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Relationships Between Women's Glass Ceiling Beliefs, Career Advancement Satisfaction, and Quit Intention

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Walden University
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MA, California State University, 2003

BA, Florida International University, 2000

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Organizational Psychology

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Abstract

Research on the glass ceiling shows that women may encounter obstacles in their pursuit of high-level management positions. The purpose of this quantitative study was to test the explanatory style theoretical framework by examining relationships between women's glass ceiling beliefs, career advancement satisfaction, and quit intention and to determine whether satisfaction with career advancement opportunities mediated the relationship between glass ceilings beliefs and quit intention. Data were collected from 179 working women in the public or private sector and women who exited the public or private sector job market within the past 5 years via Web-based surveys. Glass ceiling beliefs were assessed using the Career Pathways Survey (CPS), career advancement satisfaction was assessed using the Career Satisfaction Measure, and quit intention was assessed using the Intention to Quit Scale and data were analyzed using multiple regression and correlational statistical techniques. Findings indicated significant relationships between the principal variables. Results also showed that career advancement satisfaction had a significant mediating effect on denial, resilience, and acceptance glass ceiling beliefs and quit intention. Findings may be used to help women understand how their glass ceiling beliefs and career satisfaction drivers influence their reaction to workplace events and may be used by employers to implement proactive retention strategies.

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Dedication

I dedicate this dissertation to my beautiful family and friends. To my husband, Fernando, who encouraged and supported me every step of the way and even managed to talk me down from the ledge a few times. His unconditional love made it possible for me to continue to move forward even when I doubted I would finish the journey. To my daughter, Krystle, and my son, Fernando, who never let me forget how far I had come so giving up was not an option. To my father, Hector, who always told me he had no doubt that I would accomplish anything I wanted in life and the sky was the limit. Finally, to my dear son, Christopher, who after hearing me talk about pursuing this dream for so many years, looked me straight in the eye one day and said, “Stop talking about it already and just go for it.” To my husband, children, and dad, thank you all for your unwavering love and support. Finally, to my extended family and friends, thank you for being there to support and cheer me on!

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Chapter 1: Introduction to the Study

Hymowitz and Schellhardt introduced the term *glass ceiling* in their 1986 *Wall Street Journal* article. Although they were the first to use the metaphor, they were not the first to write about the challenges women faced as they attempted their climb up the corporate ladder to senior-level positions. Hymowitz and Schellhardt remarked that even women who successfully climbed the corporate ladder would eventually crash into an invisible barrier and although high-level positions appeared to be within women's reach, they just could not crack the glass ceiling. Since these remarks were made, others have continued the effort to gain a better understanding of the antecedents of the phenomenon through research, which have led to the development of theories attempting to explain the phenomenon. A summary of the glass ceiling literature is found in Chapter 2.

Hymowitz and Schellhardt (1986) predicted that the barriers would be overcome sooner in some occupational areas such as financial services, insurance, retail, banking, and communications because women made up a larger portion of middle-management positions. However, in some occupational areas such as manufacturing and technology, women were far from reaching the executive board room. Some of these predictions would prove to be accurate, as noted in the Problem Statement section of this chapter.

Title II of the Civil Rights Act entitled The Glass Ceiling Act of 1991 was created and with that, a 21-member Glass Ceiling Commission was formed (U.S. Department of Labor, 1995b). The mission of the Glass Ceiling Commission was to conduct a study and develop recommendations to eliminate artificial barriers to advancement and increase progression and training opportunities for women and minorities to promote advancement

of women and minorities into management and decision-making roles (U.S. Department of Labor, 1995a). In the spring of 1995 the Glass Ceiling Commission published its fact-finding report, and in the fall of 1995 the Commission's recommendations were published. Included was the following message from Commission Chair, Robert B. Reich:

> The "glass ceiling" is a concept that betrays America's most cherished principles. It is the unseen, yet unbreachable barrier that keeps minorities and women from rising to the upper rungs of the corporate ladder, regardless of their qualifications or achievements…. The glass ceiling is not only an egregious denial of social justice that affects two-thirds of the population, but a serious economic problem that takes a huge financial toll on American business. Equity demands that we destroy the glass ceiling. (U.S. Department of Labor, 1995b, p. 4)

In addition to the glass ceiling regulatory history this chapter includes the study's problem statement, purpose statement, research questions, theoretical framework, definitions, assumptions, scope, limitations, delimitations, and significance.

Problem Statement

The Glass Ceiling Commission found that more women and minorities were trapped in low income and low status jobs with no growth opportunities (U.S. Department of Labor, 1995a). Research on the glass ceiling showed that women may encounter obstacles in their pursuit of high level management positions (Cech & Blair-Loy, 2010; Eagly & Karau, 2002). In 2014, 57% of the United States workforce were women and 52% were in management and professional level jobs (Bureau of Labor

Statistics, 2015). Labor statistics from 2014 indicated that 40% of women between the ages of 25 and 64 had earned college degrees compared to 11.2% in 1970, and only 6% did not graduate from high school compared to 34% in 1970. Further, women accounted for more than 50% of all workers in a number of industries (e.g., health care, education, and financial services) (Bureau of Labor Statistics, 2015). Despite the number of women currently in the workplace, increased educational achievements, and increased representation in a variety of industries (Bureau of Labor of Statistics, 2015), women "within the C-suite… remain as rare as hens' teeth" (Eagly & Carli, 2008, para. 2).

There is empirical evidence that the glass ceiling phenomenon can lead to perceptions of discrimination, decreased job satisfaction (Deitch et al., 2003), and increased health issues (de Castro, Gee, & Takeuchi, 2008). DelCampo and Blancero (2008) showed that as the perceived psychological contract of fairness increased, perceived discrimination decreased and as perceived psychological contract of fairness increased, perceived autonomous status increased.

Smith, Caputi, and Crittenden (2012) found a relationship between a woman's glass ceiling belief and career satisfaction in Australia. However, I did not find any studies conducted in the United States addressing the relationship between glass ceiling beliefs and career advancement satisfaction. Joo and Park (2010) found that career satisfaction, organizational learning culture, and organizational commitments are predictors of turnover intentions. Joo and Park concluded that if organizations focus on improving the problems that cause career dissatisfaction, quit intentions are decreased.

However, to date no one has examined how a woman's glass ceiling belief influences her satisfaction with career advancement opportunities and quit intention.

Purpose Statement

The purpose of this cross-sectional quantitative study was to test the explanatory style theoretical framework by examining (a) the relationships between women's glass ceiling beliefs (independent variables) and quit intention (dependent variable); (b) the relationships between satisfaction with career advancement opportunities (independent variable) and quit intention (dependent variable) to determine whether a woman's level of career advancement satisfaction influences her quit intention; (c) the relationships between glass ceiling beliefs (independent variables) and satisfaction with career advancement opportunities (dependent variable) to determine whether a woman's specific glass ceiling belief influences her overall level of satisfaction with the career opportunities; and, (d) whether satisfaction with career advancement opportunities mediates the relationships between glass ceilings beliefs and quit intention.

The data for this study were collected by surveying working women. The results were analyzed to gain a better understanding of how these relationships may influence a woman's quit intention. The glass ceiling effect not only negatively impacts women as outlined earlier, but also negatively impacts organizations. If a woman is dissatisfied with her career advancement opportunities, she may think of quitting and may even actually quit (Briggs, Jaramillo, & Weeks, 2011; Jawahar & Hemmasi, 2006; Poisat, Mey & Theron, 2014; Sousa-Poza & Henneberger, 2004). Increased turnover may prevent an organization from achieving its objectives due to decreased productivity or employee

morale (Abbasi & Hollman, 2000). In this cross-sectional study, I was not be able to draw any definitive causal relationships regarding the findings; however, the results of the study may serve to (a) expand the literature on quit intention, career advancement satisfaction, and glass ceiling and (b) educate woman and employers regarding potential antecedents leading to women's decreased career advancement satisfaction and increased quit intention resulting from the glass ceiling effect.

Background

Numerous theories have been developed over the years in an effort to explain the existence or perpetuation of the glass ceiling phenomenon, each founded on a core set of beliefs as to what actually causes or perpetuates the phenomenon (e.g., structural and meritocratic theories, social role theories, and attribution theories). Attribution theories are of particular relevance for this study. Harvey and Weary (1984) argued that people make attributions to understand and control their environment. Wrigley (2002) expanded the research on the glass ceiling phenomenon to introduce the concept of negotiated resignation, which is a form of denial that allows a woman to psychologically manage the perceived glass ceiling effect. Wrigley concluded that due to structural issues and socialization processes, the glass ceiling still exists. Smith, Crittenden, & Caputi (2012) expanded Wrigley's work by evaluating how a woman's beliefs regarding the glass ceiling influenced her career advancement attitude. The study was grounded on the role congruity theory and Wrigley's (2002) negotiated resignation theory. Smith, Crittenden et al. (2012) referred to Wrigley's negotiated resignation construct as resignation and defined it as "women give up or fail to pursue promotions because of social or

organizational change" (p. 72). Smith, Crittenden et al. identified three more beliefs: denial ("women believe glass ceilings are now myths and non-existent" [p. 72]), acceptance ("women are satisfied and happy but not seeking high level positions" [p. 72]), and resilience ("women feel they can and will go forward" [p. 72]), which resulted in a four-factor model of glass ceiling beliefs. Smith, Crittenden et al. asserted that a woman's belief (e.g., acceptance) would influence her career advancement attitude (e.g., she will stop looking for career advancement opportunities). The Wrigley and Smith, Crittenden et al. studies were the catalysts for the current study.

Theoretical Framework

Heider (1958) introduced attribution theory, and its central tenets are that people (a) give meaning to the behaviors they observe, (b) use methodical procedures to explain those behaviors, and (c) once attributed, feelings and ensuing behaviors are impacted. Attribution theory also posits that there are two types of attributes: internal attributes (e.g., trait, personality) and external attributes (e.g., task difficulty, luck) (Heider, 1958). Heider was the first attribution theorist, but Kelley and Weiner made significant contributions to the literature by expanding on Heider's work (Hart, 2005). Kelley's attribution model focused on the behaviors of others (Martinko & Thomson, 1998). The two central tenets of Kelley's model are (a) the covariation principle, which posits that "an effect is attributed to the one of its possible causes with which, over time, it covaries" (Kelley, 1973, p. 108), and (b) the discounting effect, which suggests that "the role of a given cause in producing a given effect is discounted if other plausible causes are also present" (Kelley, 1973, p. 113). Weiner's model is focused on self-attributions, and there

are three dimensions of causality to the model: (a) control locus (internal or external), (b) stability (stable or unstable), and (c) controllability (intentional or unintentional) (Hart, 2005; Weiner, 2008). Ability, effort, task difficulty, and chance are key achievement attributions associated with Weiner's model (Hart, 2005; Weiner 2008).

The optimism theory of explanatory style shares some similarities to Weiner's model (e.g., internal and external attribution). The central tenet of the theory is that individuals exhibit a tendency to explain the causes of bad events in a particular way (Peterson, 2004; Peterson, Seligman, & Vaillant, 1988). There are three dimensions to the theory: (a) internal or external, (b) short-term or long-term, and (c) specific or global (Peterson, 2004; Peterson & Seligman, 1984; Peterson et al., 1988; Seligman, 1990). An individual will attribute the causes of negative events either to internal, long-term, global causes (pessimistic perspective) or to external, short-term, specific causes (optimistic perspective) (Peterson, 2004; Peterson & Seligman, 1984; Peterson et al., 1988; Seligman, 1990). These theories are explored in more detail in Chapter 2.

Research Questions

The primary objectives of the study were to gain a better understanding of the relationships between women's glass ceiling beliefs (denial, acceptance, resignation, and resilience), women's satisfaction with career advancement, and women's quit intention. The following were the research questions (RQs) and hypotheses that guided this study:

RQ1: Is there a relationship between a woman's glass ceiling belief (independent variable) and her satisfaction with career advancement opportunities (dependent variable)?

$H_0$1: There is no relationship between a woman's glass ceiling belief and her satisfaction with career advancement opportunities.

H_a1: There is a relationship between a woman's glass ceiling belief and her satisfaction with career advancement opportunities.

RQ2: Is there a relationship between a woman's glass ceiling belief (independent variable) and her quit intention (dependent variable)?

$H_0$2: There is no relationship between a woman's glass ceiling belief and her quit intention.

H_a2: There is a relationship between a woman's glass ceiling belief and her quit intention.

RQ3: Is there a relationship between a woman's satisfaction with career advancement opportunities (independent variable) and her quit intention (dependent variable)?

$H_0$3: There is no relationship between a woman's satisfaction with career advancement opportunities and her quit intention.

H_a3: There is a relationship between a woman's satisfaction with career advancement opportunities and her quit intention.

RQ4: Does a woman's satisfaction with career advancement opportunities (independent variable) mediate the relationship between a woman's glass ceiling belief and her intention to quit (dependent variables)?

$H_0$4: A woman's satisfaction with career advancement opportunities is not a mediator between a woman's glass ceiling belief and intention to quit.

H_a4: A woman's satisfaction with career advancement opportunities is a mediator between a woman's glass ceiling belief and intention to quit.

Nature of Study

The nature of this study was quantitative and nonexperimental. Data were collected via Web-based surveys and analyzed using regression and correlation analyses. This method was appropriate because the main objective of the study was to gain a better understanding of the relationships between variables to test objective theories (Creswell, 2009). Specifically, the relationship between glass ceiling beliefs, satisfaction with career advancement, and quit intention attitudes was the focus of this study to test the explanatory style theoretical framework.

Analytical Strategies

Given the number of independent variables and dependent variables identified in this study, multiple regression and correlation analytical strategies were used for data analysis. Hypotheses 1 and 2 were addressed using multiple regression because it is appropriate test to evaluate the relationship between a single dependent variable and multiple independent variables (Miles & Shevlin, 2001). Hypothesis 3 was addressed using correlational analysis. Hypothesis 4 was addressed using mediation analyses.

Definitions

The key variables in this study were glass ceiling beliefs, women's satisfaction with career advancement, and quit intention. The variable type (independent or dependent) for each varied based on the research question. Covariates included age,

education level, marital status, number of children, ethnicity, job category, and organizational tenure.

Bona-fide occupational qualification (BFOQ): An exception to EEO laws that allows employers to base employment decisions for a particular job on such factors as sex, religion, or national origin if it is reasonably necessary to the normal operation of the business (U.S. Equal Employment Opportunity Commission, n.d.).

Career advancement: Association of a current position to a larger organizational structure and to anticipated future positions (Kanter, 1977).

Career ladder: Progression of jobs, ranked from highest to lowest, based on level of responsibility and compensation (Society of Human Resource Management [SHRM], 2015).

Career levels: The graded position of jobs within a career stream (Mercer, 2015).

Career path: Forms of career progression such a vertical career ladders or horizontal career ladder (Society for Human Resource Management [SHRM], 2015).

C-Suite: Word used to describe corporate officers and directors that originated from the use of the letter C in most high-level positions (Business Dictionary, 2017).

Glass ceiling beliefs: Four distinct beliefs (denial, acceptance, resignation, and resilience) that women may have regarding their career progression (Smith, Crittenden et al., 2012).

Internal mobility: Internal movement of talent from role to role (Bersin, 2017).

Turnover: "Movement of workers around the labor market, between firms, and among the states of employment, unemployment, and inactivity" (Burgess, 1998, p. 55).

Turnover intentions: A subjective construct that shows the likelihood that an employee will change jobs within a given time period (Sousa-Poza & Henneberger, 2004).

Assumptions

I made the following assumptions regarding career advancement: (a) there were no bona fide occupational qualifications (BFOQs) that precluded women from moving into open positions, (b) both women and men were willing and able to follow the same career path, and, (c) both women and men were equally qualified (e.g., met minimum job requirements) for the open positions. These assumptions were necessary because it is was important to assume that both women and men had equal opportunity to move into the open positions prior to drawing any conclusions from the data analysis.

Limitations

Consistent with the previous glass ceiling belief studies (Smith, Caputi et al., 2012; Smith, Crittenden et al., 2012), I used the snowball recruiting strategy to identify potential participants. Snowball sampling can be cost effective and efficient (Atkinson & Flint, 2001); however, selection bias and representativeness are two risks associated with this method (Atkinson & Flint, 2001; Baltar & Brunet, 2011; Magnani, Sabin, Saidel, & Heckathorn, 2005; van Meter, 1990). Selection bias is a key concern because participants are not randomly selected (Atkinson & Flint, 2001; Baltar & Brunet, 2011; van Meter, 1990); instead, they are personally selected by those initially selected to participate (Atkinson & Flint, 2001; Baltar & Brunet, 2011; van Meter, 1990). The process is also referred to as seeds (Magnani et al., 2005), which threatens the generalizability of the

results (Atkinson & Flint, 2001). Williams (1978) stated that selection bias can vary in degree, can alter associations, and increasing response rate may not achieve desired outcome. Baltar and Brunet (2011) asserted that snowball samples tend to be biased toward individuals more willing to participate or those individuals that have a large personal network, which is why Magnani et al. (2005) argued that the seeds were actually selected via a convenience sample. Despite these concerns, the formative nature of the study and the use of nonprobability sampling were viewed as suitable (see Magnani et al., 2005).

Surveys are a cost effective and efficient mode of collecting data (Groves et al., 2009; Lewis, Watson, & White, 2009; O'Rourke, 2011); however, nonresponse rate and nonresponse bias are two potential risks associated with using this mode (Groves et al., 2009). Atkinson and Flint (2001) suggested selection bias could be addressed, to some degree, by generating a large sample and by duplicating results to strengthen generalizability. Potential participants for the current study were recruited via email and the professional and social network sites Linkedin and Facebook. Social networks were added because Baltar and Brunet (2011) suggested that nonprobabilistic sample size and representativeness could be increased using virtual networks. The topic of glass ceiling beliefs, as well the convenience and anonymity (Ahern, 2005; Lewis et al., 2009; O'Rourke, 2011) of Web-based surveys, were expected to increase response rate. In addition, the method of contact (snowball sampling), the emphasis on the importance of the study in the instruction sheet, and the questionnaire length were expected to mitigate the risk of nonresponse bias (see Yu & Cooper, 1983).

Delimitations

The glass ceiling phenomenon can lead to a host of negative outcomes, as previously discussed. The degree to which glass ceiling antecedents are external to the individual (e.g., organizational culture) is one topic addressed in the existing literature; however, how a woman's glass ceiling beliefs affect her work, career attitudes, and behaviors opens up a host of new questions and challenges for women, as well as employers, that have yet to be thoroughly explored. Included in this study were women working in the public or private sector and women who had exited the public or private sector job market within the previous 5 years. Men were excluded, as were women who had opted out of the labor market in general.

Significance of the Study

The literature indicated that more women are moving into senior leadership positions (Caceres-Rodriguez, 2011); however, progress has been slow (Caceres-Rodriguez, 2011; Guvenen, Kaplan & Song, 2014). There is no research to date on women's glass ceiling beliefs and the impact those beliefs may have on a woman's career advancement attitude and her quit intention. The potential negative outcomes of the glass ceiling effect highlight the importance of examining the relationships between these variables to educate employers on the antecedents that may lead to dissatisfaction with career advancement opportunities and increased quit intention. Armed with this information, employers may become better prepared to proactively manage the glass ceiling effect by providing training or by giving women stretch assignments.

Summary

There has been much research conducted before and since the 1970s on the challenges women face on the climb up the corporate ladder. However, since the release of the Glass Ceiling Commission's reports, there has been an increased awareness of the issue as evidenced by the volume of glass ceiling research conducted since 1995. A Google Scholar key word search of *glass ceiling* between 1970 and 1985 returned 117 articles, the period between 1986 and 1994 returned 2,230 articles, and the period between 1995 and 2017 returned 30,020 articles on the topic.

In Chapter 1, I briefly described the history of the glass ceiling metaphor and the regulatory landscape of the 1990s. I also outlined the scope of the study, the theoretical framework being tested, and the study limitations and how those limitations would be addressed to mitigate the identified external threats to validity. The theoretical framework and the literature on glass ceiling, career advancement, turnover, and glass ceiling beliefs are discussed in greater detail in Chapter 2.

Chapter 2: Literature Review

The major sections of this chapter include the literature search strategy, theoretical foundation, glass ceiling literature review, career advancement literature review, turnover literature review, and glass ceiling beliefs literature review. The research on the glass ceiling phenomenon is broken into two parts: (a) glass ceiling theoretical models and assumptions that purport to explain what causes or perpetuates the glass ceiling phenomenon and (b) glass ceiling phenomenon research findings. The literature on the three major constructs (career advancement satisfaction, quit intention, and glass ceiling beliefs) were explored in an effort to provide a better understanding of relationships between the variables in this study.

Literature Search Strategy

Library databases and search engines used for this study included Academic Search Complete, ProQuest Central, Business Source Complete, ABI/INFORM Complete, Emerald Management Journals, SAGE Premier, JSTOR, and Google Scholar. Key words included *women* and *career advancement*, *glass ceiling*, *glass ceiling* and *women*, *glass ceiling* and *career advancement* or *turnover* or *quit*, *optimism* and/or *pessimism*, and *explanatory style* and *workplace development*. The goal was to focus on research published within the last 5 year; however, literature from 1977 to the present was included because the more recent research often led back to seminal glass ceiling and/or theoretical literature. Most of the literature reviewed was from 2000 or later.

