nature of the study, risks and benefits, compensation, and confidentiality. This document gave the participants detailed information about the study and an understanding of their role as a participant. The responses from the participants provided detailed commonalities of the phenomenon being studied.

**Dependability**

I ensured dependability of the study by keeping detailed records of each participant with the use of a password protected Excel spreadsheet. Information such as the participant's name, email address, job title, industry, job tenure, years of

senior leadership experience, race, age, and interview date and time were all included in the spreadsheet. After each interview, all audio recordings were uploaded to a password protected folder on my personal computer. The process of member checking also confirmed the dependability of the participant's experiences for this study.

### Confirmability

A systematic process was followed for data collection, data analysis, and final conclusions to allow a reader to confirm the acceptability of the research findings. All types of personal bias were excluded by bracketing to guarantee validity of the study. Open-ended questions were used to achieve confirmability.

## Study Results

The following sections will provide an in-depth review of the transcribed participant responses in narrative form. Six major themes were identified as pertinent to the purpose of the study and the stated research question. Table 2 displays the code, theme, and participant percentages. Each theme was developed as a result of the collected data from the research participants. There were no discrepancies or nonconforming data that occurred while reporting the results for this study. There was only one research question for this study, which was: RQ1 – What is the essence of the lived professional and personal experiences of women in their career advancement, which led to them to achieve their senior level positions in the IT field?

Table 2

*Themes* (*N* = 15)

| **Codes** | Themes | Participant % |
|---|---|---|
| **001** | IT is a great field | 93 |
| **002** | Midcareer change to IT | 40 |
| **003** | Mentors/supportive professional network | 40 |
| **004** | Research your future | 33 |
| **005** | Self-efficacy | 53 |
| **006** | Difficult work-life balance | 40 |

**Theme 1: IT is a Great Field**

Table 3

*Theme 1: IT Is a Great Field*

| Theme number | Theme/textural description | Participants |
|---|---|---|
| 1 | IT is a great field | 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 |

**Textural description**. It is so dynamic and I love the ever-existing challenge and change of working in IT

**Textural description**. As I mentioned, I sat down with a counselor. They looked at my grades and they looked at my skills and everything like that in my messages and everything previous efforts to equal in India. Let me put it that way. And basically said that it would be better if I actually chose IT and they actually said it's going to be that the next big thing. This was a long time back. So I believed what that

counselor was saying and doing and just took that IT over critical medical electronics at the time. I am so happy I listened to them!

**Textural description**. I was like hmm; I can make a lot of money! And I think I had the aptitude for it. It was not difficult for me. And I knew all along that project management would be more what I wanted to do instead of just pure engineering. So I was willing to do something on a bigger scale. And that was too generic. I wanted to see the bigger picture and then put together the whole thing. I am analytical in addition to being organized. It just kind of fit for my personality. I could see at the one-hundred feet level where a lot of people can only see what we are trying to accomplish where I can look for the top and not necessarily from bottoms up.

All, but one participant (93%) directly stated or acknowledged that working in the IT field is great with many rewards. Participants described being able to have job stability, make a great deal of money, and felt challenged due to the ever-changing nature of the field.

**Theme 2: Mid-Career Change to IT**

Table 4

*Theme 2: Mid-Career Change To IT*

| Theme number | Theme/textural description | Participants |
|---|---|---|
| 2 | Mid-career change to IT | 3, 7, 8, 11, 13, 14 |

**Textural description**. I worked in finance for the first 4 years after I graduated. I worked as a corporate auditor as my first job out of college. I actually utilized my degree. In 1995, I entered the federal sector. From 1995 to 2000 I was in a procurement management job. In 2000, I moved into the IT arena.

**Textural description**. I was an accountant for seven years. During those seven years, I recall my last project that lasted 18 months to two years. It was a mix of accounting and IT work. We were very small company. So the role I was in in those last 18 months to two years, I would call it a business systems analyst slash QA slash query developer, but it was. I was a project manager that was kind of filling all those roles in a very small environment. In doing that, I really learned all about the product lifecycle of doing a package system implementation of a large enterprise package. It was J D Edwards at the time and during that implementation. I learned how to write a query. That is really what it was- cost accounting. And once I learned the power of writing a query and what it could do for you to do cost allocations through actual computer generated process that would then follow everybody's labor rate and get a cost accounting. Writing that query kind of did it for me and seeing the power of code.

**Textural description**. Well, it has been my accidental career. And you know I really did just stumble into it because as I said I was working in an office environment. You know basically secretarial work stuffing papers. I was the go-to person in the office really because I was the youngest person in the room and had used computers in college. They were like “Oh, help help help” me out a printer or help me help me

check my e-mail. I cannot figure out you know where did I saved my file. And so I just gradually moved into that role in the office. I realized that I really enjoyed that work. And so I decided to pursue it full time. Once I got out of my Ph.D. program, I got a job as support.

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Forty percent of the participants stated that they switched over to the IT field halfway during their professional working careers. Out of the 40% of women who had made a mid-career switch to the IT field, 67% of them were introduced to IT functions while assisting with new software implementations at their previous organizations. Thirty-three percent of those women made a mid-career switch after experiencing being the go-to person in the workplace to help troubleshoot IT related issues because they were one of the younger employees in the organization. Being the go-to person sparked an interest in the IT field for these women.