Theoretical Foundation

This study was grounded in the explanatory style optimism theory, which shares some similarities to Weiner's model (e.g., internal and external attribution) discussed in Chapter 1. Peterson and Seligman (1984) referred to the construct as explanatory rather than attribution because they believed that explanations could only be determined by looking at both situational and dispositional factors. The central tenet of the theory is that individuals exhibit a tendency to explain the causes of bad events in a particular way (Peterson & Seligman, 1984; Peterson et al., 1988). The theory evolved from the reformulation of the learned helplessness model as a means of explaining differences in how people respond to uncontrollable bad events in an effort to identify those individuals who may be more vulnerable to learned helplessness (Abramson, Seligman, & Teasdale, 1978; Peterson & Seligman, 1984; Peterson et al., 1988; Schulman, 1995). How the individual habitually explains positive or negative events will affect how he or she reacts to future events, which can positively or negatively impact performance (Abramson et al., 1978; Peterson & Seligman, 1984; Peterson & Seligman, 1987; Peterson et al., 1988; Schulman, 1995). Scheier and Carver's (1985) study results supported the assertion that optimism plays a critical role in many phenomena that includes the workplace. Scheier and Carver also noted that coping strategies will differ based on a person's optimist or pessimist viewpoint. Explanatory style is viewed as a trait because it is stable across time and situations (Peterson & Seligman, 1984; Peterson et al., 1988).

Fiksenbaum, Koyuncu, and Burke (2010) found a positive correlation between optimism and proactive behavior. They found that self-confidence and determination were key career advancement factors, as well as family and organizational support. These findings suggested that women have more control over their career advancement opportunities than one might initially assume when looking at the causes of the phenomenon strictly as external to the woman. Campbell and Henry (1999) hypothesized that gender is a moderating factor in attribution style and women are more likely to have a pessimistic viewpoint; however, men are more likely to have a more optimistic viewpoint. Women are more likely to attribute failure to themselves and success to others, whereas men are more likely to attribute success to themselves and failure to others (Campbell & Henry, 1999). Campbell and Henry found no significant difference between attribution style or performance by gender although their results did show differences in course performance explanations; specifically, women were more likely than men to attribute performance to effort, and women were less likely than men to attribute their performance to ability.

There are three dimensions to the explanatory style theory: (a) internal or external, (b) short-term or long-term, and (c) specific or global (Abramson et al., 1978; Peterson & Seligman, 1984; Peterson & Seligman, 1987; Peterson et al., 1988; Smith, Caputi, & Crittenden, 2013). An individual will attribute the causes of negative events either to internal, long-term, global causes (pessimistic perspective) or to external, short-term, specific causes (optimistic perspective) (Peterson & Seligman, 1987; Peterson et al., 1988; Seligman, 1990). Although the explanatory style theory was initially derived

from the learned helplessness theory, Peterson et al. (1988) asserted the explanatory style is broadly germane because it influences helplessness, and that in turn, may affect how people adapt to events. The explanatory style alone is not the cause of the helplessness; rather, it influences the expectation and it is the expectation that can lead to helplessness. Knowing the explanatory style can predict how an individual might react under specific circumstances (Peterson & Seligman, 1984). Peterson and Seligman (1987) asserted there are three ways an explanatory style may be developed: (a) imitating parents, especially a primary caregiver, (b) teachers' criticisms or disapproval; and, a person's first traumatic loss, which may set person's explanatory style for life.

Seligman and Schulman (1986) found support for their hypothesis that a pessimistic explanatory style leads to decreased productivity and quitting when bad events happen. Seligman and Schulman suggested that there are several ways to interpret the relationship they found between explanatory style and productivity: optimistic explanatory style precedes successful performance, successful performance precedes optimistic explanatory style; and, a third factor may produce both an optimistic explanatory style and job success. Seligman and Schulman did not rule out the viewpoint that a pessimistic explanatory style may lead to more failure and an optimistic explanatory style may lead to more success. Youssef and Luthans (2007) found a relationship between positive work-related outcomes (e.g., performance and organizational performance appraisals) and hope, optimism, and resilience. Smith, Caputi et al. (2012) used the optimism and pessimism theoretical framework to develop their hypotheses. Smith, Caputi et al. proposed a dichotomy of the Career Pathways Survey

(CPS) factors, specifically that women's glass ceiling beliefs have pessimistic perspectives (acceptance and resignation) and optimistic perspectives (resilience and denial).

Based on the central tenets of the attribution theories and the explanatory style framework, I expected that women with optimistic glass ceiling beliefs would have higher levels of satisfaction with career advancement opportunities and neutral levels of quit intention. Neutral quit intention for the purpose of this study was defined as a willingness to consider internal and external career opportunities because the woman views the career opportunity as a means to advance her career. Conversely, I expected women with pessimistic glass ceiling beliefs to have lower levels of satisfaction with career advancement opportunities and lower levels of quit intention because they believe there are no career advancement opportunities available externally for them.

Literature Review

Causes of or Factors That Perpetuate the Glass Ceiling Phenomenon

Over the years, many theories have been developed, each founded on a core set of beliefs as to what causes or perpetuates the glass ceiling phenomenon. A comprehensive review of the glass ceiling theoretical models is beyond the scope of this study; however, the following section highlights a number of different perspectives on the antecedents or perpetuating factors of the glass ceiling phenomenon.

Kanter (1977) argued that for the most part it, organizations make workers into who they are. Although individual traits and the nature of external social relationships play a role, people are generally adaptable; however, it is the organizational structure that

shapes workplace behaviors (Kanter, 1977). Kanter also stated that it is the structural issues that impede women's mobility in the workplace, so it is the organization not the individual that must change. Further, gender comes into play through organizational roles as they "carry characteristic images of the kinds of people that should occupy them" (Kanter, 1977, p. 250). Grant (1989) and Acker (1990) explored this viewpoint further. Grant stated that "organizations clearly reproduce themselves" (p. 57) and as such, the women who move into senior management positions "usually resemble the men in power" (p. 57), which suggests that women adapt to progress and organizations have been successful at creating the "she-male" (p. 57). Grant also argued that organizations would benefit by recognizing the unique managerial abilities that women possess rather than trying to force fit women into the male role model. Acker found that organizations are gendered, defined as "advantage or disadvantage, exploitation and control, action and emotion, meaning and identity, are patterned through and in terms of a distinction between male and female, masculine and feminine" (p. 146). As a result of social role stereotypes and the perception that women are less effective leaders, men and women alike, may perceive women as less effective leaders, assess women's performance more harshly than men's, and be less willing to work with women (Eagly & Karau 2002; Grissom, Nicholson-Crotty, & Keiser, 2012; Schein, 1973). Chugh and Sahgal (2007) reviewed the literature of the past 20 years on the glass ceiling and concluded that the mind-set that "male is equal to manager" is "entrenched in the minds of employees across organizations" (p. 360). Other key findings were lack of formal career planning among women and that women and men have different motivation for working (Chugh &

Sahgal, 2007). Assuming organizations are gendered, it would seem logical to conclude that gendered organizations can present significant barriers for women on their journey to the top.

Eagly's social role theory is grounded in the belief that society has certain expectations of men and women based on gender (Dulin, 2008; Eagly & Johnson, 1990). Eagly and Karau (2002) expanded on the social role theory to include leader-role differences. They posited that gender-role and leader-role expectations may lead to incongruity, which can lead to two prejudices: (a) a woman not being viewed as suited for leadership positions and (b) when a woman demonstrates the behaviors attributed to an effective leader, she is assessed less favorably because she is a woman. Isaac, Kaatz, and Carnes (2012) concluded that because leadership is stereotypically viewed as a male characteristic, woman that model assertive characteristics will move up into leadership.

Frank's (1978) theory of differential overqualification suggested that due to work-life balance issues, married women were more likely than married men to feel overqualified. Building on Frank's theory of differential overqualification, Luksyte and Spitzmueller (2011) asserted that whether overqualification is real or perceived, it is a fact that a person's behavior is driven by perception. Some may argue that given the number of women currently in the workplace, the theory is not applicable today; however, Luksyte and Spitzmueller stated that when taken into consideration along with perceptions of the glass ceiling and the persistence of gender bias, the theory may be as applicable today as it was 30 years ago. Perceptions of overqualification can lead to a host of counterproductive behaviors such as decreased motivation, passive or active

disengagement, and reluctance to engage in extra-role behaviors, and withdrawal behaviors such as absenteeism, decreased work effort, and health issues (Luksyte & Spitzmueller, 2011).

The human capital theory is grounded in the belief that differences in education, individual level of work effort (Cech & Blair-Loy, 2010; Newman, 1993), aptitude, training, productivity, and work experience influence overall career development (Newman, 1993) The theory suggests that the more a women invests in these variables, the higher she is likely to progress in her career (Newman, 1993). Grounded in the belief that the phenomenon results from explicit and implicit biases (structural lens) or from human capital issues (meritocratic lens) such as the individual level of effort a woman puts into her work, Cech and Blair-Loy (2010) examined the glass ceiling phenomenon from the perspective of successful women who have cracked the glass ceiling. Cech and Blair-Loy found that married, business educated, and top-level managers were more likely to attribute gender inequalities to human capital or women's motivation, whereas mothers, primary earners, professional services salespersons, and those working in unaccommodating organizations were more likely to attribute inequalities to structural explanations. Based on their findings, Cech and Blair-Loy concluded that family and career circumstances influence whether a successful woman will remove or reconstruct the glass ceiling phenomenon.

Singh, Finn, and Goulet (2004) used two competing theoretical models (job model and gender model) to explain gender job attitudes. The former theory posits that job or organizational situational differences influence job attitudes. The latter theory

posits that differences are at the individual level. In other words, all job and organizational factors being equal, there should be no differences. Singh et al. found some support for the job model, some for the gender model, and in some instances neither was supported. They concluded that there were no intrinsic differences in job attitudes between the genders that could not be explained by workplace experiences. They also suggested that the study results expanded on theoretical work previously completed and the results countered stereotypical beliefs that women have about continuing commitment and the gender model. In other words, all things being equal, women's commitment levels and outcomes are comparable to or higher than men.

Eagly and Carli (2008) on the other hand, asserted that it is not the glass ceiling that prevents women from moving into senior leadership positions but the obstacles they face along the way that keeps them out of the C-suite. Eagly and Carli used a metaphor, the labyrinth, to describe the obstacles a woman may encounter on her journey to the C-suite. The labyrinth, although complex, does not mean that women cannot achieve their goals of moving into senior leadership positions, it simply means that achieving those goals requires perseverance despite those obstacles. Eagly and Carli's labyrinth metaphor is consistent with Ragins and Sundstrom's (1989) assertions that a woman's career journey can best be described as an "obstacle course" (p. 81).

Glass Ceiling Literature Review

Kanter (1977) asserted that "sex division and sex segregation of occupations is a fact of the American workplace" (p. 16). She stated that women's advancement in the workplace was limited to routine, lower level positions rather than decision-making roles.

The Glass Ceiling Commission's 1995 finding that more women and minorities were trapped in low income and low status jobs with no growth opportunity (U.S. Department of Labor, 1995a) was consistent with Kanter's finding nearly 20 years earlier. According to Tharenou (1999) women work in a structure led primarily by men who look to replicate themselves and thus women are less likely to advance to senior management levels because management at the top is predominantly male. Riger and Galligan (1980) stated that implicit in the person-centered strategies is the belief that women should model organizational behaviors that are fundamentally male. Women are advised that modeling characteristics typically attributed to the male sex role is the key to success (Riger & Galligan, 1980).

Kanter (1977) also stated that women may be successful moving up into management positions because they are "[members of] the ruling family; they [are] already part of the inner circle" (p. 55). This suggests that women's advancement is driven by the relationships she had developed rather than individual merit. When it came to work, women were viewed as either less dedicated than men or as having commitment conflicts as they attempted to balance work and family responsibilities (Kanter, 1977).

The number of women that have progressed to senior leadership positions since 1995 is an indicator that progress has been made (Caceres-Rodriguez, 2011) but it has been slow (Caceres-Rodriguez, 2011; Guvenen et al. 2014). Guvenen et al. (2014) also argued that most of the progress was made in the 1980s and 1990s, with no progression made in the last decade. O'Connor (2001) argued that although the glass ceiling exists, it

only partially explains why there are fewer women in senior management positions than men.

Ragins, Townsend and Mattis (2006) posited that in order to shatter the glass ceiling it is critical to understand what advancement barriers women face, what strategies successful women use to overcome those barriers, and organizational leadership have a thorough understanding of what barriers and organizational climate women face.

The literature indicates that women face individual, societal, and organizational challenges in their efforts to climb the corporate ladder (Cacares-Rodriguez, 2011; Followell, 2014); however, to what degree these factors impact her advancement opportunity is unclear (Caceres-Rodriguez, 2011). Consistently exceeding expectations, developing a leadership style that makes men and women equally comfortable, seeking stretch or high visibility assignments, openness to relocate, willingness to a career or organizational change, gaining front line experience, willingness to initiate career goals discussions, (Caceres-Rodriguez, 2011), having a mentor, being part of a professional network, increasing education (Caceres-Rodriguez, 2011; Followell, 2014), and having clear career objectives (Followell, 2014) are a few of the career advancement strategies women can use. It is equally important that organizations are creating a culture that is conducive for women to advance and that from an organizational perspective, organizational culture change, and CEO support (Followell, 2014) are strategies that can be used to shatter the glass ceiling. Oakley (2000) concluded that while women have made progress by moving into middle management positions, progress to the level of senior management continued to be a challenge. Oakley further suggested that in

response to the frustration felt by women as a result of such obstacles, future change would not be noted by movement into senior level positions, but rather from an exit from corporate world into self-employment. Hamel (2009) found a number of factors such as intensity of the psychological contract violation, degree of commitment to the advancement of women's career progression, and opportunity to be heard (voice), influenced a woman's sensemaking and how she would respond to a particular barrier. Further, if loyalty was present, a woman was less likely to quietly exit but she would use voice to initiate change instead.

Chen, Ployhart, Thomas, Anderson, and Bliese (2011) study results indicated that the relationship between job satisfaction and quit intention was dynamic in nature. This relationship was mediated by future work expectations and moderated by organizational tenure. Organizational tenure was found to have a moderating effect on turnover intentions in a number of studies (see Chen et al., 2011; Hom, Roberson, & Ellis, 2008; Kraemer & Gouthier, 2014). According to Guvenen et al. (2014) their findings:

> Painted a glass-half-full picture of recent trends in gender differences among top earners: females have made substantial inroads toward gender equality at the top. Today a working female is over four times more likely to be in the top 0.1 percent of the earnings distribution than a working female was three decades ago. Yet, with the same data, it is also easy to paint a glass-half-empty picture of these trends: despite the dramatic transformation of the gender composition of top earners, women are still vastly underrepresented at the top of the earnings distribution. (p. 13)

Career Advancement Opportunity Literature Review

Kanter (1977) argued that there is a direct relationship between mobility and employee behavior such that it becomes a self-fulfilling prophecy. In other words, employees that experience mobility will have increased work commitment (Kanter, 1977; Nouri & Parker, 2013), increased ambitions, and upward orientations (Kanter, 1977). Conversely, lack of mobility can lead to indifference or conclusion that their initial placement within the structure was correct may be drawn (Kanter, 1977). Further, a woman's career objectives may not be low initially (Kanter, 1977) but her motivation to aspire to higher levels of advancement may be negatively impacted by the experiences she encounters in the workplace (Bartol, 1978; Kanter, 1977; Riger & Galligan, 1980). Career advancement is a dynamic construct that evolves over time; therefore, a lack of career advancement can lead to withdrawal behaviors that can lead to quit intention (Zhao & Zhou, 2008). These findings are consistent with Kosteas's (2011) finding that promotions are an important career and life factor that affects other facets of the work experience. Kosteas found being promoted within the past two years and the prospect of being promoted in the next two years increased job satisfaction; whereas, prolonged promotions decreased job satisfaction.

Tharenou (1990) evaluated approaches used by psychologists to explain women's achievement behaviors and career advancement by comparing and contrasting traditional approaches with more contemporary approaches used to explain the phenomenon. The former approach focuses on a woman's personality or attitudinal predisposition (e.g., fear of success); whereas, the latter focuses on individual characteristics relative to contextual

factors. Tharenou found that choice of occupation and career advancement goals are influenced by interactive and reciprocal individual, environmental, and behavioral factors rather than internal psychological characteristics alone. This finding was consistent with the core tenets of the social cognition theory. Browne (2006) stated that it should not be assumed that the freedom to choose one's career means that men and women will make the same choices.

Hede and Ralston (1993) concluded that, in general, female managers were less likely than male managers to want or expect to progress up the management ladder. They emphasized that these results should not be interrupted to mean that female managers rated career less important than non-work life. Instead, women may simply be more satisfied with lateral moves. Hede and Ralston offered an "optimistic" and a "more realistic" (p. 278) interpretation of their findings. The optimistic interpretation was that women aspire to move up the ladder in equal proportion to men and are willing to commit to overcoming the challenges they may encounter. The more realistic interpretation was that based on historically slow progress made in female representation in management, women aspiring to move up did not anticipate the challenges they would face, which is that the glass ceiling exists.

Tharenou, Latimer, and Conroy's (1994) confirmatory model supported the assertion that career advancement for men and women are influenced by ordered interaction of situational and personal factors. These findings were consistent with a number of studies (e.g., Fagenson, 1990; Tharenou, 1990; Akpinar-Sposito, 2013) although gender related differences were found. The study results showed that gender

influenced resources and power that increased career advancement. Training had a direct positive effect on career advancement because it increased the individual's knowledge, skills, abilities, and qualifications and education and work experience had a more indirect positive effect on career advancement for men than women (Ragins & Sundstrom, 1989; Tharenou et al., 1994). Hoobler, Lemmon, & Wayne (2014) found a significant positive relationship between organizational development and the manager's perception of the woman's career motivation.

Human capital and promotional opportunities were found to be the most influential factors to women's movement into management (Metz & Tharenou, 2001; Tharenou, 2001) with managerial aspiration and masculinity being the next most influential factors (Tharenou, 2001). Metz and Tharenou (2001) found that social capital factors contributed little to the differences from the quantitative data but they did find differences between the quantitative and qualitative data as it relates to how much impact social capital had on women's career advancement. While they provided several plausible explanations for the differences, one explanation was that, consistent with the attribution theory, women may attribute roadblocks to career advancement opportunities to others and successes to themselves. This may result in attribution bias on the part of the female participants.

Tharenou (1995) study results indicated that interpersonal and situational factors influenced a woman CEO's status more than individual factors and found the most differences in the relationships were between interpersonal, organizational, and non-work variables and gender. A positive relationship between encouragement and women's

career advancement were also found (Ragins & Sundstrom, 1989; Tharenou, 1995) and after further examination, Tharenou (1995) found that other women provided women CEOs with the encouragement needed for career advancement. Tharenou (1995) found that women were offered less internal and external training opportunities than men while on-the-job training was comparable.

Phelps and Waskel (1994) found no significant correlation between explanatory style and perceived job satisfaction or dissatisfaction; however, they suggested that the inclusion of peers and supervisors may have been a factor in the outcome. Similarly, Campbell and Henry (1999) did not find a relationship between attribution style and gender and course performance but a difference in explanations provided for the actual performance by gender was noted.

Johnson and Johnson (2000) argued that perceptions of overqualification due to lack of mobility could lead to "psychological discrepancy" that may make the individual simultaneously satisfied with some aspects of the job and dissatisfied with other aspects of the job. Discrepancies can to a lead a negative outlook and decreased work satisfaction. Kelly and Marin (1998) posited that career advancement opportunities may present some conflicting role issues for women. They found that the more perceived opportunities, the greater the conflict between work and family that may result in women changing career tracks to minimize or avoid the conflicts. Gomez et al. (2001) found factors such a socioeconomic status, education, culture, family support structure, and cultural identity were influential variables. They asserted that when faced with "optimism, persistence, passion, and capacity for cognitive reframing [women] cope with

challenges and remain true to their values, beliefs, and sense of self" (p. 286). Relationships between the woman, career development, and her environment indicated that career-life choices lead to compromises that may lead to nonlinear and unplanned career paths (Gomez et al., 2001). Consistent with these findings, Lirio et al. (2007) found that a woman's career journey looks like a series of 'zigzags' rather than climbing a ladder. Gersick and Kram (2002) results indicated that finding her role in life, managing career-family choices, and self-actualization are most important for women. Further, when faced with challenges, high-achieving women turned to their support network, reframed challenges as advantages or ignored potential hurdles (Gomez et al, 2001).

Bombuwela and De Alwis (2013) set out to evaluate the relationship between the glass ceiling and women's career development and cultural, family, individual, and organizational factors. They found a moderate relationship between the glass ceiling and women's career development, a significant relationship between individual and organizational factors and women's career development and a relationship between family and glass ceiling. Of these, the individual factor was the most influential. This

finding will be explored further in this study as explanatory style and glass ceiling beliefs are individual factors.

Supervisor support, monetary rewards, and career paths were found to have to moderating effects on depersonalization and decreased personal achievement in call centers (Choi, Cheong, & Feinberg, 2012). Specifically, a negative relationship between career path and depersonalization, and decreased personal accomplishment was noted (Choi et al. 2012). No moderating effect was found between emotional exhaustion and turnover intentions (Choi et al., 2012; Kraemer & Gouthier, 2014).

Hultin (2003) found that males working in typically female occupations have considerably better internal promotional prospects than their similarly qualified female counterparts. As a result, they concluded that working in female-dominated occupations could be viewed as a "stepping stone" for men but "an impediment" for women seeking mobility (p. 31). Furthermore, Hamel (1990) found no support for the assumption that impediments to women's internal mobility are particularly challenging in male-dominated occupations. Semykina and Linz (2013) found a significant positive relationship between job satisfaction and women's promotional opportunities to the director level that they partly attributed to worker personality and organizational characteristics. Semykina and Linz found the positive relationship was stronger for younger women and weaker among older women. These results supported their assertion that over time, women learn to adapt and thus become less sensitive to career advancement inequalities.

Quit/Turnover Intentions Literature Review

Turnover intentions is a subjective construct that shows the likelihood that an employee will change jobs within a given time period (Sousa-Poza & Henneberger, 2004). Although turnover intentions may not necessarily result in actual turnover, there is a close relationship between the two variables such that turnover intentions are a good predictor of future actual turnover (Mobley, 1977; Mobley, Horner, & Hollingsworth, 1978; Sousa-Poza & Henneberger, 2004). Abbasi and Hollman (2000) argued that high turnover had significant consequences that may threaten organizational objectives. Conceptually, turnover is a progressive processes rather than a "snap" decision (Steel, 2002). With this in mind, understanding the progressive interaction of the turnover phenomenon (Boswell, Boudreau, & Tichy, 2005; Steel, 2002) and employee work attitudes is critical (Boswell et al., 2005; Mobley, 1977; Steel, 2002) if employers are to implement effective retention strategies. Specifically, holistic strategies designed to decrease turnover that are conducive to the leadership style of women is critical (Krishnan, Park, & Kilbourne, 2006).

Steel (2002) posited that turnover research was highly influenced by the attitude theory. This indicated that the relationship between work attitudes (e.g., career advancement satisfaction) and turnover is much more complex than a simple sequential relationship (Boswell et al., 2005). The literature on turnover intentions is vast and relationships between turnover intentions and job satisfaction (Allisey, Noblet, Lamontagne, & Houdmont, 2013; Boswell et al., 2005; Cotton & Tuttle, 1986; Griffeth, Hom, & Gaertner, 2000; Hofstetter & Cohen, 2014; Jawahar & Hemmasi, 2006; Kosteas,

2011; Lambert & Hogan, 2009; Lee, 2012; Leip & Stinchcomb, 2013; Mobley, 1977; Nouri & Parker, 2013; Sousa-Poza & Henneberger, 2004), career advancement, (Briggs et al., 2011; Jawahar & Hemmasi, 2006; Poisat et al., 2014; Sousa-Poza & Henneberger, 2004), organizational commitment (Armstrong, Riemenschneider, Allen, & Reid, 2007; Downes, Hemmasi, & Eshghi, 2014; Griffeth et al., 2000; Joo & Park, 2010; Kammeyer-Mueller, Wanberg, Glomb, & Ahlburg, 2005; Lambert & Hogan, 2009; Mobley, 1977; Nouri & Parker, 2013; Poisat et al., 2014; Shih-Tse Wang, 2014), career aspirations (Tharenou, 2001), resource development (Ragins & Sundstrom, 1989; Tharenou, 2001), supervisor gender (Grissom et al., 2012), emotional exhaustion (Kraemer & Gouthier, 2014; Shih-Tse Wang, 2014), organizational pride (Kraemer & Gouthier, 2014; Sousa-Poza & Henneberger, 2004), employment perceptions (Cotton & Tuttle, 1986), pay (Cotton & Tuttle, 1986; Poisat et al., 2014; Sousa-Poza & Henneberger, 2004; Zhao & Zhou, 2008), job status (Zhao & Zhou, 2008), gender (Kraemer & Gouthier, 2014; Royalty, 1998; Sousa-Poza & Henneberger, 2004), tenure (Briggs et al., 2011; Cotton & Tuttle, 1986; Kraemer & Gouthier, 2015; Royalty, 1998), education (Cotton & Tuttle, 1986; Royalty, 1998; Sousa-Poza & Henneberger, 2004), employer satisfaction (Jawahar & Hemmasi, 2006), Perceived Organizational Support (Jawahar & Hemmasi, 2006), job security (Sousa-Poza & Henneberger, 2004), labor market opportunities (Sousa-Poza & Henneberger, 2004), work experience (Royalty, 1998), age (Cotton & Tuttle, 1986; Sousa-Poza & Henneberger, 2004), masculinity (Tharenou, 2001), individual job change pattern (Boswell et al., 2005), and, Distributive Justice (Downes et al., 2014) has been

found; however, I could find no research on the relationship between the glass ceiling beliefs and quit intention.

Schwartz's (1989) Harvard Business Review article sparked much debate when a corporate study was cited that showed the turnover rate was 2 ½ times higher among women than it was among men. Further, women's careers had a higher propensity of leveling out or being interrupted. Schwartz also stated that the glass ceiling metaphor is "misleading" as a more appropriate metaphor was "counterproductive layers on women – maternity, tradition, socialization – meet management strata pervaded by the largely unconscious perceptions, stereotypes, and expectations of men" (p. 3). Further, such obstacles do not exist for men but are unsurmountable for women. According to Light and Ureta (1992), employers may associate "female with quitter" (p. 156) because women's average turnover rates are higher for than men. As a result, women may be negatively affected because development and advancement opportunities, and even the jobs themselves, are less likely to be given to people expected to turnover. Conversely, Grissom et al. (2012) found turnover rates higher among male teachers and Moynihan and Landuyt (2008) found a decrease in the turnover rate among women. Stroh, Brett, and Reilly (1996) found that family role was not the primary driver for women's intentions to quit but career-related factors such as perceived lack of career opportunities, job dissatisfaction, and organizational loyalty were the primary reasons women quit in higher proportion than men. Talented managers, regardless of gender, are needed in business to remain competitive (Powell, 1990; Schwartz, 1989). Therefore, the benefits

of attracting and retaining women, career-primary or career-and-family oriented, far outweighs employment costs (Schwartz, 1989).

Lee (2012) assessed several turnover levers (e.g., job-to-job, job-to-unemployment, and job-to-non-employment) and found no supporting evidence to indicate that turnover among women was higher overall or that voluntary turnover among women was higher. Findings supported the assertion that job satisfaction influenced different turnover pathways. Specifically, when looking at turnover propensity by gender and turnover reason, Lee found (a) no gender differences in turnover to look for another job, (b) women had a higher propensity to leave only after securing another job, and, (c) over time, women were a higher risk to turnover due to family. Light and Ureta (1992) found that turnover among women may be higher than men because they are more likely to be "'movers' for unobserved reasons" (p. 156). Light and Ureta also found (1) turnover among younger employees was higher regardless of gender, (2) successive cohort of women attained higher education and number of women in the workforce increased, and (3) successive cohort turnover behavior dramatically changed in a brief period of time.

Rosin and Korabik (1995) found no variable contribution differences between men and women. Position characteristics, commitment, and satisfaction equally predicted turnover intentions between the sexes. They concluded that the turnover differences between the sexes were situation, rather than person, specific. Sabharwal (2013), on the other hand, found that employees who are satisfied from a work-life balance perspective, are more likely to leave and women at the senior executive level are less likely to express intent to leave. Wahn (1998) argued that perceptions of sex discrimination, as it relates to

the staffing processes and promotional opportunities, may lead a women to view the prospect of moving to another company as risky and, thus, she may remain with her current employer because of perceived lack of external opportunities.

Ragins et al. (2006) argued that whether real or perceived, the perception of limited career advancement opportunity alone was sufficient to trigger turnover decisions and deceased career goals amongst talented female workers. Employees with lower levels of job satisfaction will have decreased levels of job involvement, and, thus, will be more likely to be searching for other employment (Gächter, Savage, & Torgler, 2013). Further, they found that improved cooperation and trust, higher levels of fairness, and higher levels of work-life balance had a significant positive affect on intentions to not quit. Lobene and Meade (2013) assessed turnover for people who were motivated by career advancement and achievement, referred to as "career orientation", compared to those that have a "career calling orientation". Wrzesniewski, McCauley, Rozin and Schwartz (1997) described a person with a *Calling* as someone who "works not for financial gain or career advancement, but instead for the fulfillment that doing the work brings to the individual" (p. 22). Lobene and Meade found that perceived overqualification (POQ) was positively related to intentions to quit. They also found employees with a lower calling had higher levels of continuance commitment compared to those with higher calling and, thus, may remain with the company because of a perceived lack of alternative external opportunities. Research indicated there was a positive relationship between career advancement opportunities and organizational commitment and a negative relationship between career advancement opportunities and turnover (e.g., Briggs et al., 2011; Nouri

& Parker, 2013). Kammeyer-Mueller et al. (2005) found that perceived financial risk associated with a job change, organizational commitment, work satisfaction, and promotion satisfaction levels are lower at the time of hire, as measured soon after hire. Further, despite the fact that some attitudinal changes were noted over time, the changes were not dramatic because people look for or focus on information that is consistent with their formed attitudes (Kammeyer-Mueller et al., 2005). Similarly, Light and Ureta (1992) also found that contributing factors of turnover are evident at the time of hire.

Glass Ceiling Beliefs Literature Review

The literature on the glass ceiling beliefs specifically is limited as it is a relatively new construct. Wrigley (2002) concluded that the glass ceiling existed due to structural issues and socialization processes. She identified what she called "negotiated resignation." Smith, Crittenden et al. (2012) expanded on Wrigley's work by evaluating the relationship between women's beliefs in the glass ceiling and her career advancement attitude. Smith, Crittenden et al. described resignation as statements that indicate "women give up or fail to pursue promotions because of social or organizational change", (p. 72). Smith, Crittenden et al. also identified three more factors: denial ("women believe glass ceilings are now myths and non-existent" [p. 72]), acceptance ("women are satisfied and happy but not seeking high level positions" [p. 72]), and resilience ("women feel they can and will go forward" [p. 72]), which resulted in a four-factor model of glass ceiling beliefs (p. 72). Smith, Crittenden et al. asserted that a woman's belief (e.g., acceptance) would influence her career advancement attitude (e.g., she will stop looking for career advancement opportunities). The glass ceiling beliefs could influence a woman's

promotion aspirations that may, in turn, lead to career choices and workplace actions (Smith, Crittenden et al.). The Wrigley and Smith, Crittenden et al. studies were the catalysts for the current study.

The explanatory style is deemed to be a state-like trait (Hart, 2005; Peterson & Seligman, 1984; Smith, Crittenden et al, 2012) although Smith, Crittenden et al. acknowledged that further longitudinal research was needed to evaluate if the glass ceiling beliefs are stable over time as women make job and career changes. Smith, Caputi et al.'s (2012) study on the relationship between the glass ceiling beliefs and career success was grounded in the optimism and pessimism framework. Smith, Caputi et al. posited that glass ceiling beliefs could be antecedents for a variety of subjective work variables. Smith, Caputi et al. found denial had the strongest positive relationship with subjective success and resignation had the most negative relationship.

Summary

The glass ceiling literature review indicated that while progress has been made as it relates to women's' movement into senior level positions (Careres-Rodriguez, 2011), progress has been slow (Caceres-Rodriguez, 2011; Guvenen, 2014). The literature is full of theories about factors that cause or perpetuate the phenomenon (e.g., gendered organizations, social role factors, etc.); however, the role that individual factors such as explanatory style and glass ceiling beliefs play as it relates to a woman's career advancement objectives and her quit intention warrants further investigation. The glass ceiling beliefs in particular is a new construct and there is much that is not known about how those beliefs influence a woman's coping strategies and how those beliefs impact

her career advancement aspirations. How are they developed? Are they innate (static) or are they shaped over time based on a woman's expectations and experiences (dynamic)? How do they influence a woman's coping strategies when faced with perceived or real glass ceiling barriers? What intervention strategies might women employ that may help her move into management positions or accelerate her career advancement? It is not possible to answer all of these questions in a single study; however, gaining a better understanding of the relationship between glass ceiling beliefs, career advancement satisfaction, and quit intention may help women and organizations through increased awareness. Being aware of the existence of the glass ceiling beliefs and understanding that an individual explanatory style may provide valuable insight into how a woman is likely to react under specific circumstances. In chapter 3, I will discuss the study methodology in detail including the study research design and how data was collected, managed and analyzed.

Chapter 3: Methodology

This chapter includes the research design and rationale for this quantitative cross-sectional study, the methodology for collecting and analyzing the data, threats to validity, how threats were handled to minimize risks, ethical issues, and how those ethical issues were managed.

Research Design and Rationale

Glass ceiling beliefs, women's satisfaction with career advancement, and quit intention were the principle variables assessed in this study. Glass ceiling beliefs were independent variables for all research questions, career advancement satisfaction was either an independent or dependent variable based on the research question, and quit intention was a dependent variable for all research questions. As in Smith, Caputi et al.'s (2012) study on glass ceiling beliefs and career success, the covariates included age, education level, marital status, number of children, and career level. Job category was added as a covariate in this study as Smith, Caputi et al. recommended that future research incorporate this variable because they suspected attitude differences about the glass ceiling may have been influenced by job category (e.g., finance, retail sales, etc.). Based on the literature review, I added organizational tenure. Finally, ethnicity was added because previous studies on the glass ceiling beliefs (e.g., Smith, Crittenden et al., 2012; Smith, Caputi et al., 2012) were conducted in Australia, and I suspected that differences in women's attitude about the glass ceiling may vary in the United States based on ethnicity.

The covariates were coded as follows for data collection purposes:

- Age: 1 = 18-20; 2 = 21-30; 3 = 31-40; 4 = 41-50; 5 = 51-60; 6 = 6 -70; 7 = 70+
- Education Level: 1 = Did Not Attend School; 2 = Primary/Elementary School; 3 = Secondary School; 4 = High School; 5 = Bachelor's Degree; 6 = Master's Degree; 7 = Doctoral Degree
- Marital Status: 1 = Single; 2 = Married; 3 = With Partner
- Number of Children: From 1 = None to 8 = 6 or More Children
    - Age of Youngest Child: 1 = Less Than 2 Years Old; 2 = 2-5; 3 = 6-10; 4 = 11-15; 5 = 15+; 6 = Not Applicable
- Career Level: 1 = Not Currently Employed; 2 = Individual Contributor (No Direct Reports); 3 = Supervisor; 4 = Manager; 5 = Director; 6 = VP; 7 = Executive; 8 = Self-Employed
    - If not currently employed, when did you exit the labor market? 1 = Less Than 1 Year; 2 = 1-5 Years; 3 = More Than 5 Years
- Current Career Level: 1 = Less Than 12 Months; 2 = 1-5 Years; 3 = 6-10 Years; 4 = 11-20 years; 5 = More than 20 Years
- Job Category: 1 = Accounting / Finance to 21 = Other; refer to detailed list below:

    1. Accounting / Finance
    2. Insurance Professional

3. Administrative Support
4. Banking, Real Estate, or Mortgage Professional
5. Construction
6. Customer Service
7. Education
8. Engineer
9. Food Services / Hospitality
10. Human Resources
11. Information Technology
12. Science, Engineering, and Mathematics
13. Legal
14. Manufacturing
15. Marketing
16. Sales
17. Health care
18. Transportation, Distribution, and Logistics
19. Law, Safety, Corrections, and Protective Services
20. Self-Employed
21. Other; if Other, Specify Here: (Free Text)

- Organizational Tenure: 1= Less Than 12 Months; 2 = 1-5 Years; 3 = 6-10 Years; 4 = 11-19 Years; 5 = More Than 20 years

- Ethnicity: 1 = American Indian or Alaskan Native; 2 = Asian or Pacific Islander; 3 = Black or African American; 4 = Hispanic or Latino; 5 = White/Caucasian; 6 = Two or More; 7 = Prefer Not to Answer.

Population, Sampling, and Sampling Procedures

The sampling framework for this study was working women in the public or private sector and women who exited the public or private sector job market within the past 5 years. Purposive sampling was selected for this study because it was not possible to precisely define the probability sample (Frankfort-Nachmias & Nachmias, 2008). To determine the minimum sample size, I started my sample size calculations by using rules of thumb because it was the same method used by Smith, Caputi et al. (2012) in their glass ceiling beliefs and career success study. A number of different rules of thumb are available to determine the minimum number of participants needed for regression analysis (Field, 2009; Green, 1991). As recommended by Green (1991), I selected two rules of thumb because I not only wanted to test the overall model but I also wanted to test the individual predictors. The first rule of thumb, $50 + 8k$, where k represents the number of predictor variables, yielded a minimum sample size of 154. The second rule of thumb, $104 + k$, yielded a minimum sample size of 117, which I increased by 20% to 140 to account for bad data. Next, I wanted to compare these results using power analysis. To accomplish this, I used G*Power, a free power analysis program (Faul, Erdfelder, Buchner, & Lang, 2009). To calculate the sample size using G*Power, I needed to set the alpha level, effect size, and power level (Cohen, 1988, 1992; Green, 1991). I set the alpha level at .05 because it is a “traditional level of significance” (Green, 1991, p. 502). This

assertion was supported by Cohen (1988) and Miles and Shevlin (2001). The power level was set at .80 to minimize the risk of committing a type II error (Cohen, 1988; 1992; Green, 1991), and this power level is appropriate for a broad range of behavioral studies (Cohen, 1988; Green, 1991). Cohen's (1988, 1992) effect size index shows that small, medium, and large effect sizes for f^2 (multiple and multiple partial correlation) are .02, .15, and .35, respectively. I selected the following G*Power test family, statistical test, and type settings: *F*-tests, linear multiple regression, fixed model, R^2 deviation from zero, and A priori options. I then entered Cohen's medium effect size value (.15), alpha level (.05), power level (.80), and the number of predictors (13); the resulting sample size was 131. Cohen (1988) asserted that behavioral science studies typically have a medium effect size and the minimum number of participants using this effect size is 53. VanVoorhis and Morgan (2007) stated that no fewer than 50 participants should be used for a correlation or regression analysis with the number increasing as the number of predictor variables increases. The results from both rule-of-thumb calculations yielded results higher than 50. The power analysis also yielded results higher than 50. My rule-of-thumb results were consistent with Smith, Caputi et al.'s (2012), which indicated a minimum sample size of 122 using the $50 + 8k$ formula. The average number of participants for the glass ceiling studies (see Smith, Caputi et al., 2012; Smith, Crittenden et al., 2012) was 268. For this study, I used a minimum sample size of 154 participants, the highest of the three medium effect results.

Procedures for Recruitment, Participation, and Data Collection

The nonprobability sample was drawn by contacting members of The National Association of Professional Women, individuals from my professional network (Linkedin), and my personal network. Data were collected via Web survey because it offered respondents anonymity, which increased the probability they would participate in the study (Ahern, 2005; Lewis et al., 2009; O'Rourke, 2011).

Instrumentation and Operationalization of Constructs

For this study, I used Smith, Crittenden et al.'s (2012) CPS to measure glass ceilings beliefs. It was the only instrument I could find that was specifically designed to measure these beliefs. The instrument is comprised of four components: denial, resilience, acceptance, and resignation. In two studies that included the instrument (see Smith, Caputi et al., 2012; Smith, Crittenden et al., 2012), each factor attained a Cronbach's alpha of 0.70 or higher. This instrument was used with permission from the author, Dr. Paul Smith (refer to Appendix A). A list of instrument questions by scale appears in Appendix B.

Consistent with previous studies (e.g., Greenhaus, Parasuraman, & Wormley, 1990; Hofmans, Dries, & Pepermans, 2008; Joo & Park, 2010; Smith, Caputi et al., 2012), I used the Career Satisfaction Measure to assess career satisfaction factors. Hofmans et al. (2008) found the instrument had been used in 240 studies. I ran a cursory search on Google Scholar that returned 175 studies citing this instrument. In the instrument's pilot study, Greenhaus et al. yielded an average Cronbach's alpha of 0.88, and subsequent studies Hofmans et al. (2008) yielded 0.74, Joo and Park yielded 0.82,

and Smith, Caputi et al. yielded 0.91. Using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), participants indicated the degree to which they agreed or disagreed with each of the following five items:

1. I am satisfied with the success I have achieved in my career.
2. I am satisfied with the progress I have made toward meeting my overall career goals.
3. I am satisfied with the progress I have made toward meeting my goals for income.
4. I am satisfied with the progress I have made toward meeting my goals for advancement.
5. I am satisfied with the progress I have made toward meeting goals for the development of new skills. (Greenhaus et al., 1990, p. 86)

Quit intention was measured using the Intention to Quit Scale, which is a 3-item measure (Colarelli, 1984). Internal consistency for the instrument was .75 (Colarelli, 1984). Using a 5-point- Likert scale (1 = strongly disagree to 5 = strongly agree), participants indicated the degree to which they agreed or disagreed with each of the following three items:

1. If I have my own way, I will be working for my current employer one year from now (reverse scored).
2. I frequently think of quitting my job.
3. I am planning to search for a new job during the next 12 months (Colarelli, 1984). Refer to Appendix A for Permission Letters.