**Strategies for Success**

Themes 3 through 5 (Theme 3: Mentors/Supportive Professional Network, Theme 4: Research your future, Theme 5: Self-efficacy) are strategies for success that were suggested by the participants when asked "What advice would you give women working in the IT field that are interested in ascending into senior leadership?

**Theme 3: Mentors/Supportive Professional Network**

Table 5

*Theme 3: Mentors/Supportive Professional Network*

| Theme number | Theme/textural description | Participants |
|---|---|---|
| 3 | Mentors/supportive professional network | 1, 5, 7, 10, 11, 13 |

**Textural description**. Do a good job networking from the beginning. Know that every time you meet someone in your company, you are being interviewed whether you or they know it or not. So you know when you are meeting with people within your company that you do not know understand that every interaction is kind of an interview. And the reason I say that is because you should always think about what kind of impression you leave, right. Arm yourself with your board of directors. These are the people that you surround yourself with that know you and can vouch for you. You know the first part of your career is all about your performance. But the second part of your career is all about the relationships that you made as a result of you having done a good job.

**Textural description**. My advice to those women and even to the men would be get a support group. There are so many neat apps out there and ways to be able to network effectively.

**Textural description**. And then I really do believe mentors can help. I taught a lot of people and I stay open to that. You know people want to call and need to think through these things.

**Textural description**. But that is one thing that I encourage. I do a lot of peer mentoring and that is one thing I encourage them to do is to get a mentor early on. It is good to know who the movers and shakers are in the organization.

Forty percent of women stated that they feel that the key to success for women ascending into senior leadership positions in the IT field is to have a mentor throughout their career and to have a supportive network of people that can vouch for you. One participant stated that obtaining a life coach was necessary to help women understand themselves and how they process things so that they can be a better leader and understand the people that they work with. Fifty-three percent of the participants stated that they did not have mentors during their professional careers.

**Theme 4: Research you future**

Table 6

*Theme 4: Research Your Future*

| Theme number | Theme/textural description | Participants |
|---|---|---|
| 4 | Research your future | 4, 9, 10, 11, 15 |

**Textural description**. You don't work your eight hours you get you know average you know you are a candidate for you know first gen first out or you know garbage

in garbage out but for people who really work and put forth a really strong effort. The opportunities are endless. There is just no damage to what you cannot do. You have to be self-motivated and self-inspired to succeed. It's not going to happen. Because someone's got to walk by say hey there's a hardworking person and you should promote her promote him

**Textural description.** You know the advice I was given to me by somebody that I found to be very helpful is to find a topic or a subject and really become an expert on it. You know get to know your domain expertise and build your credibility. And do the work.

**Textural description**. Align yourself accordingly with the company you work at. You know I've been there for 34 years. Again I say that because that's a feat in itself because we've had massive layoffs over the years. But the thing that I think has been a will to allow me to stay there is hopefully of course what I call "reading the tea leaves". And making sure that I understand what's going on in the industry. Knowing what's going on in the company in aligning myself accordingly. We get quarterly newsletters at my job. I read the announcements of who just got promoted. I read those because I think also allows me to plan my next move of “How do I get in that area?” or “How do I get on those deals?” Keep your hand on the pulse of the industry because it's actually ever changing and it's changing very fast. You don't want to become a dinosaur. You gotta keep up with the trends and a lot of it may be doing homework on your own. But you gotta to keep up with the trends and

you gotta make sure that when you walk in a room that you know what you are talking about especially as a female.

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Thirty-three percent of the participants stated that researching your future will provide a roadmap to aspiring women senior leaders to reach their success. Some of the participants stated that they stay current on who is being promoted within their organization by reading company newsletters and researching the professional biographies of other women leaders.

**Theme 5: Self-Efficacy**

Table 7

*Theme 5: Self-Efficacy*

| Theme number | Theme/textural description | Participants |
|---|---|---|
| 5 | Self-efficacy | 3, 4, 6, 8, 10, 13, 14, 15 |

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**Textural description.** I say stay dedicated and sometimes you have to be a little tough. So you have to stand up for yourself

**Textural description.** Persevere! Stick with it no matter what! Do not give up and there will be a lot of reasons to give up. There are reasons every single day not to do this. But I would say that the rewards are great. You have an ability to influence others. So there are a lot of reasons why not to lead or to come in to step past emerging technologies coming along as they are. There is so much bias and

discrimination in technology that we need people of color in STEM specifically women of color in STEM.

**Textural description.** It takes initiative. I mean, I found that I got plucked out because I was always the one that said "Yes, how can I help". I made myself the go-to for the senior level management above me so it got me recognition I needed to be like the current leadership. So it is just being that person. You cannot be shy and introverted. You have to say "yes, I want to help you" go above and beyond what your role is. That will get noticed right away. That is how I choose my team members, the people that will succeed me.

**Textural description**. Do not be afraid to challenge stuff at work. Do not be shy or do not refrain from talking because you are the only woman at the table. It is okay to be different and it is okay to have your own opinion and a mind of your own.