Threats to Validity

Statistical Conclusion Threats to Validity

A key factor that may have affected my results was sample size (Cohen, 1988; Green, 1991; Miles & Shevlin, 2001). As stated earlier, I calculated sample size using two rules of thumb as well as a power analysis. Based on the results of these calculations, I set the sample size at 154, which was the highest of the three sample size calculations. Therefore, I was confident that the sample size of 154 was appropriate for this study.

According to Cohen, the power of statistical tests depends on significant criterion, reliability of the sample and results, and effect size. The significance criterion is the degree to which it can be proven the phenomenon exists or the risk of erroneously rejecting the null hypothesis (Cohen, 1988). A type I error (also referred to an alpha error) is the risk of rejecting a true null hypothesis, and a type II error (also referred to as a beta error) is the risk of accepting a false null hypothesis (Cohen, 1988). I had to be cautious not to set the alpha level too low to avoid making a type I error but end up making a type II error instead (Cohen, 1988). To mitigate that risk, I set the significance level at .05 (rather than .001) and my power to .80.

Another potential threat to validity was statistical test assumption violations that could make any interpretations derived from the data flawed (Field, 2009; Miles & Shevlin, 2001; Tabachnick & Fidell, 1989). How assumptions were checked and how identified violations, if any, were managed are discussed in the prescreening data analysis plan and data management sections below.

Internal Threats to Validity

Selection bias and representativeness were highlighted as potential risks to generalizability in Chapter 1 because of the snowball recruiting strategy. Every precaution was taken to minimize or avoid these risks on the front-end as recommended by Williams (1978). To mitigate the risks, I used several recruiting strategies such as email and social media. Participation was strictly voluntary, surveys offered anonymity, and participants could stop at any point during the process. The addition of the Qualtrics data collection step further strengthen the study validity. In this case, participants did not come from my personal or professional network but rather from the Qualtrics pool of response panelists, thereby adding an extra layer of anonymous separation between me and the participants. The invitation to participate in the study was made directly by Qualtrics to the response panel members, and 75% of the total responses were obtained using this strategy.

Construct Threats to Validity

The CPS instrument is a relative new instrument used in just a few studies to date (e.g., Mohammadkhani & Gholamzadeh, 2016; Smith, 2012, Crittenden et al., 2012; Smith, Caputi & Crittenden, 2012), therefore, construct validity, defined as "the state where a measuring instrument reflects the concepts and theoretical assumptions of a general theoretical framework" (Frankfort-Nachmias & Nachmias, 2008, p. 517), was a potential threat to validity. To mitigate this risk, clearly operationalized descriptions of each of the variables were outlined (Marczyk, DeMatteo, & Festinger, 2005).

Data Management

Managing Missing Data

If missing data was identified, a critical decision on how to manage the missing data needed to be made. A few of those options were:

- Delete cases or variables: If there were only a few cases of missing data and they were random in nature, it may be appropriate to simply delete the cases or variables (Tabachnick & Fidell, 1989). However, if data was missing across many cases and variables, this approach could lead to a significant loss of data or misrepresentation of the sample (Tabachnick & Fidell, 1989).
- Estimate missing data: Three of the more common approaches that could be used to estimate missing data were: prior knowledge, means, and the regression approach (Tabachnick & Fidell, 1989):
    - The *prior knowledge* approach is when missing values are replaced with values "from a well-educated guess" (p. 64). Given that research on the glass ceiling beliefs is limited and the sample size is not large, 154, I would not have used this option.
    - The *means* approach is when overall mean or group means are calculated and used to replace the missing data prior to analysis. While one advantage of using this approach is that it is considered conservative, one disadvantage of the approach is that the variable correlation is reduced because the "mean is closer to itself than the value it replaces" (Tabachnick & Fidell, 1989, p 64).

- The *Regression approach* is a more complex approach where the independent variables are used to generate a regression equation, which is then used to predict values for the missing instances (Tabachnick & Fidell, 1989, p. 64). This approach is more objective than any guess I could come up with and not as blind as using the mean (Tabachnick & Fidell, 1989). There are several disadvantages to using this approach however, (a) the resulting score may be more be consistent with the values used to predict the missing value than the initial score was, (b) decreased variance because the estimate may be too close to the mean, (c) if the other variables are not good predictors, this method is no better than using the mean, and (d) estimated value must fall within the value for complete cases (Tabachnick & Fidell, 1989).

Managing Outliers, Skew or Kurtosis

There are a number of strategies that could be used to manage outliers (Field, 2009; Miles & Shevlin, 2001; Tabachnick & Fidell, 1989). The first of two strategies that could be used is to check to ensure data was entered correctly (Miles & Shevlin, 2001; Tabachnick & Fidell, 1989). If the data was entered correctly or if the correct value could not be found, deleting the outlier may be a good option (Miles & Shevlin, 2001; Tabachnick & Fidell, 1989) assuming the variable is highly associated with other variables and it is not essential to the analysis (Tabachnick & Fidell, 1989). If it is determined the cases are not part of the intended sample, cases can be deleted. If determined that the cases were part of the intended sample, they can be kept but have to

either be transformed or changed the scores to minimize their influence (Miles & Shevlin, 2001, Tabachnick & Fidell, 1989).

Deciding what strategy to use to manage outliers, skew and kurtosis is "more of an art than a science" and assuming the data was entered correctly, deciding to run the analysis with or without the outliers is "part of the art" (Miles & Shevlin, 2001, p. 80). To avoid making a concession, Miles and Shevlin recommended following Pedhazur and Schmelkin's (1991) suggestion and analyze the data twice. Pedhazur and Schmelkin asserted that although it falls on the researcher to interpret how the outliers may influence the data set and how to manage identified outliers, the researcher owes it to the reader to complete a comprehensive report of the criteria used for the designation of outliers, how they were managed and why. In addition, the analyses report out should include results with and without outliers.

Managing Normality, Linearity, Homoscedasticity and Independence Violations

Like outliers, data transformation is recommended for normality, linearity, and homoscedasticity failures although they are not generally recommended because transformed variables may be more difficult to interpret (Tabachnick & Fidell, 1989, p. 83). Nonetheless, Tabachnick and Fidell, recommended transformation in all situations unless there is compelling reason not to transform. They also highlighted that it is important to verify the variable is normally, or near-normally, distributed after it has been transformed. Further, it may be necessary to transform the variables more than once in order to get the results closest to zero and with the smallest number of outliers. The type of transformation used would depend on the degree to which the variables differ from

normal. For instance, if positively skewed, square root (differs moderately), logarithm (differs substantially), inverse (differs severely); and, if negatively skewed, reflect and square root reflect and logarithm and reflect and inverse transformation approaches to achieve normality (Tabachnick & Fidell, 1989). From a process perspective, screen for the biggest score in the distribution and add one to it to get a constant that is larger than any other score. Next, create a new variable by subtracting each score from the constant. In doing so, any negative skewness is converted to positive skewness prior to transformation (Tabachnick & Fidell, 1989).

Managing Multicollinearity and Singularity

Short of discarding the data or collecting new data that are not practical solutions, there is no easy solution to manage collinearity (Miles & Shevlin, 2001). Other than these two options, variables can be either removed or combined (Miles & Shevlin, 2001; Tabachnick & Fidell, 1989). If this approach is used, principal components analysis (PCA) would be used to streamline the number of independent variables and those independent variables are used in my regression model (Miles & Shevlin, 2001). Finally, if original independent variables are kept, using ridge regression might be considered; however, this is a difficult (Miles & Shevlin, 2001; Tabachnick & Fidell, 1989) and contentious (Tabachnick & Fidell, 1989, p. 130) procedure that is not easily managed within statistical packages and it is difficult to understand, which is why it is rarely used (Miles & Shevlin, 2001).

Managing Independence Violations

There are two scenarios that may lead to the violation of independence – time-series design and cluster sampling design (Miles & Shevlin, 2001). However, given that I did not use either of these two designs, I did not anticipate that the assumption of independence would be violated but it was screened for nonetheless. If on the off chance the assumption had been violated, more advanced statistical technique such as multilevel modeling (MLM) need to be used to manage the violation (Miles & Shevlin, 2001). A detailed discussion of MLM is beyond the scope of this study. However, to summarize, using MLM would have enabled me to retain the information contained in my data but would enable me to analyze the data at an appropriate level, which is important because the relationships at the different levels may not be the same (Miles & Shevlin, 2001). The advantages of using MLM are that (1) I would be clearly identifying the level of the relationship and not generalizing at an inappropriate level, and, (2) power in the higher level units (Miles & Shevlin, 2001).

Data Analysis Plan

This section outlines the descriptive statistical analysis, what statistical techniques were used, how covariates were managed, the pre-analysis data screening steps, and how assumption violations, missing data, and outliers, if any, were managed.

Descriptive Statistic Analysis

- **Frequency distribution analysis**. Calculate percentage distributions in order to compare frequencies (Frankfort – Nachmias & Nachmias, 2008).

  Frequency distribution lists of all possible values for a particular variable, as

well as the frequency that each value appeared in the data set (Marczyk et al., 2005).

- **Measures of central tendency from the frequency analysis.** The primary measure reviewed is the mean. The mean is defined as the summation of all observations divided by the number of observations and because all of the values in the distribution are taken into consideration it can be misleading (Frankfort – Nachmias & Nachmias, 2008). The mode and median values are screened, if appropriate, to evaluate those against mean results. The mode is the observation that appears most frequently in the distribution and the median is midpoint of the distribution (Frankfort – Nachmias & Nachmias, 2008).
- **Variance and standard deviation, measures of dispersion around the central value analysis in order to get a complete understanding of the distribution** (Frankfort-Nachmias & Frankfort, 2008). Dispersion enables us to understand how the values vary in the distribution (Frankfort-Nachmias & Nachmias, 2008; Marczyk et al., 2005).
- **Measures of association**. Correlations analysis examines relationships between variables. In this analysis, *correlation coefficient* (*r*) are assessed to see if there are directional relationships (positive or negative) and, if any, the intensity of those relationship (-1.0 to +1.0) (Marczyk et al., 2005). Correlations were also tested for statistical significance, which was not the case with measures of central tendency and dispersion (Marczyk et al., 2005).

Statistical Analysis Techniques

When conducting statistical analysis, it is critical to consider what the data is telling us and if the statistical technique (e.g., regression analysis) is appropriate for the intended purpose (Miles & Shevlin, 2001). To reiterate the study hypotheses and the statistical test(s) I used for each:

- Multiple regression was used to examine Hypotheses 1 and 2:
  - RQ1: Is there a relationship between a woman's glass ceiling beliefs (independent variables) and her satisfaction with career advancement opportunities (dependent variable)?
    - $H_0$1: There is no relationship between a woman's glass ceiling beliefs and her satisfaction with career advancement opportunities.
    - H_a1: There is a relationship between a woman's glass ceiling beliefs and her satisfaction with career advancement opportunities.
  - RQ2: Is there a relationship between a woman's glass ceiling beliefs (independent variables) and her quit intention (dependent variable)?
    - $H_0$2: There is no relationship between a woman's glass ceiling belief and her quit intention.
    - H_a2: There is a relationship between a woman's glass ceiling belief and her quit intention.

- Pearson Correlational analysis was used to examine Hypothesis 3:
    - RQ3: Is there a relationship between a woman's satisfaction with career advancement opportunities (independent variable) her quit intention (dependent variable)?
        - $H_0$3: There is no relationship between a woman's satisfaction with career advancement opportunities and her quit intention?
        - H_a3: There is a relationship between a woman's satisfaction with career advancement opportunities and her quit intention?
- Multiple regression was used to examine the meditational model for Hypothesis 4:
    - RQ4: Does a woman's satisfaction with career advancement opportunities (independent variable) mediate the relationship between a woman's glass ceiling beliefs and her intention to quit (dependent variables)?
        - $H_0$4: A woman's satisfaction with career advancement opportunities is not a mediator between a woman's glass ceiling beliefs and intention to quit.
        - H_a4: A woman's satisfaction with career advancement opportunities is a mediator between a woman's glass ceiling beliefs and intentions to quit.

Multiple regression takes into account relationships between independent variables and assesses the effect of each independent variable when all other variables are

held constant (Miles & Shevlin, 2001). Given the number of independent variables in this study, multiple regression analysis was ideal for this study.

Assumptions to the standard regression model (Berry, 1993):

1. Independent variables are quantitative or dichotomous and the dependent variables are quantitative, continuous and unbounded and the variables all measured without error.
2. Independent variables have nonzero variance.
3. No perfect multicollinearity.
4. At each set of values for the independent variables the mean value of the error term is zero.
5. Each independent variable is uncorrelated with the error term.
6. The residual variance should be constant for every set of independent variables; this is referred to as homoscedasticity.
7. Error terms of different observations are uncorrelated; lack of autocorrelations.
8. Each set of independent variables is normally distributed.

According to Berry (1993) meeting assumptions 1-7, referred to as *Gauss-Markov* assumptions, leads to several desirable outcomes such as unbiasedness and efficiency and can be used for statistical tests or to construct confidence intervals. When all 8 assumptions are met, the sampling distribution for the estimate for the normal probability distribution is accurately reflected. In regression analysis, the goal is to find the BLUE estimates – BLUE stands for "the *b*est (in the sense of smallest sampling variance) *l*inear

*u*nbiased *e*stimators" (p. 19), which "informs us of a real world association" (p. v). If the estimate is not BLUE, "then the estimate may describe only movement along a plane on a pencil-and-paper graph" (p. v).

Pearson Correlation significance test (*r*) evaluates the degree of linear relationships in the sample (Green & Salkind, 2011). There are two assumptions that must be met: (1) the bivariate variables be normally distributed and (2) the cases are randomly assigned and they are independent (Green & Salkind, 2011).

According to Baron and Kenny (1986) "mediators explain how external physical events take on internal psychological significance" and "[speaks] to how and why such effects occur" (p. 1176). Mackinnon, Fairchild, and Fritz (2007) describe mediation as the "addition of a third variable to this X → Y relation, whereby X causes the mediator, M, and M causes Y, so X → M → Y" (p. 2).

Baron and Kenny outlined the following three regressions to test for mediation:

1. Regressing the mediator on the independent variables;
2. Regressing the dependent variables on the independent variables; and,
3. Regressing the dependent variable on both the independent and mediator variables.

Baron and Kenny asserted that to establish mediation, the following conditions must be met:

1. The independent variable must influence the mediator in the first equation;
2. The independent variable must be shown to influence the dependent variables in the second equation;

3. The mediator must influence the dependent variable in the third equation; and,
4. If conditions 1-3 hold in the expected direction, then the influence of the independent variable on the dependent variable must be less in the third equation than in the second. Perfect mediation will hold if the independent variable has no influence when controlling for the mediator.

Further, using multiple regression to estimate a mediational relationship requires no measurement error in the mediator and that the dependent variable not cause the mediator (Baron & Kenny, 1986). Although Baron and Kenny's causal step model is not without its critics (e.g., Hayes, 2009, MacKinnon et al., 2007), the classic model is the most widely used approach to test for mediation (Hayes, 2009; MacKinnon et al., 2007).

Covariate Analysis

As outlined in Chapter 1, there are a number of demographic covariates, nine, that were included in the analyses as they were considered important to this study. Following Smith, Caputi et al.'s (2012) career success study data analysis methodology, I tested my hypotheses with correlations and regression analyses to understand how they influenced the results.

Pre-Analysis Data Screening Plan

Given that the items in the questionnaire are either categorical or continuous, I did not expect to see too much noise, if any, in the data. If any noise were found with the data (e.g., outliers, skew or kurtosis) I would have been managed accordingly (e.g., remove outlier) prior to analyzing the data results. Ensuring that my data was clean prior to actual data analysis and that all statistical assumptions had been met was a critical step in my

data analysis processes; otherwise, any interpretations I made from data analysis may be flawed (Field, 2009; Miles & Shevlin, 2001; Tabachnick & Fidell, 1989). In the pre-analysis data screening phase data is screened to see if there is missing data, outliers, assumption violations and near-perfect correlations among variables (Field, 2009; Miles & Shevlin, 2001; Tabachnick & Fidell, 1989).

Missing data. Tabachnick and Fidell (1989) asserted when evaluating missing data, patterns of missing data is more critical than the amount of missing data because with patterns of missing data, generalizability of the results is affected (p. 61). Because it is difficult to ascertain how patterns of missing data may affect the results Tabachnick and Fidell (1989) recommended that patterns of missing data be tested (e.g., mean of difference test).

Outliers. Extreme case values of a single variable or a grouping of variables that inordinately influence statistics (Tabachnick & Fidell, 1989). Outliers are a prevalent problem in the social, behavioral, biological, and medical sciences according to Tabachnick and Fidell. Univariate outliers are cases with one extreme variable and multivariate outliers are cases with combination of two or more unusual scores (Tabachnick & Fidell, 1989). Outliers may be a result of incorrect data entry, failure to identify missing value codes that results in the missing value being interpreted as real data, or the outlier not being a member of the intended sample (Tabachnick & Fidell, 1989) and outliers can result in type I and type II errors that then negatively affects generalizability of the results (Tabachnick & Fidell, 1989). Univariate outliers are screened for first statistically (SPSS FREQUENCIES) looking for standardized scores

higher than +/- 3.00 and graphically by reviewing histograms and box plots and possibility even probability plots and/or detrended normal probability plots (Tabachnick & Fidell, 1989). Next, multivariate outliers are assessed. Like univariate outlier screening, there are statistical methods (e.g., Mahalanobis distance and Cook's distance) and graphical methods (e.g., residual plot) that can be used to identify multivariate outliers (Tabachnick & Fidell, 1989). In examining the Mahalanobis distance, cases with $\rho < .0001$ are likely outliers and then it needs to be determined why they are extreme cases (Tabachnick & Fidell, 1989). Cook's distance measures the change in regression produced by not including a case and screens for scores larger than 1.00 as those may be potential outliers (Tabachnick & Fidell, 1989).

Multicollinearity and singularity. Multicollinearity occurs when two or more variables are highly correlated (Field, 2009; Miles & Shevlin, 2001); specifically correlations of .09 or above (Field, 2009; Tabachnick & Fidell, 1989). With singularity, variables are perfectly associated and one of the variables is a combination of one or more of the other variables (Tabachnick & Fidell, 1989). Tabachnick and Fidell caution against including two variables with a bivariate correlation of .70 or more in the same analysis unless factor analysis is being used. Although regression assumes that perfect collinearity is not present and SPSS would stop and produce an error message if it were present (Miles & Shevlin, 2001) there are two SPSS diagnostics tests that could be run to test for these, tolerance and variance inflation factor (VIF), to screen for multicollinearity. Tolerance ranges from 0 to 1 with 0 indicating perfect collinearity and 1 indicating the variable is completely uncorrelated (Miles & Shevlin, 2001). VIF reports

how much the standard error of the variables has been increased because of collinearity and four is frequently used to as an arbitrary cut-off to determine if collinearity has occurred (Miles & Shevlin, 2001).

Normality assumes model residuals are random and normally distributed with mean of zero (Field, 2009). This is an important assumption in regression analysis (Field, 2009) but there is no easy way to test for this assumption because it is not reasonable to test every possible linear combination of variables for normality (Field, 2009; Tabachnick & Fidell, 1989). The assumption can be checked to some extent through normality, linearity, and homoscedasticity of variables or by examining residuals (Tabachnick & Fidell 1989). Regression assumes statistical or graphical methods can be used to screen for normality (Field, 2009; Miles & Shevlin, 2001; Tabachnick & Fidell, 1989). Statistically, there are two components to normality: skewness and kurtosis (Tabachnick & Fidell, 1989). Skewness is associated with the symmetry of the distribution (mean is not centered in the distribution; one tail longer than the other) and kurtosis is associated with the peakedness of the distribution (not enough cases in the tails or too many cases in the tails) (Field, 2009; Miles & Shevlin, 2001; Tabachnick & Fidell, 1989). To check, look for the values of skewness and kurtosis to be zero (Field, 2009; Miles & Shevlin, 2001; Tabachnick & Fidell, 1989). In accordance with Field's (2009) recommendation, both statistical and graphical tests to check for normality in order to determine the degree of non-normality so an informed decision on how best to manage the non-normality can be made. Although histograms are the easiest way to examine for univariate normality, they can be misleading if the sample is small (Miles & Shevlin, 2001). As such, screen

for normality using boxplots because random differences do not have the effect on boxplots as they do on histograms and probability plots are recommended as this approach is a more mathematical approach to check for normality (Miles & Shevlin, 2001). With SPSS, Fisher's technique can be used to assess normality (Miles & Shevlin, 2001). The advantage of using a statistical package is that in addition to getting the values for the skew and kurtosis, the standard errors will also be calculated, which can help me ascertain if the results differ significantly from what would be expected in a normally distributed population (Miles & Shevlin, 2001). If values (signs ignored) are 2x greater than the standard error, then it can conclude that the distribution significantly differs from a normal distribution (Miles & Shevlin, 2001). While screening for multivariate normality is more complicated than screening for univariate normality because now the interest is in the outliers and the shape of "joint distributions", the principles remain the same (Miles & Shevlin, 2001). According to Tabachnick and Fidell (1989) multivariate normality is the assumption that individual variables and all linear permutations are normally distributed. When assumption is met, analysis residuals are normally distributed and independent. (Tabachnick and Fidell, 1989)

Linearity assumes there is a straight-line relationship between two variables (Tabachnick & Fidell, 1989). It is also assumed there is linearity between all variable pairs, as such, significance tests are based on that assumption and, finally, only linear relationships are analyzed and nonlinear relationships are not captured unless they are transformed (Tabachnick & Fidell, 1989).