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The last strategy for success stated by the participants was self-efficacy. When offering strategies for success, 53% of the participants stated that having a high sense of self-efficacy is very important as a woman senior leader in a male-dominated industry. Women stated phrases such as "be tough", "persevere", "take initiative", "do not be afraid". Having a high sense of self-efficacy and mindset is equated with having a high sense of confidence in yourself that you are just as good and qualified as your male counterparts.

**Theme 6: Difficult Work-Life Balance**

Table 8

*Theme 6: Difficult Work-Life Balance*

| Theme number | Theme/textural description | Participants |
|---|---|---|
| 6 | Difficult work-life balance | 2, 3, 7, 10, 11, 15 |

**Textural description**. Well not easy right. That's kind of been the hardest thing. I made a decision very early I didn't go through all this education and all this drive to stay home. So yeah it is hard. It's really you know about priorities and sometimes work takes priority and sometimes family does. You have to kind of have to constantly balance and choose and manage.

**Textural description**. I think I don't know that it would make a difference. What industry you are in one area is from an IT perspective that probably add a little bit more challenge in itself. In the IT world, you know so much of what we do is off hours. So that we are not impacting our customers and our users. So when something goes down or payroll goes down in the middle of the night. You know it is not as the same as an accountant or a nurse who works a certain shift right and then has coverage when they are not there. That has been a bit of a challenge. Also you do not schedule those outages. When something breaks or when you get a cyber security attack, that may impact your life and your children when it does come into play. I know for a family situation I have been fortunate enough to have a spouse to help with situations like these. But we're both in technology. So there are times

things are going on or things like that. And it does become a yes it has become a challenge. So having a support network has been helpful with the way technology is going. Being able to work remotely, being able to be effective remotely, having things in place ahead of time, having backups for people to cover your area to share that kind of responsibility when you do need to be out of pocket for kids I think has been the key to success. I think I am actually being more disciplined on attending events and not feeling guilty about being away from work.

**Textural description.** Its been interesting because being in IT pretty much to me is black and white and it has to be logical. So raising her and I traveled quite a bit so raising her was difficult because I was gone a lot. I missed a lot like her first steps because she was at daycare.

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Forty percent of women agreed that raising young children while working in the IT field is very tough. One participant stated that she put her successful career over her family and she missed a great deal of her children's upbringing and is now divorced. She expressed a great deal of regret and sadness during her interview. Two participants stated that their place of employment was very supportive of having a work-life balance and that they were very present and involved in their children's lives. One participant was very aggressive in her response of "It is my prerogative how I raise my children and so what if I have been late to meetings or have been late picking my children up from school due to a meeting running late" to the question of "How was it raising children while working in the IT field?" Three

women stated that they had very supportive husbands that helped take care of the children and household when the wife had to be away from home due to work.

## Summary

This chapter provided a detailed review of the data collection and data analysis that was completed for the 15 participant interviews that were completed for this research study. With prior approval from the participant, telephone interviews were recorded and completed for each participant. The participants were recruited using a purposive sampling with the use of LinkedIn. NVivo 12 qualitative research software was used to complete the transcription and data analysis for the data collected.

The modified Van Kaam method was used to analyze the data collected from the participants. A total of six major themes emerged as result of the data coding, which included IT is a great field, mid-career change, mentors/supportive professional network, research your future, self-efficacy, and difficult work-life balance. The themes of mentors/supportive professional network, research your future, and self-efficacy were grouped together as "strategies for success", which was advice shared by the participant's for women who may be interested in entering the IT field and for women who already work in IT and aspire to ascend into senior leadership. Each of these six major themes supports the research question - What is the essence of the lived professional and personal experiences of women in their career advancement, which led them to achieve their senior level positions in the IT field? Textural descriptions were provided to support each theme

and the research findings. Chapter 5 includes the study results, limitations, recommendations, implications for positive social change, conclusions and recommendations from the results of the study.

# Chapter 5: Discussion, Conclusions, and Recommendations

The career advancement of women senior leaders in the IT field has not been addressed in the existing literature; therefore; it has been difficult for organizations to fully understand and support women trying to ascend through the ranks of senior leadership in the IT field. Future research on the career advancement of women senior leaders in the IT field could inspire other women to pursue senior leadership roles in their organizations (Dubow et al., 2013). By providing information on the career advancement of women senior leaders in the IT field, the findings may assist organizations with creating tools that they need to mentor and support women who may be interested in ascending into senior leadership positions.

The purpose of this transcendental phenomenological study was to understand the lived experiences of women senior leaders in the IT field to gain an understanding of their career advancement into senior leadership positions. Selecting a transcendental phenomenological approach was the best option for this study because it enabled the exploration of the lived experiences of the stated phenomenon, which in this case was the career advancement of women senior leaders in the IT field. Phenomenology seeks to understand the life of human experiences as it is lived (Moerer-Urdhal & Creswell, 2014).

Data for this study was collected with the use of a semistructured interview from 15 women senior leaders in the IT field located in the continental United States. NiVivo 12 qualitative software was used to organize and process the data for

this study. The following six major themes emerged as a result of the data coding and analysis:

1. IT is a great field
2. Mid-career change to IT
3. Mentors/supportive professional network
4. Research your future
5. Self-efficacy
6. Difficult work-life balance

This chapter provides a detailed analysis of the interpretation of the research findings, limitations of the study, recommendations, implications for the study, as well as final conclusions.

## Interpretation of Findings

The research question provided the boundaries for this study as well as the exploration of the lived experiences of women senior leaders in the IT field. Six major themes generated from the findings of the study were related to the research question. The research question for this study was:

What is the essence of the lived professional and personal experiences of women in their career advancement, which led them to achieve their senior level positions in the IT field?

The six themes that emerged from the data were as follows:

1. IT is a great field
2. Mid-career change to IT for more complex work

3. Mentors/supportive professional network
4. Research your future
5. Self-efficacy
6. Difficult work-life balance

Each of the six themes supports the majority of the literature review that was conducted for this study.

**Theme 1: IT is a Good Field**

The first theme that emerged from the findings of this study was IT is a good field. Based on the findings of this study, I found that women senior leaders in IT agreed that the IT field is a great field to work in. The first theme partially supports Pretorius et al. (2015) that women around the globe other than the United States specifically pursue careers in IT because of the perceived high status associated with working in the field and for job stability. Fifty percent of women from research by Pretorius et al. (2015) were senior leaders and the remaining 50% were women senior leaders in lower level IT positions. All participants for this study lived and worked in the continental United States. Participants stated that working in the IT field was interesting, challenging, provided job stability, and great pay. None of the participants mentioned status in their descriptions of working in the IT field.

This theme is also supported by a report from the United States Department of Labor (2017) indicating an increase of women in the IT field. This increase of 1% proves that there are in fact women senior leaders in the field who are ascending into senior leadership positions within the IT field.

Each participant stated that they were lucky and happy to work in such a great field. Most participants stated that they were already working in their dream jobs and could not imagine doing other work. These statements provided by the participants demonstrate that they have a high sense of self-efficacy in their abilities and beliefs that they can and are succeeding as women senior leaders in the information.

**Theme 2: Mid-Career Change to IT**

The second theme that emerged from the findings of this study was that women senior leaders currently working in the IT field made a mid-career change from a different field to IT because they found it to be exciting work and a great field to work in. This emerging theme was refreshing to hear from a researcher's point-of-view because it proves that women are in fact interested in IT. Six out of the 15 participants interviewed for this study stated that they switched to a career in the IT field after being introduced to IT functions after working on small IT related projects in their previous fields. Phrases such as "challenging", "ever changing", "fast paced", "make more money", "complex", and "IT makes work easier" were used by participants who did a midcareer change into the IT field. Participants reported leaving their first careers to work in the IT field after working five to 10 years.

American women making mid-career changes into the IT field for more complex work align with Varma and Kapur (2015) who have extensively researched Indian women working in IT. Women in India with computer science backgrounds are viewed as intelligent being that they are able to handle the technical aspects of

the job, work on complex projects, and use advanced problem solving skills (Varma & Kapur, 2015). Women working in IT positions are well paid and have vast employment opportunities compared to other fields in the country. In India, working in IT is not a field for male geeks, which is sometimes the perception in the United States, but is viewed by both genders as a prestigious high-paying job (Varma & Kapur, 2015). In India, women who work in IT benefit from having high social status and independence of having a high salary position, which overshadows any preconceptions of teachers and gender discrimination (Varma & Kapur, 2015).The findings of this study prove that American women share the same views of working in the IT field as do Indian IT workers.

This theme also supports the research by Ojokoh et al. (2014) focusing on Nigerian women in the IT field. In Nigeria, working in IT is a very popular field to work in despite having issues with recruiting more women to the field. Nigerian women are very autonomous and do not have to deal with societal pressures of working in stereotypical careers such as homemakers, teachers, or administrative roles such as secretarial positions (Ojokoh et al., 2014). Nigerians place high importance on becoming college educated and obtaining professional jobs (Ojokoh et al., 2014). Women are attracted to the field of IT in Nigeria because it involves interesting work that allows for them to learn new things, solve complex problems, and allows for continuous education, which makes them appear knowledgeable and up-to-date on new technologies (Ojokoh et al., 2014).

This study does not support the research findings by Way (2015) of women leaving the IT field midcareer. The participants of this study purposely sought out to work in the IT field from the beginning of their careers or switched to the IT field halfway through their working careers. Each participant stated that they were lucky and happy to work in such a great field. Most participants stated that they were already working in their dream jobs and could not imagine doing other work.

The theme of women making a mid-career change to IT proves that Bandura's (1986) social cognitive theory shaped the mindsets of the women who were affected by this theme. Being introduced to IT functions in their previous careers created a sense of excitement and fulfillment. Realizing that they were good at what they were doing in their new found interest, these women had a high sense of self-efficacy to follow their dreams and become successful leaders in the field of IT.

**Theme 3: Mentors/Supportive Professional Network**

The third theme that emerged from the findings of this study was for women to have a mentor and further establish a supportive professional network. The participants of this study suggested obtaining a mentor at the beginning of a women's career in IT. There are many different job pathways that can be pursued in IT such as networking, hardware, software, coding, and project management just to name a few. With so many pathways to pursue, it was stated by the research participants to obtain a mentor that can guide and introduce women through the diverse field of IT would be helpful to their success.