Homoscedasticity assumes the variables in scores of one variable is approximately equal at all values of the other variable (Tabachnick & Fidell, 1989). Graphically, scatterplots are used to check for homoscedasticity (Miles & Shevlin, 2001; Tabachnick & Fidell, 1989). Statistically, Levene's test option using the *Explore* menu in SPSS when running tests and if the test is significant, $p \leq .05$, the assumption has been violated (Field, 2009). In this case, Field recommended also running the Hartley's F_{Max} test and if F_{Max} is less than 10, the assumption has been met (p. 150).

Independence assumes that for any two variables the residuals will be zero (Field, 2009; Miles & Shevlin, 2001). This is also referred to as lack of autocorrelation (Field, 2009; Miles & Shevlin, 2001). Independence error can be screened for by looking for Durbin-Watson values less than 1 or greater than 3 (Durbin & Watson, 1950), although values close to 2 may also be of concern (Field, 2009, p. 221).

Ethical Procedures

The research proposal was submitted to the Institutional Review Board (IRB) and throughout every phase of the study process, the ethical principles of the Psychologists and Code of Conduct were followed. Given the nature of the study and means of data collection, risk of harm to potential participants was classified as minimal. Potential participants were provided a detailed information sheet containing study details to enable them to make an informed decision as it relates to participation. A link to the Web survey was provided on the information sheet and consent was implied through the completion of the survey. As outlined the Limitations Section of Chapter 1, selection bias and representativeness were potential risks into the study; however, by using multiple

methods of recruiting potential candidates, it was expected that the associated risks would be low. Data were collected via Web survey to ensure anonymity. The resulting dataset will be archived in SPSS, which is stored on a password- protected laptop.

Summary

In this chapter, the study research design, methodology, threats to validity, and ethical procedures were discussed in detail. To recap, this is a cross-sectional, quantitative study assessed the relationships between women's glass ceiling beliefs, career advancement satisfaction, and intention to quit. The chapter highlighted a number of threats to validity and to address these potential risks, multiple recruitment modes were used and clear operational definitions for each construct were outlined. Data was collected via Web survey and data were statistically analyzed using SPSS 24.0 with the Hayes PROCESS v2.16 add-on tool, the results of which are outlined in detail in Chapter 4.

Chapter 4: Results

This chapter outlines the research design for this quantitative cross-sectional study, the methodology used for collecting and analyzing the data, the results of statistical tests, threats to validity, how threats were handled to minimize identified risks, ethical issues, and how those issues were managed.

Procedure

Hypotheses were tested with correlations, stepwise regression analyses, and mediation analyses. Data were analyzed using SPSS 24.0 with the Hayes PROCESS v2.16 add-on tool. The sample size 179. The initial data collection phase was designed to be completed within a 3-month period utilizing four different recruiting strategies. To increase the response rate, I collected data using a Web survey via Survey Monkey because it offered respondents anonymity.

In accordance with the IRB approved recruiting plan, I sent an invitation to the target audience for each of the recruiting sources. In order, the recruiting sources and data collection timeframes were as follows:

1. National Association of Professional Women (NAPW): The NAPW has over 850,000 members nationwide. The survey invitation was posted on chapter activity walls and then sent directly to all contacts in my association contact list (approximately 40). The initial recruitment window was 30 days.
2. My professional LinkedIn network (approximately 1,000 connections): The initial recruitment window was 30 days.

3. My personal network, which included Facebook connections: The initial recruitment window was 2 weeks.
4. Walden Participant Pool: The initial recruitment window was to be 2 weeks.

Once the invitation was posted on each recruiting site, I sent several reminder posts during the recruiting window to the respective target audience in an effort to increase the response rate. By the end of the data collection window for the third recruiting source, 47 of the 154 responses were collected. Of those, three responses were rejected because only demographic data were completed, and one was rejected due to conflict between current career level and when respondent exited the job market. Given the lower than expected response rate, I reassessed the recruiting plan and decided to add a new recruiting step. The new step involved the purchase of a response panel via a new survey provider, Qualtrics. A new provider was needed because the number of questions in the survey (50+) exceeded Survey Monkey's response panel maximum of 25 questions.

Upon receipt of IRB approval for the recruiting plan modification, I developed the new survey and had Qualtrics send the survey to a response panel meeting the survey respondent criteria. I paid a flat fee ($4.75) per response to the panel provider (target was 125 additional respondents). In accordance with the established payment agreement with the panel provider, the panel provider then paid each survey respondent directly upon completion of the survey. Within 2 days, 136 additional surveys were completed, bringing the total number of survey respondents to 179 from a variety of job categories. Data collection ceased at that point. I then combined raw data from both survey sources

into a single data set for analysis. Including the additional time resulting from the modification in the data collection plan, the total data collection phase took approximately 5 months.

Participants

As shown in Table 4.1, an ethnically diverse group of 179 respondents from a wide variety of job categories participated in the study. Of the 179 respondents, 88% were between the ages of 21 and 60, 53.7% were college graduates, 62.5% were married or in a relationship, and 63.7% had children. Of those with children, 20.0% had children under the age of 2, 27% were between ages 2 and 5, 11% were between 6 and 10, 10% were between 11 and 15, and 32% were 15 or older.

Nineteen percent of the respondents were not currently employed, 30.7% were individual contributors (no direct reports), 35.2% were people managers (supervisors, managers, directors, vice president, or executive), and 15.1% were self-employed. Of those who were not currently employed (34), 50% exited the labor market less than 12 months ago and 47.2% exited 1-5 years ago. In addition, 13.4% were in their current (or most recent) career level less than 1 year, 52.5% were 2-5 years, 19.6% were 6-10 years, 7.3% were 11-20 years, and 7.3% were more than 20 years. Demographic data indicated that 25.7% had less than 1 year of service, 37.4% had 1-5 years, 16.2% had 6-10 years, 7.8% had 11-19 years, and 12.8% had 20 or more years of service.

Table 4.1

Respondent Descriptive Statistics (N = 179)

	Minimum	Maximum	Mean	Std. Deviation
Age	1	7	3.16	1.393
Ethnicity	1	6	4.46	1.018
Highest Education Level Completed	1	7	4.70	.891
Marital Status	1	3	1.74	.654
Number of Children	1	8	2.36	1.421
Age of Youngest Child	1	6	4.13	1.891
Current Career Level	1	8	3.49	2.352
Number of Years at Current (or Last) Career Level	1	5	2.42	1.049
Job Category	1	21	11.42	6.392
Organizational Tenure	1	5	2.45	1.303
Valid N (listwise)				

Glass Ceiling Beliefs

Smith, Crittenden et al.'s (2012) CPS was used to measure glass ceiling beliefs. In this study the Cronbach's alphas were satisfactory: 0.77 (denial scale), 0.83 (resignation scale), 0.89 (resilience scale), and 0.73 (acceptance scale). Women were asked to rate their level of agreement with 38 statements on a scale from 1 (strongly disagree) to 7 (strongly agree) with seven items reverse scored (Smith, Crittenden et al., 2012). Following Smith, Caputi et al. (2012) process, to obtain individual factor scores I used the mean score of the relevant items to calculate a scale composite score for each factor for analysis purposes.

Career Satisfaction

I used Greenhaus et al.'s (1990) Career Satisfaction Measure to assess career satisfaction. Using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree),

participants indicated the degree to which they agreed or disagreed with five scale items. I also calculated an overall career satisfaction composite score. The Cronbach's alpha was satisfactory at 0.92.

Quit Intention

I used Colarelli's (1984) Intention to Quit Scale (3-item measure) to measure quit intention. Participants' ranged from 1 (strongly disagree) to 5 (strongly agree) (Colarelli, 1984). The Cronbach's alpha was satisfactory at 0.70.

Data Analysis and Results

Research Question 1

At the onset of the study, the goal was to determine whether there were relationships between women's glass ceiling beliefs (independent variables) and satisfaction with career advancement opportunities. However, I included all of the career satisfaction factors (6 including the composite overall career satisfaction score) in the initial correlation analysis because the data were available to determine whether there were other career satisfaction factor relationships that should be explored further as part of this study or perhaps future studies. Figure 4.1 shows the model of RQ1.

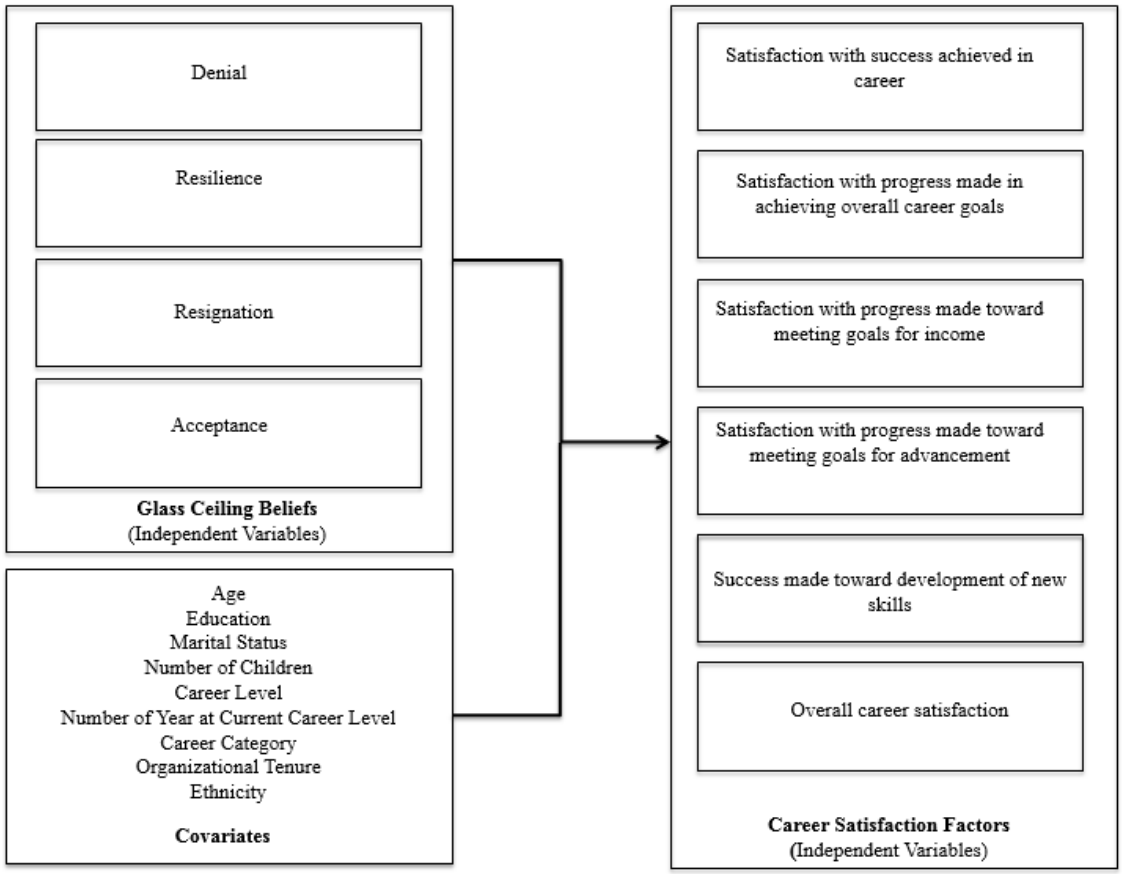

Figure 4.1. Research Model for Study Question 1

Research Question 1 Correlation Results

Results showed there were statistically significant positive relationships between satisfaction with success achieved in career and the denial glass ceiling belief, $r = .21$, p (two-tailed) $< .01$; resignation glass ceiling belief, $r = .16$, p (two-tailed) $< .05$; resilience glass ceiling belief, $r = .38$, p (two-tailed) $< .01$; and, acceptance glass ceiling belief, $r = .16$, p (two-tailed) $< .05$. There were statistically significant positive relationships between satisfaction with overall career goals and the denial glass ceiling belief, $r = .21$, p (two-tailed) $< .01$; resilience glass ceiling belief, $r = .31$, p (two-tailed) $< .01$; and, acceptance glass ceiling belief, $r = .19$, p (two-tailed) $< .05$. There were statistically

significant positive relationships between satisfaction made toward meeting goals for income and the denial glass ceiling belief, $r = .29$, p (two-tailed) $< .01$; resilience glass ceiling belief, $r = .26$, p (two-tailed) $< .01$; and, acceptance glass ceiling belief, $r = .23$, p (two-tailed) $< .01$. Statistically significant positive relationships were found between satisfaction with meeting goals for advancement and denial glass ceiling belief, $r = .24$, p (two-tailed) $< .01$; resignation glass ceiling belief, $r = .16$, p (two-tailed) $< .05$; resilience glass ceiling belief, $r = .30$, p (two-tailed) $< .01$; and, acceptance glass ceiling, $r = .22$, p (two-tailed) $< .01$. There were statistically significant positive relationships between satisfaction made toward meeting goals for development of new skills and resignation glass ceiling belief, $r = .16$, p (two-tailed) $< .05$ and resilience glass ceiling belief, $r = .41$, p (two-tailed) $< .01$. Finally, there were statistically significant positive relationships between overall career satisfaction and the denial glass ceiling belief, $r = .25$, p (two-tailed) $< .01$; resignation glass ceiling belief, $r = .17$, p (two-tailed) $< .05$; resilience glass ceiling belief, $r = .38$, p (two-tailed) $< .01$; and, acceptance glass ceiling belief, $r = .21$, p (two-tailed) $< .01$. Table 4.2 shows results for RQ1 correlation tests.

Table 4.2

Correlation Analysis – Career Satisfaction Factors and Glass Ceiling Beliefs

		Denial	Resignation	Resilience	Acceptance
Satisfied with the success achieved in career	Pearson Correlation	0.213**	0.162*	0.376**	0.164*
	Sig. (2-tailed)	0.004	0.031	0.000	0.029
I am satisfied with the progress I have made toward meeting my overall career goals	Pearson Correlation	0.211**	0.145	0.309**	0.192*
	Sig. (2-tailed)	0.004	0.053	0.000	0.010
I am satisfied with the progress I have made toard meeting my goals for income	Pearson Correlation	0.294**	0.109	0.255**	0.230**
	Sig. (2-tailed)	0.000	0.146	0.001	0.002
I am satisfied with the progress I have made toward meeting my goals for advancement	Pearson Correlation	0.237**	0.162*	0.298**	0.216**
	Sig. (2-tailed)	0.001	0.030	0.000	0.004
I am satisfied with the progress I have made toward meeting my goals for the development of new skills	Pearson Correlation	0.086	0.159*	0.412**	0.077
	Sig. (2-tailed)	0.255	0.033	0.000	0.303
Overall Career Satisfaction	Pearson Correlation	0.245**	0.168*	0.376**	0.206**
	Sig. (2-tailed)	0.001	0.024	0.000	0.006

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Based on the results of the correlations analysis for RQ1, the null hypothesis was rejected as relationships were found between all four glass ceiling beliefs and satisfaction with career advancement. Analyses also showed positive relationships between glass ceiling beliefs and the other career satisfaction factors, so I included them in all subsequent tests and referred to them collectively as the career satisfaction factors.

Research Question 1 Stepwise Regression Results

Satisfaction with success achieved in career (Q5.1). For resilience, because the *t*-test statistic equaled 5.531 with a *p*-value < 0.001, I rejected the null hypothesis at $\alpha = 0.05$ level of significance and concluded that resilience belief was a significant predictor of satisfaction with success achieved in career. The unstandardized (B) coefficient was 0.466, which meant that for every one unit increase in resilience composite score, the model predicted satisfaction with success achieved in career would increase by 0.466

points on average and hold all other variables constant. For denial, because the *t*-test statistic equaled 3.230 with a *p*-value = 0.001, I rejected the null hypothesis at $\alpha = 0.05$ level of significance and concluded that denial belief was a significant predictor of satisfaction with success achieved in career. The B coefficient was 0.245, which meant that for every one unit increase in denial composite score, the model predicted satisfaction with success achieved in career would increase by 0.245 points on average and hold all other variables constant. For number of children, because the *t*-test statistic equaled 2.954 with a *p*-value = 0.004, I concluded that number of children was a significant predictor of satisfaction with success achieved in career. The B coefficient was 0.098, which meant that for every one unit increase in the number of children score, the model predicted satisfaction with success achieved in career would increase by 0.098 points on average and hold all other variables constant. For information technology (IT) job category, because the *t*-test statistic equaled 2.222 with a *p*-value = 0.028, I concluded that IT job category was a significant predictor of satisfaction with success achieved in career. The B coefficient was 0.886, which meant that for every one unit increase in the IT job category score, the model predicted satisfaction with success achieved in career would increase by 0.886 on average points and hold all other variables constant. For accounting/finance job category, because the *t*-test statistic equaled 2.194 with a *p*-value = 0.030, I concluded that accounting/finance job category was a significant predictor of satisfaction with success achieved in career. The B coefficient was 0.688, which meant that for every one unit increase in the accounting/finance job category score, the model predicted satisfaction with success achieved in career would increase by 0.688 points on

average and hold all other variables constant. Because the *p*-value for resilience was less than denial, number of children, and IT and accounting/finance job categories, it was the stronger predictor. Denial was the next strongest predictor. The regression model with all five predictors produced $F(5, 173) = 12.33$, $p < .0001$ with $R^2 = .263$ and Adjusted $R^2 = .241$.

Satisfaction with progress made toward meeting overall career goals (Q5.2). For resilience, because the *t*-test statistic equaled 4.219 with a *p*-value < 0.001, I rejected the null hypothesis at $\alpha = 0.05$ level of significance and concluded that resilience belief was a significant predictor of satisfaction with success made toward meeting overall career goals. The B coefficient was 0.373, which meant that for every one unit increase in resilience composite score, the model predicted satisfaction with progress made toward meeting overall career goals would increase by 0.373 points on average and hold all other variables constant. For denial, because the *t*-test statistic equaled 2.922 with a *p*-value = 0.004, I rejected the null hypothesis at $\alpha = 0.05$ level of significance and concluded that denial belief was a significant predictor of satisfaction with success made toward meeting overall career goals. The B coefficient was 0.236, which meant that for every one unit increase in denial composite score, the model predicted satisfaction with progress made toward meeting overall career goals would increase by 0.236 points on average and hold all other variables constant. For number of children, because the *t*-test statistic equaled 2.140 with a *p*-value = 0.034, I concluded that number of children was a significant predictor of satisfaction with success made toward meeting overall career goals. The B coefficient was 0.076, which meant that for every one unit increase in number of children

score, the model predicted satisfaction with progress made toward meeting overall career goals would increase by 0.076 points on average and hold all other variables constant. Because the *p*-value for resilience was less than denial and number of children it was the stronger predictor. Denial was a stronger predictor than number of children. The regression model with all three predictors produced $F(3, 175) = 11.32$, $p < .0001$ with $R^2 = .163$ and Adjusted $R^2 = .148$.

I am satisfied with the progress I have made toward meeting my goals for income (Q5.3). For denial, because the *t*-test statistic equaled 4.522 with a *p*-value <0.001, I rejected null hypothesis at $\alpha = 0.05$ level of significance and concluded that denial belief was a significant predictor of satisfaction with success made toward meeting goals for income. The B coefficient was 0.398, which meant that for every one unit increase in denial composite score, the model predicted satisfaction with progress made toward goals for income would increase by 0.398 points on average and hold all other variables constant. For resilience, because the *t*-test statistic equaled 3.506 with a *p*-value = 0.001, I rejected the null hypothesis at $\alpha = 0.05$ level of significance and concluded that resilience belief was a significant predictor of satisfaction with success made toward meeting goals for income. The B coefficient was 0.337, which meant that for every one unit increase in resilience composite score, the model predicted satisfaction with progress made toward goals for income would increase by 0.337 points on average and hold all other variables constant. For manager career level, because the *t*-test statistic equaled 2.642 with a *p*-value = 0.009, I concluded that manager career level was a significant predictor of satisfaction with success made toward meeting goals for income. The B

coefficient was 0.498, which meant that for every one unit increase in manager job category score, the model predicted satisfaction with progress made toward goals for income would increase by 0.498 points on average and hold all other variables constant. Because the *p*-value for denial was less than resilience and manager career level, it was the stronger predictor. Resilience was a stronger predictor than manager career level. The regression model with all three predictors produced $F(3, 175) = 13.17$, $p < .001$ with $R^2 = .184$ and Adjusted $R^2 = .170$.

I am satisfied with the progress I have made toward meeting my goals for advancement (Q5.4). For resilience, because the *t*-test statistic equaled 4.316 with a *p*-value <0.001, I rejected the null hypothesis at $\alpha = 0.05$ level of significance and concluded that resilience belief was a significant predictor of satisfaction with success made toward meeting goals for career advancement. The B coefficient was 0.362, which meant that for every one unit increase in resilience composite score, the model predicted satisfaction with progress made toward career advancement would increase by 0.362 points on average and hold all other variables constant. For denial, because the *t*-test statistic equaled 2.626 with a *p*-value = .009, I rejected the null hypothesis at $\alpha = 0.05$ level of significance and concluded that denial belief was a significant predictor of satisfaction with success made toward meeting goals for career advancement. The B coefficient was 0.212, which meant that for every one unit increase in denial composite score, the model predicted satisfaction with progress made toward career advancement would increase by 0.212 points on average and hold all other variables constant. For acceptance, since the *t*-test statistic equaled 2.127 with a *p*-value = 0.035, I rejected the

null hypothesis at $\alpha = 0.05$ level of significance and concluded that acceptance belief was a significant predictor of satisfaction with success made toward meeting goals for career advancement. The B coefficient was 0.171, which meant that for every one unit increase in acceptance composite score, the model predicted satisfaction with progress made toward career advancement would increase by 0.171 points on average and hold all other variables constant. Because the *p*-value for resilience was less than denial and acceptance beliefs, it was the stronger predictor. Denial was a stronger predictor than acceptance. The regression model with all three predictors produced $F(3, 175) = 11.72$, $p < .001$ with $R^2 = .167$ and Adjusted $R^2 = .153$.

I am satisfied with the progress I have made toward meeting my goals for the development of new skills (Q5.5). For resilience, because the *t*-test statistic equaled 5.813 with a *p*-value <0.001, I rejected the null hypothesis at $\alpha = 0.05$ level of significance and concluded that resilience belief was a significant predictor of satisfaction with success made toward meeting goals for development of new skills. The B coefficient was 0.442, which meant that for every one unit increase in resilience composite score, the model predicted satisfaction with progress made toward goals for development of new skills would increase by 0.442 points on average and hold all other variables constant. For number of children, because the *t*-test statistic equaled 2.146 with a *p*-value = 0.033, I concluded that number of children was a significant predictor of satisfaction with success made toward meeting goals for development of new skills. The B coefficient was 0.065, which means that for every one unit increase in number of children score, the model predicted satisfaction with progress made toward goals for development of new skills

would increase by 0.065 points on average and hold all other variables constant. Because the *p*-value for resilience was less than number of children, it was the stronger predictor. The regression model with both predictors produced $F(2, 176) = 20.78$, $p < .001$ with $R^2 = .191$ and Adjusted $R^2 = .182$.

Overall career satisfaction (Q5 Composite). For resilience, because the *t*-test statistic equaled 5.444 with a *p*-value < 0.001, I rejected the null hypothesis at $\alpha = 0.05$ level of significance and concluded that resilience belief was a significant predictor of overall career satisfaction. The B coefficient was 0.395, which meant that for every one unit increase in resilience composite score, the model predicted overall career satisfaction score would increase by 0.395 points on average and hold all other variables constant. For denial, since the *t*-test statistic equaled 3.887 with a *p*-value < 0.001, I rejected the null hypothesis at $\alpha = 0.05$ level of significance and concluded that denial belief was a significant predictor of overall career satisfaction. The B coefficient was 0.259, which meant that for every one unit increase in denial composite score, the model predicted overall career satisfaction score would increase by 0.259 points on average and hold all other variables constant. For manager career level, since the *t*-test statistic equaled 2.354 with a *p*-value = 0.20, I concluded that manager career level was a significant predictor of overall career satisfaction. The B coefficient was 0.336, which meant that for every one unit increase in manager career level score, the model predicted overall career satisfaction score would increase by 0.336 points on average and hold all other variables constant. Because the *p*-value for resilience is less than denial and manager career level it was the stronger predictor. Denial was a stronger predictor than manager career level.

The regression model with all three predictors produced $F(3, 175) = 17.07$, $p < .001$ with $R^2 = .226$ and Adjusted $R^2 = .213$. Table 4.3 shows detailed results.

Table 4.3

Stepwise Regression Analysis - Glass Ceiling Beliefs, Covariates, and Career Satisfaction Factors

Career Satisfaction Factor (DV)	Model	Variables	B	t	Sig	R^2	Adj. R^2
I am satisfied with the success I have achieved in my career	1	Resilience Comp	0.466	5.531	0.000	0.142	0.137
	2	Resilience Comp, Denial Comp	0.245	3.230	0.010	0.188	0.178
	3	Resilience Comp, Denial Comp, Number of Children	0.098	2.954	0.004	0.223	0.209
	4	Resilience Comp, Denial Comp, Number of Children, IT_Ind	0.886	2.222	0.028	0.242	0.225
	5	Resilience Comp, Denial Comp, Number of Children, IT_Ind, AcctFin_Ind	0.688	2.194	0.030	0.263	0.241
		$F(5,173)$ 12.328, $p = <.001$					
I am satisfied with the progress I have made toward meeting my overall career goals	1	Resilience Comp	0.373	4.219	0.000	0.095	0.090
	2	Resilience Comp, Denial Comp	0.236	2.922	0.004	0.141	0.131
	3	Resilience Comp, Denial Comp, and Number of Children	0.076	2.140	0.034	0.163	0.148
		$F(3,175)$ 11.320, $p = <.001$					
I am satisfied with the progress I have made toard meeting my goals for income	1	Denial Comp	0.398	4.522	0.000	0.086	0.081
	2	Denial Comp, Resilience Comp	0.337	3.506	0.001	0.152	0.142
	3	Denial Comp, Resilience Comp, Mgr_Ind	0.498	2.642	0.009	0.184	0.170
		$F(3,175)$ 13.172, $p = <.001$					
I am satisfied with the progress I have made toward meeting my goals for advancement	1	Resilience Comp	0.362	4.316	0.000	0.089	0.084
	2	Resilience Comp, Denial Comp	0.212	2.626	0.009	0.146	0.136
	3	Resilience Comp, Denial Comp, Acceptance Comp	0.171	2.127	0.035	0.167	0.153
		$F(3,175)$ 11.720, $p = <.001$					
I am satisfied with the progress I have made toward meeting my goals for the development of new skills	1	Resilience Comp	0.442	5.813	0.000	0.170	0.165
	2	Resilience Comp, Number of Children	0.065	2.146	0.033	0.191	0.182
		$F(2,176)$ 20.776 $p = <.001$					
Overall Career Satisfaction	1	Resilience Comp	0.395	5.444	0.000	0.141	0.136
	2	Resilience Comp, Denial Comp	0.259	3.887	0.000	0.202	0.193
	3	Resilience Comp, Denial Comp, Mgr_Ind	0.336	2.354	0.020	0.228	0.213
		$F(3,175)$ 17.070 $p = <.001$					

Research Question 2

Examine if there are relationships between glass ceiling beliefs (independent variables) and quit intention (dependent variables). Figure 4.2 shows research model for RQ2.

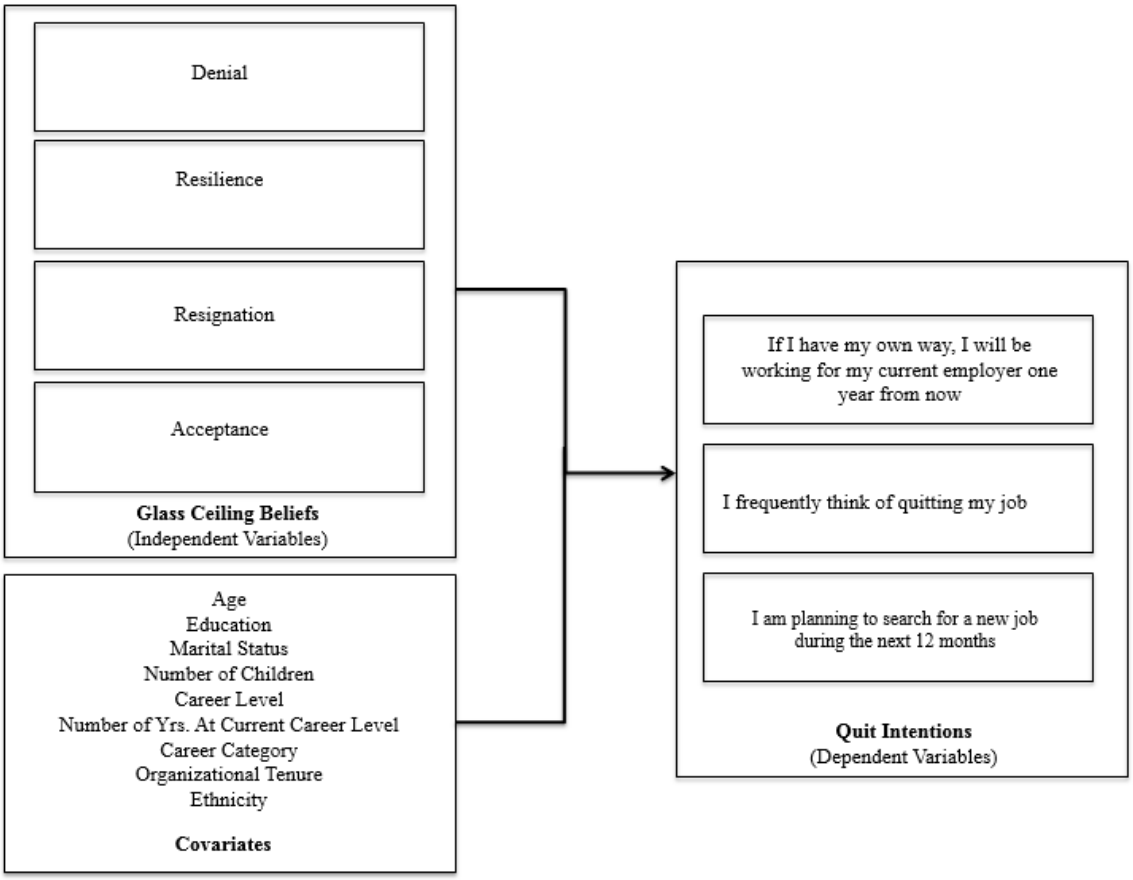

Figure 4.2. Research Model for Study Question 2

Research Question 2 Correlation Results

There was a statistically significant negative relationship between the resignation and resilience glass ceiling beliefs and if I have my own way, I will be working for my current employer a year from now, r = -.23, p (two-tailed) < .01 and r = -.28, p (two-tailed) < .01; respectively. There was a statistically significant positive relationship between resignation glass ceiling belief and I frequently think of quitting and I plan on searching for a new job within the next 12 months, r = -.18, p (two-tailed) < .05 and r = -.23, p (two-tailed) < .01; respectively. Table 4.4 shows detailed results.

Table 4.4

Correlations Analysis Glass Ceiling Beliefs and Quit Intentions

		Denial	Resignation	Resilience	Acceptance
If I have my own way, I will be working for my current employer one year from now	Pearson Correlation	-0.121	-0.226**	-0.277**	-0.137
	Sig. (2-tailed)	0.106	0.002	0.000	0.067
I frequently think of quitting my job	Pearson Correlation	-0.031	0.181*	-0.002	0.130
	Sig. (2-tailed)	0.676	0.015	0.983	0.083
I am planning to search for a new job during the next 12 months	Pearson Correlation	-0.098	.230**	0.045	0.059
	Sig. (2-tailed)	0.191	0.002	0.554	0.434

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Research Question 2 Stepwise Regression Results

If I have my own way, I will be working for my current employer one year from now (Q6.1). For resilience, because the *t*-test statistic equaled -4.082 with a *p*-value <0.0001, I rejected the null hypothesis at $\alpha = 0.05$ level of significance and concluded that resilience belief was a significant predictor of if I have my own way, I will be working for my current employer one year from now. The B coefficient was -0.408, which meant that for every one unit increase in resilience composite score, the model predicted if I have my own way, I will be working for my current employer one year from now score would decrease by 0.408 points on average and hold all other variables constant. For Hispanic, because the *t*-test statistic equaled 2.387 with a *p*-value = 0.018, I concluded that Hispanic was a significant predictor of if I have my own way, I will be working for my current employer one year from now. The B coefficient was 0.718, which meant that for Hispanic women, the if I have my own way, I will be working for my current employer one year from now score would increase by 0.718 points on average and hold all other variables constant. For health care job category, since the *t*-test statistic equaled 2.245 with a *p*-value = 0.026, I concluded that health care job category was a

significant predictor of if I have my own way, I will be working for my current employer one year from now. The B coefficient is 0.715, which meant that for every one unit increase in health care score, the model predicted the if I have my own way, I will be working for my current employer one year from now score would increase by 0.715 points on average and hold all other variables constant. Because the *p*-value for resilience was less than Hispanic and health care job category, it was the stronger predictor. Hispanic was a stronger predictor than health care job category. The regression model with three predictors produced $F(3, 175) = 8.58$, $p < .001$ with $R^2 = .128$ and Adjusted $R^2 = .113$.

I frequently think of quitting my job (Q6.2). For resignation, because the *t*-test statistic equaled 2.746 with a *p*-value= 0.007, I rejected the null hypothesis at $\alpha = 0.05$ level of significance and concluded that resignation was significant predictor of I frequently think of quitting my job. The B coefficient was 0.239, which meant that for every one unit increase in resignation score, the model predicted I frequently think of quitting my job score would increase by 0.239 points on average and hold all other variables constant. For high school graduate, because the *t*-test statistic equaled 2.840 with a *p*-value= 0.005, I concluded that being a high school graduate was a significant predictor of I frequently think of quitting my job. The B coefficient was 0.545, which meant that for every one unit increase in high school graduate score, the model predicted I frequently think of quitting my job score would increase by 0.545 points on average and hold all other variables constant. For number of years at current career level, because the *t*-test statistic equaled 2.441 with a *p*-value= 0.016, I concluded that number of years at

current career was a significant predictor of I frequently think of quitting my job. The B coefficient was 0.226, which meant that for every one unit increase in number of years in current career level score, the model predicted I frequently think of quitting my job score would increase by 0.226 points on average and hold all other variables constant. For accounting/finance job category, because the *t*-test statistic equaled -2.185 with a *p*-value= 0.030, I concluded that accounting/finance job category was a significant predictor of I frequently think of quitting my job score. The B coefficient was -0.817, which meant that for every one unit increase in accounting/finance job category score, the model predicted I frequently think of quitting my job score would decrease by 0.817 points on average and hold all other variables constant. For IT job category, because the *t*-test statistic equaled -2.023 with a *p*-value = 0.045, I concluded that IT job category was a significant predictor of I frequently think of quitting my job score. The B coefficient was -0.992, which meant that for every one unit increase in IT job category score, the model predicted I frequently think of quitting my job score would decrease by 0.992 points on average and hold all other variables constant. Because the *p*-value for resignation was less than high school graduate, number of years at current career level and accounting/finance and IT job categories, it was the stronger predictor. The regression model with all five predictors produced $F(5, 173) = 5.19$, $p < .001$ with $R^2 = .130$ and Adjusted $R^2 = .105$.

I am planning to search for a new job during the next 12 months (Q6.3)

For resignation, because the *t*-test statistic equaled 3.097 with a *p*-value= 0.002, I rejected the null hypothesis at $\alpha = 0.05$ level of significance and concluded that

resignation belief was a significant predictor of I am planning on searching for a new job during the next 12 months. The B coefficient was 0.297, which meant that for every one unit increase in resignation composite score, the model predicted I am planning on searching for a new job during the next 12 months score would increase by 0.297 points on average and hold all other variables constant. For health care job category, since the *t*-test statistic equaled 2.052 with a *p*-value= 0.042, I concluded that health care job category was a significant predictor of I am planning on searching for a new job during the next 12 months. The B coefficient was 0.729, which meant that for every one unit increase in health care job category score, the model predicted I am planning on searching for a new job during the next 12 months score would increase by 0.729 points on average and hold all other variables constant. Because the *p*-value for resignation was less than health care job category, it was the stronger predictor. The regression model with both predictors produced $F(2, 176) = 7.16$, p = .001 with $R^2 = .075$ and Adjusted $^2 R$ = .065. Table 4.5 shows detailed results.

Table 4.5

Stepwise Regression Analysis - Glass Ceiling Beliefs, Covariates, and Quit Intentions

Quit Intentions (DV)	Model	Predictor Variables	B	t	Sig	R^2	Adj. R^2
If I have my own way, I will be working for my current employer one year from now	1	Resilience Comp	-0.408	-4.082	0.000	0.077	0.072
	2	Resilience Comp, Hispanic_Ind	0.718	2.387	0.018	0.103	0.093
	3	Resilience Comp, Hispanic_Ind, Healthcare_ind	0.715	2.245	0.026	0.128	0.113
		$F(3, 175)= 8.578$, $p = <.001$					
I frequently think of quitting my job	1	Resignation Comp	0.239	2.746	0.007	0.033	0.027
	2	Resignation Comp, HS Grad	0.545	2.840	0.005	0.062	0.052
	3	Resignation Comp, HS Grad, Number of Years at Current (or Last Career Level)	0.226	2.441	0.016	0.087	0.072
	4	Resignation Comp, HS Grad, Number of Years at Current (or Last Career Level), AcctFin_ind	-0.817	-2.185	0.030	0.110	0.089
	5	Resignation Comp, HS Grad, Number of Years at Current (or Last Career Level), AcctFin_ind IT_Ind	-0.992	-2.023	0.045	0.130	0.105
		$F(3, 175)= 5.191$, $p = <.001$					
I am planning to search for a new job during the next 12 months	1	Resignation Comp	0.297	3.097	0.002	0.053	0.048
	2	Resignation Comp, Health_Ind	0.729	2.052	0.042	0.075	0.065
		$F(2,176)= 7.155$, $p = .001$					

Research Question 3

Correlation analysis was conducted to examine relationship between career satisfaction factors (independent variables) and a woman's quit intention (dependent variables). Figure 4.3 shows research model for RQ3.

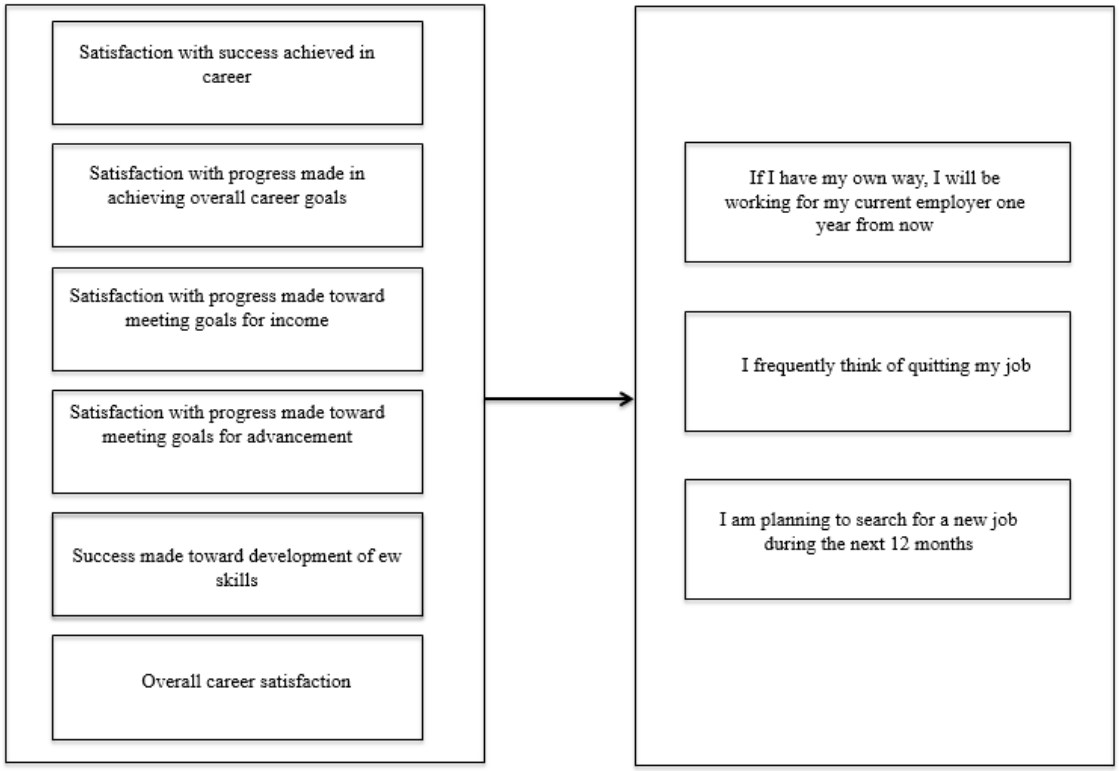

Figure 4.3. Research Model for Study Question 3

Research Question 3 Correlation Results

There was a statistically significant negative relationship between satisfaction with success achieved in career and all three quit intention items; specifically, r = -.45, p (two-tailed) < .01 (If I have my own way, I will be working for my current employer one year from now), r = -.23, p (two-tailed) <.01 (I frequently think of quitting my job), and r

= -.29, *p* (two-tailed) <.01 (I am planning to search for a new job during the next 12 months). There was a statistically significant negative relationship between satisfaction with progress made toward meeting overall career goals and all three quit intention items; specifically, *r* = -.36, *p* (two-tailed) < .01 (If I have my own way, I will be working for my current employer one year from now), *r* = -.22, *p* (two-tailed) <.01 (I frequently think of quitting my job), and *r* = -.27, *p* (two-tailed) <.01 (I am planning to search for a new job during the next 12 months). There was a statistically significant negative relationship between satisfaction with progress made toward meeting goals for income and if I have my own way, I will be working for my current employer one year from now, *r* = -.33, *p* (two-tailed) < .01 and I am planning on searching for a new job during the next 12 months, *r* = -.24, *p* (two-tailed) <.01). There was a statistically significant negative relationship between career advancement satisfaction factors and all three quit intention items; specifically, *r* = -.41, *p* (two-tailed) < .01 (If I have my own way, I will be working for my current employer one year from now), *r* = -.22, *p* (two-tailed) <.01 (I frequently think of quitting my job), and *r* = -.26, *p* (two-tailed) <.01 (I am planning to search for a new job during the next 12 months). There was a statistically significant negative relationship between satisfaction made toward progress made toward goals for development of new skills and all three quit intention items; specifically, *r* = -.30, *p* (two-tailed) < .01 (If I have my own way, I will be working for my current employer one year from now), *r* = -.23, *p* (two-tailed) <.01 (I frequently think of quitting my job), and *r* = -.16, *p* (two-tailed) <.05 (I am planning to search for a new job during the next 12 months). There was a statistically significant negative relationship between overall career

satisfaction and all three quit intention items; specifically, r = -.43, p (two-tailed) < .01 (If I have my own way, I will be working for my current employer one year from now), r = -.23, p (two-tailed) <.01 (I frequently think of quitting my job), and r = -.28, p (two-tailed) <.01 (I am planning to search for a new job during the next 12 months). Table 4.6 shows detailed results.