The few in this study who stated that they did have a mentor throughout their careers all had male mentors. The participants stated that they wish they had women mentors in their field. Instead, they had to work harder than their male counterparts to be recognized for their hard work and dedication. This theme supports Block and Tietjen-Smith (2016) who argued that there is a shortage of women senior leaders and in particular, in the higher education administration field because there is a lack of same-gender role model mentors.

This theme also aligns with Howe-Walsh & Turnball (2016) who stated "the lack of women in senior positions makes it even more difficult for other women to enter into senior level positions". In simpler terms, one can deduce that women are not going to be attracted to a particular job or field if there are not other women doing this type of work. The social cognitive theory concludes that people will mimic and follow behaviors that they have learned in their social environment. It is difficult for women to gravitate to the field of IT if there are not other women in higher numbers doing this type of work. Having other female mentors in the IT field may interest other women aspiring to ascend into senior leadership if they have someone they can emulate that has already "made it".

The theme of having a mentor and supportive professional network aligns with Bandura's (1986) social cognitive theory, which is the conceptual framework for this study. The social cognitive theory is powered by influences, behaviors, and a person's environment. Bandura believed that a person's social environment influences their behavior and actions on how they respond to given situations

(1986). The women participants of this study suggested that other women starting out in IT surround themselves with other women mentors and have a supportive professional network so that they can be influenced and learn from other successful women. By doing this, women senior leaders are nurturing, teaching, and inspiring other women, which may help to increase their self-efficacy, which will then help project them into senior leadership roles.

**Theme 4: Research Your Future**

The fourth theme that emerged from the findings of this study was research your future. Due to the fact that the IT encompasses so many segments, it is imperative that women research different IT segments such as networking, hardware, software, coding, or project management for example to see what area they may be interested in working in. It was suggested by the women senior leader participants for this study that women just starting out in IT to research the educational backgrounds, certifications, and biographies if available of other senior leaders whether it be men or women to see what steps they took to get to where they are now as a senior leader in the IT field.

In researching other senior leaders career backgrounds, women will be able to create a possible roadmap that will lead them to senior leadership in the IT field. This may be the opportunity for women to gain a mentor as they research other senior leaders in the field. The theme of researching your future goes hand-in-hand with the theme of mentoring and supportive professional network. Researching,

uplifting, and supporting one another is how women can advance into senior leadership in the IT field.

The theme of researching your future aligns with Bandura's (1986) social cognitive theory. As previously mentioned with the theme of mentors/supportive professional network, the social cognitive theory is powered by influences, behaviors, and a person's environment. One participant stated that she looks at her organization's quarterly newsletter and pays special attention to announcements to others who have been promoted in the organization. She stated that she makes it a point to read that person's work bio if available and see what course of action they took to get to where they are now. This is a prime example of using applying the social cognitive theory in the theme of researching your future.

**Theme 5: Self-Efficacy**

The fifth theme that emerged from the findings of this study was self-efficacy. Over half of the participants for this study stated that believing in yourself will bring success in your career and as a senior leader in a male dominated field such as IT. When the participants were asked about their views and experiences of being a senior leader in the IT field in a male dominated industry, I received replies such as "so what if it is a male dominated industry", "I come to the table as a key player. I do not expect to be treated differently because I am a female", "I am smart and possess highly technical skills that set me apart from others in my field". The responses from these participants promoted having a high sense of self-efficacy to work and compete in a male dominated field such as the IT field.

Additionally, the participants were asked what advice they would give other women who are interested in entering into the IT field and what advice would they give to women who are already in the field and aspire to ascend into senior leadership. Responses ranged from “be tough and standup for yourself”, “take initiative”, and “be your biggest cheerleader”. These responses also demonstrated that having a high sense of self-efficacy is the key to success as a women senior leader in the IT field

This theme supports an individual’s successful performance at getting something completed strengthens his or her self-beliefs of his or her own capabilities (Wood & Bandura, 1989). Self-efficacy affects every aspect of human behavior. By identifying and understanding the beliefs a person holds regarding his or her power to affect situations, it strongly influences both the power a person actually has to face challenges and make decisions. In addition, this theme supports Galvez et al. (2018), employees with a high sense of self-efficacy are able to overcome obstacles and setbacks they experience in the workplace. They are able to take part in workplace opportunities due to the fact that they are engaged, mindful, and have a strong belief in their abilities.

In the IT field, women are the minority compared to men. Women working in male dominated fields have to continuously prove that they are worthy to work with in the “good ole boys” environment. Some women may lack confidence in themselves to be successful in their jobs or careers in the IT field. In addition, some women may lack motivation to succeed into senior leadership positions because

they may feel that they do not fit into the hierarchy of being in a male dominated industry. Over half of the women participants of this study directly stated that they were confident in their abilities to work in a male dominated field such as IT.

The emerging theme of self-efficacy also supports Grant and Taylor (2014) of providing women with essential communication skills that are needed to project confidence when interviewing for senior leadership positions. These communication essentials include starting strong, staying succinct, dimensionalizing content, owning voice, controlling movement, and projecting warmth (Grant & Taylor, 2014). These are skills that every leader should possess to effectively communicate with others. Having a strong sense of self-efficacy when speaking will exude confidence that people like to see in their leaders.

**Theme 6: Difficult Work-Life Balance**

The sixth theme that emerged from the findings of this study was difficult work-life balance. Thirteen out of the 15 women senior leader participants interviewed for this study stated that they had children. The two participants that did not have children shared that they could not imagine working in the IT field due to the demands and nontraditional work hours of the job. Half of the participants who have children stated that they had a great support system such as their husbands or their parents that were available to take care of their children when they were not available to do so. The other half of the participants stated that they missed a great deal of their children's upbringing and expressed deep regret and

remorse. One participant cried during her interview and stated that she put her successful career over her family and now she is all alone.

This theme supports Bierema (2016) that women are at a disadvantage before they even interview for a senior-leadership position due to the "*ideal worker*" image. It is hard for society to view women as an ideal worker due to the fact that women are traditionally expected to be the caregivers of the family. This expectation puts women at a disadvantage of moving into a senior level position because if they are taking care of their families, they cannot possibly work long hours.

A key component of the social cognitive theory, which is self-efficacy, is demonstrated in the last theme of difficult work-life balance. The majority of the women participants who stated that they had children stated that it was difficult pursuing their careers in a demanding, fast-paced field with nontraditional work hours while also trying to raise young children. What assisted these women through difficult times to succeed in their careers while raising young children was their self-efficacy. Self-efficacy helped these parents overcome challenges and make contingency plans for when system outages occurred in the middle of the night or when work meetings ran longer than expected and child pickup needed to be rearranged.

## Limitations of the Study

The sample size, research findings and issues of trustworthiness contributed to the limitations of the study. The honesty of the participants was the first

limitation of the study. As the researcher, I had to trust that the participants were being truthful in sharing their lived personal experiences as women senior leaders in the IT field with me. To ensure that I accurately captured the lived experiences in their own words, I completed the process of member checking by having each participant review and verify their interview transcripts for accuracy.

The second limitation for this study was the purposive sample size of 15 participants located within the continental United States. A sample size of 15 was determined to be the point at which data saturation would be achieved. Data saturation is the point to discontinue collecting data (Saunders et al., 2018). Data saturation was achieved after the 9th participant, however; I continued on to 15 participants as originally proposed for the study. The first nine participants were easy to secure, however; the last 6 participants were difficult to secure.

The last limitation of the study was time constraints of the participants. Data collection was completed in 42 days. Coordinating around the participant's schedules and taking into consideration different time zones made it challenging at times to complete the data collection process. There were a total of 5 prospective participants that expressed interest in the study, however; their work travels caused them not to be able to commit.

## Recommendations

The purpose of this transcendental phenomenological study was to understand the lived experiences of women senior leaders in the IT field to gain an understanding of their career advancement into senior leadership positions. The

phenomenon that all participants had in common was their career advancement into senior leadership in field of IT. The results of this study revealed a range of factors for women to consider both as an employee in a male dominated field and as a senior leader in the field of IT. The two highest ranked themes by the participants that emerged from the data was that IT is a great field to work in and that women should have a high sense of self-efficacy. Additional qualitative research is needed to understand why women senior leaders feel that the field of IT is a great field to work in. The findings of this study may help organizations, grade schools, and universities better promote jobs in the IT field to women. A quantitative study may provide insight into what factors contribute to women senior leader's self-efficacy in the IT field. The findings of this study confirmed that having a high sense of self-efficacy is the key to success for women's ascension into senior leadership in the IT field.

I recommend that researchers complete a more in depth study focusing on factors that contribute to self-efficacy of women senior leaders in the IT field. Other studies that could stem from this suggested research could be to explore the self-efficacy of women senior leaders in in various IT sectors such as networking, engineering, hardware, software, and project management for example. This research could provide an understanding of which segment(s) may cater to or attracts more women senior leaders. This study may also be useful in promoting more women to the field of IT.

The next recommendation that I would make is to study women senior leaders who work in the IT field that also identify as a member of the LGBT community. One participant for this study shared that she was a lesbian and one participant who was recruited and later disqualified upon learning that her ascension into senior leadership was reached as a man and not as a woman. It would be interesting to hear about their unique experiences and views of how their sexual orientation may or may not have played a factor into their professional careers as women senior leaders in the IT field.

## Implications For Positive Social Change

As a researcher, I have learned that the participants of this study have worked very hard to become women senior leaders in the IT field. These women senior leaders in the IT field shared an experience of advancing into senior leadership in a male dominated industry while most of them also started their families and raised young children. These women attained their positions of leadership by working hard, believing and standing up for themselves, and taking initiative. Each participant stated that they actively mentor other women in IT and stated that it was important that that they did so to enrich the next generation of women leaders.