Table 4.6

Correlation Analysis - Career Advancement Satisfaction and Quit Intentions

		If I have my own way, I will be working for my current employer one year from now	I frequently think of quitting my job	I am planning to search for a new job during the next 12 months
Satisfied with the success achieved in career	Pearson Correlation	-.452**	-.232**	-.292**
	Sig. (2-tailed)	0.000	0.002	0.000
Satisfied with the progress made toward meeting overall career goals	Pearson Correlation	-.356**	-.218**	-.266**
	Sig. (2-tailed)	0.000	0.003	0.000
Satisfied with the progress made toward meeting goals for income	Pearson Correlation	-.328**	-0.128	-.239**
	Sig. (2-tailed)	0.000	0.087	0.001
Satisfied with progress made toward meeting goals for advancement	Pearson Correlation	-.411**	-.215**	-.263**
	Sig. (2-tailed)	0.000	0.004	0.000
Satisfied with progress made toward meeting goals for the development of new skills	Pearson Correlation	-.301**	-.231**	-.158*
	Sig. (2-tailed)	0.000	0.002	0.034
Overall Career Satisfaction	Pearson Correlation	-.426**	-.233**	-.283**
	Sig. (2-tailed)	0.000	0.002	0.000

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Research Question 4

Mediation tests, utilizing Hayes PROCESS add-on tool and SPSS (Bootstrap, 10,000, 95%), were conducted to assess hypothesis that career advancement satisfaction mediates the effect of glass ceiling beliefs on quit intention. Figure 4.4 shows research model for RQ4.

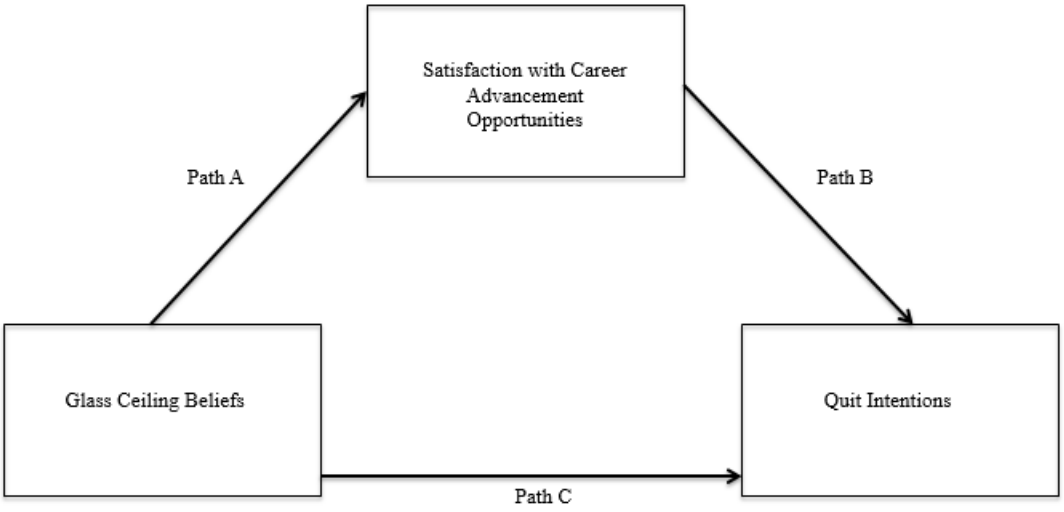

Figure 4.4. Research Model for Study Question 4

Research Question 4 Mediation Results

Mediation results indicated there was a significant indirect effect of denial, resilience, and acceptance glass ceiling beliefs on if I have my own way, I will be working for my current employer one year from now through career advancement satisfaction, ab = -0.1233, CI [-0.2166, -0.0387], ab = -0.1504, CI [-0.2462, -0.0648], and ab = -0.1099, CI [-0.1961, -0.0366]; respectively. Tables 7 and 8 show detailed results.

Table 4.7

Regression Summaries for Mediating Effect of Career Advancement Satisfaction on the Relationship between Glass Ceiling Beliefs and If I Have My Own way, I Will be Working for my Current Employer One Year from Now (6.1)

Model	B	SE_B	*t*	*p*	LLCI	ULCI
Mediator (M) on IV						
Mediator (Denial Path a)	0.2641	0.0871	3.0315	0.0028	0.0922	0.4360
Mediator (Resignation Path a)	0.1696	0.0863	1.9646	0.0510	-0.0008	0.3309
Mediator (Resiience Path a)	0.3622	0.1012	3.5808	0.0004	0.1626	0.5618
Mediator (Acceptance Path a)	0.2383	0.0796	2.9929	0.0032	0.0812	0.3954
DV on IV and Mediator						
IV (Denial Path c)	-0.1553	0.1003	-1.5492	0.1231	-0.3532	0.0425
IV (Resignation Path c)	-0.2727	0.0832	-3.2783	0.0013	-0.4369	-0.1086
IV (Resilience Path c)	-0.3884	0.1052	-3.6925	0.0003	-0.5960	-0.1808
IV (Acceptance Path c)	-0.1750	0.0937	-1.8673	0.0635	-0.3600	0.0099
IV (Denial Path c')	-0.0320	0.0963	-0.3325	0.7399	-0.2221	0.1581
IV (Resignation Path c')	-0.1976	0.0841	-2.3499	0.0199	-0.3636	-0.0316
IV (Resilience Path c')	-0.2380	0.1000	-2.3800	0.0184	-0.4354	-0.0406
IV (Acceptance Path c')	-0.0652	0.0925	-0.7043	0.4822	-0.2478	0.1175
Mediator (Denial Path b)	-0.4669	0.0777	-6.0104	0.0000	-0.6202	-0.3136
Mediator (Resignation Path b)	-0.4431	0.0786	-5.6403	0.0000	-0.5981	-0.2880
Mediator Resilience Path b)	-0.4153	0.0800	-5.1937	0.0000	-0.5731	-0.2575
Mediator (Acceptance Path b)	-0.4610	0.0795	-5.7959	0.0000	-0.6180	-0.3040

Note. Bootstrap 10,000. CI = 95%. DV = Working for current employer a year from now, if given the choice. IV = Glass Ceiling Beliefs. Mediator = Career Advancement satisfaction.

Table 4.8

Regression Summaries for Mediating Effect of Career Advancement Satisfaction on the Relationship between Glass Ceiling Beliefs and If I Have my Own Way, I Will be Working for my Current Employer One Year from Now (6.1)

	Model Summary	Effect	Boot SE	BootLLCI	BootULCI	Normal Theory Test for Indirect Effect
Total Effect of X on Y						
Denial	$F(1, 177) = 2.400$, $p = .1231$, $R^2 = .0147$					
Resignation	$F(1, 177) = 10.7473$, $p = .0013$, $R^2 = .0512$					
Resilience	$F(1, 177) = 13.6349$, $p = .0003$, $R^2 = .0769$					
Acceptance	$F(1, 177) = 3.4870$, $p = .0635$, $R^2 = .0189$					
Indirect Effect of X on Y (a*b)						
Denial		-0.1233	0.0453	-0.2166	-0.0387	0.0074
Resignation		-0.0751	0.0399	-0.1550	0.0028	0.0673
Resilience		-0.1504	0.0463	-0.2462	-0.0648	0.0036
Acceptance		-0.1099	0.0410	-0.1961	-0.0366	0.0086

Note. Bootstrap 10,000. CI = 95%. DV = Working for current employer a year from now, if given the choice. IV = Glass Ceiling Beliefs. Mediator = Career Advancement satisfaction.

Results also showed that there was a significant indirect effect of denial, resilience, and acceptance glass ceiling beliefs on I frequently think of quitting my job through career advancement satisfaction, ab = -0.0670, CI [-0.1407, -0.0018], ab = -0.0984, CI [-0.1902, -0.0256], and ab = -0.0701, CI [-0.1512, -0.0154]; respectively. Tables 4.9 and 4.10 show detailed results.

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Table 4.9

Regression Summaries for Mediating Effect of Career Advancement Satisfaction on the Relationship between Glass Ceiling Beliefs and I Frequently Think of Quitting (6.2)

Model	B	SE_B	*t*	*p*	LLCI	ULCI
Mediator on IV						
Mediator (Denial Path a)	0.2641	0.0871	3.0315	0.0280	0.0922	0.4360
Mediator (Resignation Path a)	0.1696	0.0863	1.9646	0.0510	-0.0008	0.3399
Mediator (Resilience Path a)	0.3622	0.1012	3.5808	0.0004	0.1626	0.5616
Mediator (Acceptance Path a)	0.2383	0.0796	2.9929	0.0032	0.0812	0.3954
DV on IV and Mediator						
IV (Denial Path c)	-0.0403	0.0952	-0.4236	0.6724	-0.2283	0.1476
IV (Resignation Path c)	0.2182	0.0965	2.2602	0.0250	0.0277	0.4087
IV (Resilience Path c)	-0.0023	0.0991	-0.0230	0.9817	-0.1979	0.1933
IV (Acceptance Path c)	0.1657	0.0964	1.7185	0.0874	-0.0246	0.3560
IV (Denial Path c')	0.0267	0.0886	0.3012	0.7636	-0.1482	-0.2016
IV (Resignation Path c')	0.2673	0.1006	2.6578	0.0086	0.0688	0.4658
IV (Resilience Path c')	0.0962	0.1002	0.9578	0.3395	-0.1020	0.2943
IV (Acceptance Path c')	0.2358	0.0961	2.4550	0.0151	0.0462	0.4254
Mediator (Denial Path b)	-0.2539	0.0907	-2.7982	0.0057	-0.4329	-0.0748
Mediator (Resignation Path b)	-0.2897	0.0880	-0.2901	0.0012	-0.4634	-0.1159
Mediator (Resilience Path b)	-0.2718	0.0938	-2.8984	0.0042	-0.4569	-0.0867
Mediator (Acceptance Path b)	-0.2942	0.0892	-3.2983	0.0012	-0.4702	-0.1181

Note. Bootstrap 10,000. CI = 95%. DV = I Frequently Think of Quitting. IV = Glass Ceiling Beliefs. Mediator = Career Advancement Satisfaction.

Table 4.10

Regression Summaries for Mediating Effect of Career Advancement Satisfaction on the Relationship between Glass Ceiling Beliefs and I Frequently

	Model Summary	Effect	Boot SE	BootLLCI	BootULCI	Normal Theory Test for Indirect Effect
Total Effect of X on Y						
Denial	$F(1, 177) = .1794$, $p = .6724$, $R^2 = .0010$					
Resignation	$F(1, 177) = 5.1086$, $p = .0250$, $R^2 = .0327$					
Resilience	$F(1, 177) = .0005$, $p = .9817$, $R^2 = .0000$					
Acceptance	$F(1, 177) = 2.29534$, $p = .0874$, $R^2 = .0169$					
Indirect Effect of X on Y (a*b)						
Denial		-0.0670	0.0332	-0.1407	-0.0018	0.0457
Resignation		-0.0491	0.0312	-0.1192	0.0033	0.1027
Resilience		-0.0984	0.0423	-0.1902	-0.0256	0.0277
Acceptance		-0.0701	0.0348	-0.1512	-0.0154	0.0306

Note. Bootstrap 10,000. CI = 95%. DV = I Frequently Think of Quitting. IV = Glass Ceiling Beliefs. Mediator = Career Advancement Satisfaction.

Finally, results showed there was a significant indirect effect of denial, resilience, and acceptance glass ceiling beliefs on I am planning on searching for a new job during the next 12 months through career advancement satisfaction, ab = -0.0848, CI [-0.1627, -0.0201], ab = -0.1388, CI [-0.2475, -0.0525], and ab = -0.0871, -0.1690, and -0.0259; respectively. Tables 11 and 12 show detailed results.

Table 4.11

Regression Summaries for Mediating Effect of Career Advancement Satisfaction on the Relationship between Glass Ceiling Beliefs and I am Planning on Searching for a New Job within the Next 12 Months (6.3)

Model	B	SE_B	*t*	*p*	LLCI	ULCI
Mediator on IV						
Mediator (Denial Path a)	0.2641	0.0871	3.0315	0.0028	0.0922	0.4360
Mediator (Resignation Path a)	0.1696	0.0863	1.9646	0.0510	-0.0008	0.3399
Mediator (Resilience Path a)	0.3622	0.1012	3.5808	0.0004	0.1626	0.5618
Mediator (Acceptance Path a)	0.2383	0.0796	2.9929	0.0032	0.0812	0.3954
DV on IV and Mediator						
IV (Denial Path c)	-0.1381	0.1170	-1.1801	0.2395	-0.3690	0.0928
IV (Resignation Path c)	0.3044	0.1043	2.9180	0.0040	0.0985	0.5102
IV (Resilience Path c)	0.0683	0.1074	0.6362	0.5254	-0.1436	0.2803
IV (Acceptance Path c)	0.0822	0.1069	0.7694	0.4427	-0.1287	0.2932
IV (Denial Path c')	-0.0533	0.1096	-0.4863	0.6273	-0.2697	0.1631
IV (Resignation Path c')	0.3705	0.1049	3.5323	0.0005	0.1635	0.5775
IV (Resilience Path c')	0.2072	0.1098	1.8871	0.0608	-0.0095	0.4238
IV (Acceptance Path c')	0.1693	0.0157	1.6017	0.1110	-0.0393	0.3779
Mediator (Denial Path b)	-0.3210	0.0092	-3.2358	0.0014	-0.5168	-0.1252
Mediator (Resignation Path b)	-0.3899	0.0829	-4.7009	0.0000	-0.5536	0.5775
Mediator (Resilience Path b)	-0.3833	0.0911	-4.2059	0.0000	-0.5631	-0.2034
Mediator (Acceptance Path b)	-0.3654	0.0922	-3.9635	0.0001	-0.5473	-0.1835

Note. Bootstrap 10,000. CI = 95%. DV = I am Planning on Searching for a New Job within the Next 12 Months (6.3). IV = Glass Ceiling Beliefs. Mediator = Career Advancement satisfaction.

Table 4.12

Regression Summaries for Mediating Effect of Career Advancement Satisfaction on the Relationship between Glass Ceiling Beliefs and I am Planning on Searching for a New Job within the Next 12 Months (6.3)

	Model Summary	Effect	Boot SE	BootLLCI	BootULCI	Normal Theory Test for Indirect Effect
Total Effect of X on Y						
Denial	$F(1, 177) = 1.3927$, $p = .2395$, $R^2 = .0096$					
Resignation	$F(1, 177) = 8.5148$, $p = .0040$, $R^2 = .0531$					
Resilience	$F(1, 177) = .4048$, $p = .5254$, $R^2 = .0020$					
Acceptance	$F(1, 177) = .5920$, $p = .4427$ $R^2 = .0035$					
Indirect Effect of X on Y (a*b)						
Denial		-0.0848	0.0366	-0.1627	-0.0201	0.0309
Resignation		-0.0661	0.0361	-0.1409	0.0026	0.0753
Resilience		-0.1388	0.0502	-0.2475	-0.0525	0.0073
Acceptance		-0.0871	0.0370	-0.1690	-0.0259	0.0192

Note. Bootstrap 10,000. CI = 95%. DV = I am Planning on Searching for a New Job within the Next 12 Months (6.3). IV = Glass Ceiling Beliefs. Mediator = Career Advancement satisfaction.

In summary, denial, resilience, and acceptance glass ceiling beliefs were found to partially mediate the effect on quit intention through career advancement satisfaction at 95% confidence interval. No significant indirect effect of resignation belief on the quit intention through career advancement satisfaction was found.

The goal of the study was to assess the relationships between glass ceiling beliefs, career advancement satisfaction, and quit intention. Empirical evidence was found to support the conclusion that there are positive and negative relationships between these principal variables. Further, relationships were found between glass ceiling beliefs, quit intention, and the additional career satisfactions factors. The detailed discussion of these findings, conclusions drawn from those findings, social implications, and recommendations and future research are discussed in detail in Chapter 5.

Chapter 5: Discussion, Conclusions, and Recommendations

This chapter contains a detailed discussion of the study findings, social implications, recommendations and future research, and a conclusion.

Glass Ceiling Beliefs and Career Satisfaction Discussion

The positive relationship between denial and overall career satisfaction in the current study were consistent with Smith, Caputi et al.'s (2012) findings; however, Smith, Caputi et al. found no significant relationship between resilience and acceptance glass ceiling beliefs and career satisfaction, as was found in the current study. Also, Smith, Caputi et al. found resignation was negatively related to career satisfaction; however, a positive relationship was found between these variables in the current study.

The regression model predicted that the higher a woman's denial and resilience glass ceiling belief, the more likely she is to demonstrate higher levels of satisfaction with (a) success achieved in career, (b) overall career goals, (c) goals for income, and (d) overall career satisfaction. Further, the higher a woman's resilience belief, the more likely she is to be satisfied with progress made toward meeting goals for development of new skills. Finally, the higher a woman's denial, resilience, and acceptance belief, the more likely she is to be more satisfied with goals for advancement.

Smith, Caputi et al. (2012) proposed a dichotomy for the glass ceiling beliefs: – resilience and denial are optimistic views that are "more likely to lead to positive emotions and actions toward seeking promotions" (p. 461), and acceptance and resignation are pessimistic views that "are likely to lead to negative emotions and actions toward promotion" (p. 461). Although Smith, Crittenden et al. argued that acceptance

was a pessimistic view from a career advancement perspective, it can be an optimistic view from a life balance and family life perspective. When examined from those viewpoints, the positive relationships between denial, resilience, and acceptance and career satisfaction factor findings in this study suggested that the more a woman believes that the glass ceiling is "now a myth or non-existent " (denial, [p. 72]), or "she can and will go forward" (resilience, [p. 72]), or she is "satisfied and happy not seeking high level positions" (p.72) or "[justifies] not showing more commitment to career development" (acceptance, [p. 72]), the more career satisfaction factors will increase.

Controls and Career Satisfaction Discussion

At the manager career level (including supervisor, manager, director, vice president, and executive), the model predicted that overall career satisfaction and satisfaction with progress made toward meeting goals, which accounted for 2.4% and 3.3% of the variance, respectively, would increase. This finding was consistent with Smith, Caputi et al.'s (2012) study in which management accounted for 6% of the career satisfaction variance. These findings were directionally consistent with outcomes one might expect to find as women move up the career ladder, which can lead to increased career satisfaction.

The resilience and denial glass ceiling beliefs accounted for 14.1% and 6.1% of the variance in the overall career satisfaction regression model, respectively. Denial accounted for 10% of the variance with career satisfaction in the Smith, Caputi et al. (2012) study. Both resilience and denial were optimistic views of the glass ceiling phenomenon, according to Smith, Caputi et al. The current study results may confirm that

if women feel they can overcome barriers or the glass ceiling does not exist, they will be more likely to view movement, however incremental, up the career ladder through an optimistic lens.