This study supports positive social change by promoting awareness of the lived experiences of women senior leaders in the IT field at the individual, family, organizational, and societal levels. At the individual level, women currently working in the IT field that aspire to ascend into senior leadership may benefit from this

study by acquiring a mentor to help them navigate their career paths. The participants of this study recommended that women in IT should obtain a mentor at the beginning of their careers. At the family level, the results of this study may provide an understanding for family members to implement contingency plans for childcare and other important family needs in the event the working mother needs to leave home for possible late night work, longer than expected work meetings, etc. The working mother may feel alleviated and supported enough to ascend into senior leadership if family members understand the demands, the often nontraditional work hours of the IT field, and the need to assist with contingency plans for child care.

This study has numerous implications for positive social change at the organizational level. With this information, organizations may think about providing around the clock childcare services for their employees who may not have a spouse, family member, or childcare readily available when an urgent IT matter occurs in the middle of the night. By doing this, organizations would ease the burden of the difficult work-life balance that was expressed by participants of this study. There were three different themes of this study that were labeled as strategies for success that were stated by the women senior leader participants in the IT field, which were: Mentors/supportive networks professional network, research your future, and self-efficacy. Organizations can provide support to women by incorporating these strategies for success into their workplace practices. The establishment of formal mentor programs with women mentoring women could promote positivity,

inclusion, and a supportive network of women in the workplace. Organizations could also invest in their female employees by sending them to various trade and leadership seminars and trainings to give them the skills that they need to be successful women senior leaders in the field of IT.

At the societal level, the results of this study published in journals and dissertation abstracts may increase the body of literature by addressing the gap on the lived experiences of women senior leaders in the IT field. This research may be the first of its kind to discuss and support women senior leaders in the IT field. The findings of this study may serve as an inspiration and attract more women to the field of IT.

**Implications for Different Methods**

Women and organizations as a whole could benefit if the results of this study were used to create additional research studies. A quantitative study could be created to survey women senior leaders in the IT field to determine if self-efficacy affects career advancement. My research focused on phenomenological research, however; a case study could detail the steps taken to reach senior leadership. Last, the Delphi method could be used to understand what women need in their workplace mentor programs. These proposed studies would help to extend the literature regarding women senior leaders in the IT field.

**Implications for Practice**

The recommendations for the practice of this transcendental phenomenological study could provide insight and awareness to promoting women

into senior leadership positions in the IT field as well as attract more women to the field. The dissemination of the results of this study could be presented at conferences, IT related publications, trainings within organizations, and to human resources departments to bring awareness to women and mentoring in the workplace. This research could serve as a "wakeup call" for organizations that do not have women senior leaders. Promoting women into senior leadership positions may attract more women to want to work IT, which could even out the playing field of men and women in the field.

## Conclusions

The purpose of this transcendental phenomenological study was to understand the lived experiences of women senior leaders in the IT field to gain an understanding of their career advancement into senior leadership positions. The phenomenon for this study was the career advancement of women senior leaders in the IT field. The results of this study revealed a range of factors for women to consider both as an employee in a male dominated field such as IT and as a senior leader in the field. The two highest ranked themes by the participants that emerged from the data was that IT is a great field to work in and that women should have a high sense of self-efficacy. This study confirmed that having a high sense of self-efficacy is the key to success for women's ascension into senior leadership in the IT field.

The findings of this transcendental phenomenological study extended the knowledge in the discipline of management to enable organizations and women

aspiring to ascend into senior leadership in the field by understanding the lived experiences of women who are already senior leaders in the field. Six themes emerged from the data analysis for this study, which were: IT is a great field, midcareer change to IT, mentors/supportive professional network, research your future, self-efficacy, difficult work-life balance. My recommendations are to further this research by expanding the scope to various IT functions such as networking, engineering, hardware, software, and project management for example with a different methodology. This study may contribute to positive social change by promoting the understanding of the experiences and perspective strategies for increasing the career advancement of aspiring women leaders in a male dominated industry such as IT. An increased understanding of women senior leaders' experiences in IT could attract more women, leveling the playing field of men and women.

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Appendix A: Participant Invitation and Consent Form

Date: XX Month, 2019

You are invited to participate in a research study of women who are currently working in senior leadership positions in the IT field. In order to participate in this study, you must meet the following requirements:

1. Female senior leader currently working in the IT field (Senior level positions for this study include president, vice president, C-level positions such as chief executive officer (CEO), chief operations officer (COO), chief information officer (CIO), chief technology officer (CTO), vice president of IT (VP of IT) and director and managerial level positions)
2. Work in current role for 2 or more years
3. Live and work in the continental United States

I am Michelle Newsome, a doctoral candidate at Walden University and will be conducting this study. I am 35 years old and have been worked in the IT field for 10 years.

**Background Information:**
The purpose of this study is to understand the lived experiences of women senior leaders in the IT field to gain an understanding of their career advancement into senior leadership positions.

**Procedures:**
If you agree to be in this study, you will be asked to be available for approximately 60 minutes for either a telephone call or a free video conference call interview about your career advancement into a senior leadership position. With your permission, telephone or videoconference interviews will be recorded. Only the audio portion of the interview will be recorded. There will not be any video recording of the interview whatsoever. Again, you have the option to decline being recorded if you choose.

Once the interview is completed, I will transcribe the interview into written text. I will email you a copy of the written transcript of the interview within 24-48 hours for you to review and verify that I have documented your words and experiences accurately. If any changes need to be made to your interview statement, please email me the corrections. If you agree to the transcript provided, please simply email me back stating that you “agree”. The verification step will take approximately 15-20 minutes long.

**Voluntary Nature of the Study:**
Your participation in this study is strictly voluntary. You are free to accept or turn down this invitation. If you decide to be in this study now, you may withdraw from the study later. Once the interview begins, you may request to stop or terminate your participation at any time.

**Risks and Benefits:**
There are minimal risks associated with participating in this study. In the event that you feel stressed or uncomfortable, you may terminate your participation at any time. You may refuse to answer any questions you consider invasive, too personal, or stressful. The benefit of this study may assist in attracting women to the field of IT. In addition, this study may provide a roadmap to women already working in IT who aspire to senor leadership positions in the field.

**Compensation:**
There will be no compensation provided for your participation in this study. You will receive an executive summary of the research study's findings.

**Confidentiality:**
With your consent, the interview will be recorded for research purposes. You may decline to be recorded at any point in time during the interview. The written and audio records for this study will be kept in a locked box and maintained in a secure location. The researcher will not include any information that will make it possible to identify you. You will simply be labeled as Participant 1, Participant 2, Participant 3, etc. After 5 years of the study's completion, I will destroy all paper and electronic data collected during the study.

**Participation:**
As previously mentioned, there are minimal risks with being a participant in this study. Your consent means that you do not have any personal or professional conflicts of interest with being included in this study. If you meet the requirements and are willing to be a participant in this study, please reply back to this email or chat message with the words "I Consent". When I receive your consent, I will reply back within in 24 hours to schedule your interview.

**Contacts and Questions:**
The researcher conducting this study is Michelle Newsome. You may ask any questions you have now. If you have questions later, you may contact the researcher via (850) 420-6518; michelle.newsome2@waldenu.edu. If you want to talk privately about your rights as a participant, you can call the Research Participant Advocate at my university at 612-312-1210. Walden University's approval number for this study is **05-06-19-0485770** and it expires on **May 5th, 2020.**

## Please keep a copy of this consent form for your records.

Appendix B: Interview Protocol

**Introduction**

Good morning (afternoon). I would like to first start by saying thank you for participating in this research study called "Women Leaders in IT: A Phenomenological Study of Their Career Path". My name is Michelle Newsome. The purpose of this study is to understand the lived experiences of women senior leaders in the IT field to gain an understanding of their career advancement into senior leadership positions. The research will focus on the experiences of women senior leaders in the IT field in order to understand the contributing factors of their success.

As a reminder, when you returned your email stating I consent, you have already agreed to participate in the study. All research notes and audio recordings will be stored in a lockbox in a secure location. Your identity will not be disclosed at any point during the study. All materials throughout the process of the study will have Participant 1, 2, etc. Only I will know the participant names and their codes. The code list will be stored in a lock box for five years and then destroyed with the rest of the data. All research notes and audio recordings will be stored in a lockbox in a secure location. When presenting the research findings of the study, direct quotes will simply state "Participant #1 stated…).

In just a few minutes, we will start the interview, which will consist of five demographic questions. If at any time during this interview you have any questions, please let me know so that I can address them. Also, if you do not wish to answer a

question, you may decline. If you do not wish to continue the interview for any reason, we can stop at any time. You may ask to be removed from the study at any time. If you need a break for any reason, please let me know.

We will now start the interview and begin recording

**Demographic Questionnaire**

The following questions will be used to collect demographic information.

1. What is your ethnicity? African American __ Asian __ Caucasian __ Hispanic __ Two or more races __ Other, please specify __
2. What is your age bracket? 20-29__ 30-39__ 40-49__ 50-59__ 60+__
3. For each educational degree obtained, please specify your major and concentrations as well as any minors obtained? _____
4. What is your current job title? _____
5. How long have you been in your current position? _____
6. What is the primary industry that you work in? _____

**Interview Question**

What is the essence of the lived professional and personal experiences in your career advancement, which led you to achieve your senior level positions in the IT field?

**Conclusion**

This concludes our interview. Is there anything you would like to add or do you have any additional questions? Thank you for taking the time out of your busy

schedule to participant in this study. You will receive a free copy of the executive summary of the study once it is completed.

I would like to verify your email address at this time so that I can email you a transcript of this interview for you to review and confirm that I captured your words and experiences accurately.

Thank you

## Appendix C: Social Media Announcement

### Calling Women Leaders in the IT Field!

I want to hear about your career path experiences in the IT field! Your participation in this study could benefit women already working in the field and those who are interested in entering the field.

Please contact me at michelle.newsome@waldenu.edu if you meet the following requirements:

1. Female senior leader currently working in the IT field (Senior level positions for this study include president, vice president, C-level positions such as chief executive officer (CEO), chief operations officer (COO), chief technology officer (CTO), director and managerial level positions)
2. Work in current role for at least 2 years or more
3. Live and work in the continental United States.

Please feel free to share this announcement with other women that may be qualified for this study. Your participation is greatly appreciated!