Information technology and accounting/finance job categories were positive predictors of I am satisfied with success I have achieved in my career, and accounted for 1.9% and 2.1% of the variance in the regression model, respectively. Although the study findings did not shed light on the level of career advancement satisfaction women in these job categories had, they did suggest that the subjective nature of satisfaction with success achieved in career is dependent on the woman's individual definition of success and more importantly, that the career satisfaction drivers and resulting viewpoints are individualized. In other words, one woman's level of satisfaction with success achieved in career may look very different from another woman's depending on her career satisfaction drivers, and satisfaction with career advancement may or may not be a key factor in the level of satisfaction with success achieved.

Finally, number of children was a positive predictor of satisfaction with (a) success achieved in career, (b) success achieved in overall career goals, and (c) development of new skills and accounted for 3.5%, 2.2%, and 2.1% of the variance in the regression model, respectively. Number of children was a predictor of emotional well-being (1% variance) and physical well-being (2% variance) in the Smith, Caputi et al. (2012) study. The current study findings suggest that women manage to reconcile some of the career-life choices they need to make to balance work and life, and those choices need not necessarily negatively impact career satisfaction factors. This finding is

consistent with existing research that indicates that women are often faced with career-life choices (Gomez et al., 2001; Kelly & Marin, 1998; Lirio et al., 2007), which may lead them to make career track changes to minimize or avoid conflicts (Kelly & Marin, 1998), negotiate or compromise (Gomez et al., 2001), make trade-offs (Gersick & Kram, 2002), or reframe obstacles as advantages or ignore barriers (Gomez et al., 2001) when making work-life choices.

Glass Ceiling Beliefs and Quit Intention Discussion

The current study results showed that resilience belief was a significant negative predictor of if I have my own way, I will be working for my current employer a year from now. In this case, the results suggested that women with a resilience belief are more likely to feel empowered to take control over their career choices and are more likely to take action to make job and/or career changes because they believe they can and will overcome any barriers. Conversely, results indicated that Hispanic women are much more likely to continue working for their current employer a year from now if they have the choice. Without further research, it is difficult to draw any causal conclusions from this finding; however, it may suggest that Hispanic women were either satisfied with their current jobs or feel they were not likely to find better alternatives externally.

The regression models predicted that as a woman's resignation belief increases, the frequency of thinking about quitting and plans to search for a new job within the 12 months would also increase. At first glance, these findings appear to conflict with Smith, Crittenden et al.'s (2012) definition of resignation, which is "women give up or fail to pursue promotional opportunities" (p. 72); however, that is not necessarily the case. First,

Smith, Crittenden et al.'s definition of resignation is specific to promotional opportunities and not to job opportunities in general. Second, the current study's finding suggests that even if a woman believes there are social and organizational obstacles in the way of her advancement, she will have a stronger resignation belief and will be more likely to consider external opportunities, and those opportunities need not be promotional for her to think about quitting or plan on searching for new opportunities. This conclusion was supported by the results of the mediation analyses, which indicated that resignation belief did not have a significant indirect mediating effect on quit intention through career advancement satisfaction.

Controls and Quit Intention Discussion

The current study results predicted that health care professionals are more likely to work for their current employer 1 year from now if they have their own way; however, the results also predicted that these professionals were more likely to look for a new job within the next 12 months. This suggests that although health care professionals are more likely to continue working for their current employer 1 year from now if they have their own way, they are also open to proactively exploring and considering external opportunities. This is an indicator that health care professionals feel empowered to make job changes.

For accounting/finance and IT professional categories, the model showed that I frequently think of quitting my job was a negative predictor. When the career satisfaction results for the job categories discussed earlier are also taken into consideration, this finding suggests that if an accounting/finance or IT professional's career satisfaction

drivers are not being met, quit intention may increase. This is consistent with Armstrong et al.'s (2007) results that indicated that women in IT perceived the work and home life interaction as directly and indirectly influencing career advancement opportunities and voluntary turnover. A flexible schedule may increase organizational commitment but the price for this flexibility may be decreased advancement opportunities; however, this may not necessarily lead to actual turnover if organizational management can find ways to address women's work-family conflicts (Armstrong et al., 2007).

Studies showed that job satisfaction is an antecedent of career satisfaction (Gumussoy, 2016; Joo & Park, 2010) and career satisfaction is an antecedent of career commitment (Fu & Chen, 2015; Gumussoy, 2016; Nouri & Parker, 2011). As such, job and/or career dissatisfaction have a direct effect on quit intention (Fu & Chen, 2015; Gumussoy, 2016; Nouri & Parker, 2011), which is consistent with the current study findings. Further, the results indicated that the longer a woman remains at her current career level, the more her frequency of thinking about quitting increases. This finding suggests that a woman seeking advancement opportunities, including opportunities to develop new skills or some other career goal, may think about quitting if her drivers are not being met. This finding is consistent with Kosteas's (2011) finding that a recent promotion or promotion within the past 2 years and the possibility of being promoted in the next 2 years will increase job satisfaction, whereas lingering promotions will decrease job satisfaction. Thus, women will be more likely to look externally for the next opportunity.

Mediating Effect of Career Advancement Satisfaction on Glass Ceiling Beliefs and Quit Intention Discussion

The mediation analyses results showed that career advancement satisfaction has a significant mediating effect on denial, resilience, and acceptance glass ceiling beliefs and quit intention. This suggests that a woman's experience as it relates to career advancement may influence how she copes with the glass ceiling phenomenon and ultimately has an effect on her quit intention. In other words, her career advancement experiences may help shape her glass ceiling belief and in turn how she manages career and life decisions.

Theoretical Framework Discussion

This study was grounded in the explanatory style optimism theory. An important distinction between the explanatory construct and attribution is that Peter and Seligman (1984) believed that explanations could only be determined by looking at both situational and dispositional factors. The central tenet of the theory is that individuals exhibit a tendency to explain the causes of bad events in a particular way (Peterson & Seligman, 1984; Peterson et al., 1988). Attribution theorists (Abramson et al., 1978; Peterson & Seligman, 1984; Peterson et al., 1988; Schulman, 1995) agree that how an individual explains positive or negative events will affect how she or he will react to future events, which could positively or negatively impact her or his performance.

The current study outcomes were consistent with the optimistic and pessimistic theoretical framework. Denial and resilience (optimistic viewpoints) were shown to be significant positive predictors of career satisfaction factors. Further, the optimistic

viewpoint of acceptance was shown to be a positive predictor of satisfaction with success achieved in career, satisfaction with progress made toward meeting overall career goals, and satisfaction with progress made toward meeting goals for development of new skills, and resilience was shown to be a negative predictor of quit intention. Finally, resignation (pessimistic viewpoint) was shown to a positive predictor of quit intention. The study results suggested that a woman's career advancement and/or other career satisfaction factor experiences may positively or negatively influence her quit intention. This is an important contribution to the glass ceiling beliefs, career satisfaction, quit intention, and explanatory style literature.

Recommendations and Future Research

The question as to whether glass ceiling beliefs are steady individual traits remains unanswered, and further research on the relationship between personality and glass ceiling beliefs is recommended (see Smith, Caputi et al., 2012). Although Smith, Caputi et al. identified acceptance as a pessimistic glass ceiling viewpoint from a career perspective for purposes of their study, they noted that it could be viewed through an optimistic lens from a "life balance and family life" (p. 462) perspective. The findings regarding acceptance and satisfaction with goals for advancement in the current study appear to support this assertion. Further, number of children was a positive predictor of satisfaction with (a) success achieved in career, (b) success achieved in overall career goals, and (c) development of new skills. These findings open up an array of questions relating to glass ceiling beliefs and career, life, and family life choices. In their 2010 study, Lewis and Humbert asserted that women feel they have to choose between family

responsibilities and career development and/or advancement, which results from the assumption that women cannot or do not wish to focus on both at the same time. Lewis and Humbert assumed that women make these choices freely but asserted that these "choices are always socially constrained. People choose from what is available" (p. 248). Exploring the effects of how having to choose between career, life, and family choices may help shape a woman's glass ceiling belief (optimistic or pessimistic view) may fill a significant gap in the literature. Given the relationships identified between accounting/finance and IT professionals, glass ceiling beliefs, career satisfaction factors, and quit intention, further research is also recommended in the job categories. As was the case with the Smith, Caputi et al. study, a smaller than expected sample (~4%) at the top levels of management participated in the current study. Given the small sample at the top levels of management that participated in this study, I concur with Smith, Caputi et al. that research with a larger sample at this career level is needed. Although men were excluded from the current study, it is recommended that future studies include both sexes to allow for a comparative analysis. It is recommended that future research examine if ethnicity has a moderating effect on the principle variables. Also, to get a deeper understanding of the current study results, a follow-up qualitative study is recommended. Finally, replication of results is recommended to strengthen generalizability (Atkinson & Flint, 2001).

Social Implications

There are several potential positive social change implications of this study. First, the study not only expands on the glass ceiling beliefs literature (e.g., Mohammadkhani & Gholamzadeh, 2016; Smith, 2012; Smith, Caputi et al., 2012; Smith, Crittenden et al., 2012) but it also fills a gap in the literature as it is the first to examine relationships between glass ceiling beliefs, career advancement satisfaction, and quit intention. Next, empirical evidence shows that job satisfaction is a strong predictor of quit intention (Griffeth et al., 2000; Gumussoy, 2016; Zimmerman, 2008) and job satisfaction is an antecedent of career satisfaction (Gumussoy, 2016; Joo & Park, 2010; Zimmerman, 2008); therefore, an awareness of how glass ceiling beliefs may influence a woman's career and life choices, and, in turn her career satisfaction and quit intention, can help employers identify the employee specific job and career satisfaction drivers and be better prepared to pull the right levers to retain female talent. For instance, improving context of the job or challenging assignments may increase job satisfaction (Gumussoy, 2016), increased proactive focus on career development (Nouri & Parker, 2013; Walsh, Fleming, & Enz, 2016), increased autonomy and control (Walsh et al., 2016), and providing job resources (Ribeiro, Bosch, & Becker, 2016) may all help retain female talent.

Conclusion

The current study results confirmed the optimistic and pessimistic views of the glass ceiling beliefs. Further, the results also confirmed the optimistic glass ceiling beliefs, which included an optimistic view of acceptance, mediate the effect on quit intention through career advancement satisfaction and the pessimistic view, resignation,

had no mediation effect through career advancement satisfaction. Although none of the control variables were significant predictors of career advancement satisfaction, several of them (number of children, manager career level, accounting/finance and IT job categories, number of years at current career level, education level, and ethnicity) were significant predictors on other career satisfaction factors, as well as quit intention. The addition of the other career satisfaction factors in the study revealed relationships between glass ceiling beliefs, career satisfaction, and quit intention that might have otherwise been missed had the additional career satisfaction factors not been assessed. These findings allowed for a more robust analyses of the relationships between the principal variables.

The key study findings indicated significant relationships between glass ceiling beliefs, career satisfaction factors, and quit intention. This has significant practical implications as findings may be used to help women understand their glass ceiling beliefs and career satisfaction drivers, which may not necessarily include career advancement satisfaction, influence reaction to workplace events (Smith, Caputi et al., 2012). Findings may also be used by employers to implement proactive talent retention strategies. This conclusion is consistent with O'Connor's (2001) "different needs" hypothesis test findings. The central tenet of the hypothesis was that the need for achievement is not the same for men and women. As a result, some women many not wish to attain senior

management levels, but would rather have their needs met in other ways and that self-actualization; whatever that may look like for the individual is what is important. As such, the key take-away for employers is that only with this understanding can they truly be able to put proactive talent retention strategies in place.

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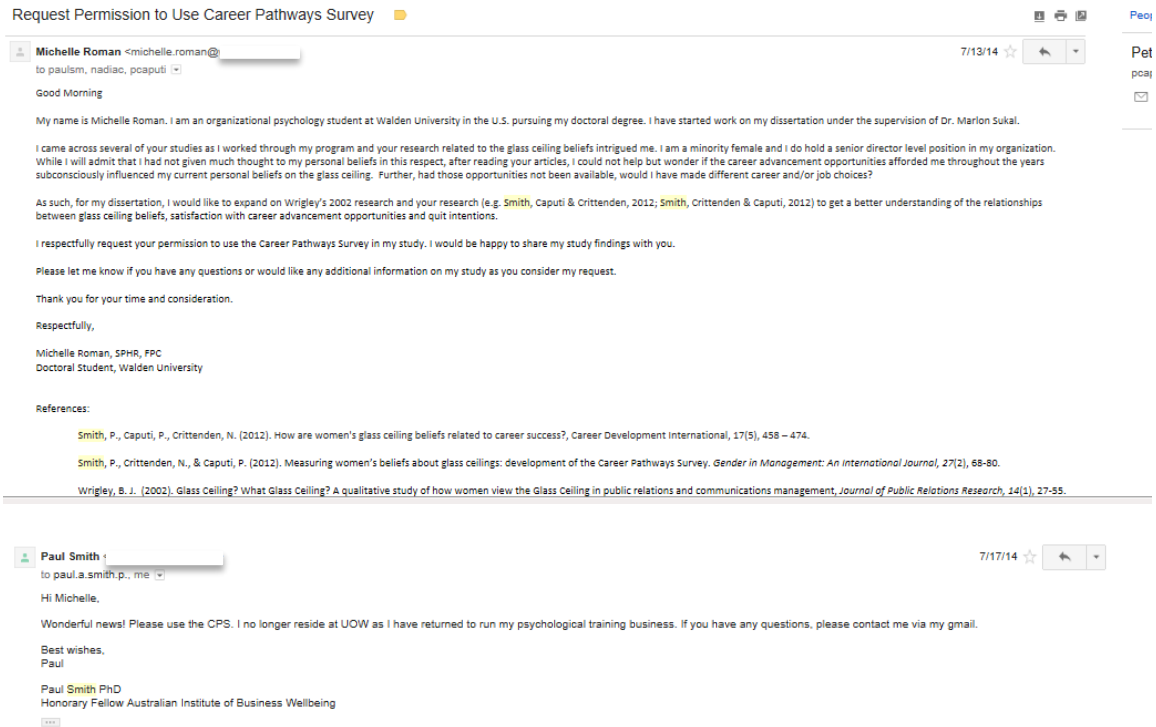
Appendix A: Permissions



Request Permission to Use Career Pathways Survey

Michelle Roman <michelle.roman@[redacted]> 7/13/14

to paulsm, nadiac, pcaputi

Good Morning

My name is Michelle Roman. I am an organizational psychology student at Walden University in the U.S. pursuing my doctoral degree. I have started work on my dissertation under the supervision of Dr. Marlon Sukal.

I came across several of your studies as I worked through my program and your research related to the glass ceiling beliefs intrigued me. I am a minority female and I do hold a senior director level position in my organization. While I will admit that I had not given much thought to my personal beliefs in this respect, after reading your articles, I could not help but wonder if the career advancement opportunities afforded me throughout the years subconsciously influenced my current personal beliefs on the glass ceiling. Further, had those opportunities not been available, would I have made different career and/or job choices?

As such, for my dissertation, I would like to expand on Wrigley's 2002 research and your research (e.g. Smith, Caputi & Crittenden, 2012; Smith, Crittenden & Caputi, 2012) to get a better understanding of the relationships between glass ceiling beliefs, satisfaction with career advancement opportunities and quit intentions.

I respectfully request your permission to use the Career Pathways Survey in my study. I would be happy to share my study findings with you.

Please let me know if you have any questions or would like any additional information on my study as you consider my request.

Thank you for your time and consideration.

Respectfully,

Michelle Roman, SPHR, FPC
Doctoral Student, Walden University

References:

Smith, P., Caputi, P., Crittenden, N. (2012). How are women's glass ceiling beliefs related to career success?, Career Development International, 17(5), 458 – 474.

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Paul Smith [redacted] 7/17/14

to paul.a.smith.p., me

Hi Michelle,

Wonderful news! Please use the CPS. I no longer reside at UOW as I have returned to run my psychological training business. If you have any questions, please contact me via my gmail.

Best wishes,
Paul

Paul Smith PhD
Honorary Fellow Australian Institute of Business Wellbeing

Record Type: Master Test Record

Test Year: 1990

Test Child Records: Career Satisfaction Measure [Test Development]
Effects of race on organizational experiences, job performance evaluations, and career outcomes. (AN: 1990-18525-001 from PsycINFO) Mar, 1990.
Authors: Greenhaus, Jeffrey H.; Parasuraman, Saroj; Wormley, Wayne M.;
Source: Academy of Management Journal. 33(1), Academy of Management, US.
Age Group: Adulthood (18 yrs & older)
Population: Human; Male; Female; Location: United States; Sample: Managers; Age: Adult
Keywords: Test Development; Career Satisfaction Measure; Internal Consistency; Rating Scales;
Subjects: Job Satisfaction; Rating Scales; Test Construction; Test Reliability;

Authors: Greenhaus, Jeffrey H., Drexel University, Philadelphia, Pennsylvania, United States
Parasuraman, Saroj
Wormley, Wayne M.

Source: PsycTESTS, 1990.

Language: English

Construct: Career Satisfaction

Purpose: The purpose of the Career Satisfaction Measure is to assess level of career satisfaction.

Description: Developed as part of a study on relationships among race, organizational experiences, job performance evaluations and career outcomes for black and white managers, the 5-item Career Satisfaction Measure (Greenhaus, Parasuraman & Wormley, 1990) assesses career satisfaction. Managers read 5 items regarding satisfaction with career success and progress meeting career, income, advancement, and skill-development goals and indicated the extent to which they agreed or disagreed with the statements on a 5-point reverse-coded scale. Cronbach's alpha = .88. (PsycTESTS Database Record (c) 2014 APA, all rights reserved)

Format: Participants indicated the extent to which they agreed or disagreed with the 5 items on the Career Satisfaction Measure on a 5-point reverse-coded scale where 5 = strongly disagree, 4 = disagree to some extent, 3 = uncertain, 2 = agree to some extent, and 1 = strongly agree

Instrument Type: Test

Administration Method: Paper

PsycTESTS Classification: Organizational, Occupational, and Career Development (7000)

Commercial Availability: No

PsycTESTS®

Intention to Quit Scale

PsycTESTS Citation:
Colarelli, S. M. (1984). Intention to Quit Scale [Database record]. Retrieved from PsycTESTS. doi: 10.1037/t11290-000

Test Shown: Full

Test Format:
Responses were recorded on a 5-point scale ranging from strongly disagree (1) to strongly agree (5).

Source:
Colarelli, Stephen M. (1984). Methods of communication and mediating processes in realistic job previews. Journal of Applied Psychology, Vol 69(4), 633-642. doi: 10.1037/0021-9010.69.4.633

Appendix B: Career Pathways Scales

Denial Scale	
Item #	Item Content
28	Women starting careers today will face sexist barriers
9	Women and men have to overcome the same problems at the workplace
37	It will take decades for women to reach equality with men in high level management positions
10	Even women in many skills and qualifications fail to be recognized for promotions
13	Women have reached the top in all areas of business and politics
1	Women face no barriers to promotions in most organizations
11	Women leaders are seldom given full credit for their successes
15	Women in senior positions face frequent putdowns of being too soft or too hard
7	Women who have a strong commitment to their careers can go right to the top
4	Talented women are able to overcome sexist discrimination
Resignation Scale	
34	Women executives are very uncomfortable when they have to criticize members of their team

25	Women leaders suffer more emotional pain than men when there is crisis within their teams
35	Being in the limelight creates more problems for women
19	Women are more likely to be hurt than men when they take big risks necessary for corporate success
29	Women believe they have to make too many compromises to gain highly paid positions
8	Jealously from co-workers prevents women from seeking promotions
32	Even very successful women can quickly lose their confidence
33	Women know that work does not provide the best source of happiness in life
17	If women achieve promotions they might be accrued of offering sexual favors
5	Smart women avoid careers that involve intense competition with colleagues
Resilience	
36	The more women seek senior positions, the easier it will be for those who follow
31	Higher education qualifications will help women overcome discrimination
26	Women have the strength to overcome discrimination
38	When women are given opportunities to lead they do effective jobs
23	Daughters of successful mothers are inspired to overcome sexist hurdles
6	Women are capable of making critical leadership decisions

20	A supportive spouse/partner or close friend makes it easier for a women to achieve success in her career
30	Successful organizations seek and want to retain talented female staff
16	The support of a mentor greatly increase the success of a women in any organization
24	Women's nurturing skills help them to be successful leaders
3	Networking is a smart way for women to increase the chances of career success
Acceptance	
18	Women are just as ambitious in their careers as men
12	Women have the same desire for power as men do
22	Motherhood is more important to most women than career development
21	Women are less concerned about promotions than men are
2	Women prefer a balance life more than gaining highly paid careers
27	Women reject the need to work incredibly long hours
14	Women commonly reject career advancement as they are keener to main a role raising children (Smith, Crittenden et al., 2012, pp. 75-76)