

**WOMEN AS LEADERS IN CONSTRUCTION IN A NORTHWESTERN U.S.
CITY: A MULTIPLE-CASE STUDY OF THE EFFECTIVENESS OF
MOTIVATION PRACTICES AND SUCCESS STRATEGIES**

by

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Abstract

Women have a low level of representation in the construction industry, even though they are nearly half of the U.S. workforce. This study sought to understand the motivation processes and successful work outcome strategies of woman leaders in construction, many of whom created a niche and advanced in the workforce. The specific research question was: What may be learned from a study of the motivational processes and successful work outcome strategies used by successful woman leaders in the construction industry in a Northwestern U.S. city? Limited information exists in the literature on woman leaders in the construction industry as it relates to motivation processes and successful work outcome strategies. No peer-reviewed articles located discussed the effectiveness of motivational practices and success strategies. The literature review focused upon the theory of purposeful work behavior. A qualitative multiple-case study was conducted to interview 15 woman leaders in construction. The results reveal that woman leaders in construction are strong and resilient, need strong support systems, and still face many roadblocks. Recommendation for future research include a replication of the study in the fields of medicine, aerospace, banking, finance, and maritime. The information gathered in this study will aid future researchers and spur further research in the field of women in construction.

Dedication

I dedicate this work to my family. I especially want to thank my husband, Ed, for putting up with me during these past 7 years of study; and my two daughters, Alexis and Madeline. This work is also dedicated to the memory of my son, Edward J. Artis III.

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CHAPTER 1. INTRODUCTION

Introduction to the Problem

The 1970s can be highlighted as the era of recognizing gender (Anker, 1997) and race in the workplace. Equal opportunities in the workplace and an end to discrimination were on the rise due to the equality movement of the 1960s. The 1980s saw state legislatures institute equal opportunity legislation, administrative codes, and rules to ensure that women and minorities were afforded an opportunity to open businesses, obtain jobs, and attempt to achieve success. Many doors had previously been slightly open or closed and very limited opportunities existed for women. Harlan and O'Farrell (1982); O'Farrell and Harlan (1982); Lillydahl (1986); Gale (1994); Smith, Smits, and Hoy (1992); and Anna, Chandler, Jansen, and Mero (2000) were the primary researchers for women working in nontraditional roles such as construction which this research document focused on. J. A. Halepota (2001); Menches and Abraham (2007); Dabke, Salem, Genaidy, and Daraiseh (2008); and Aulin and Jingmond (2010) focused on women in the field of construction and its many facets.

Construction includes buildings, roadwork, electrical, plumbing, ventilation, engineering, and much more. These fields have been viewed historically as male-dominated job roles and types. Even though much has been done to aid women in the workplace, no ground has been gained in the construction industry. In 1994, women in the construction trades made up under 2% of the trade and grew just a fraction of a

percentage point by 2002 (U.S. Department of Labor, Women’s Bureau, n.d.c). In 2010, the U.S. Department of Labor, Women’s Bureau (n.d.e) combined the natural resources, construction, and maintenance occupations and the percentage dropped to only 1%. In 2010, women comprised 46.8% of the workforce and were projected to reach 51.2% by 2018 (U.S. Census Bureau, 2012; U.S. Department of Labor, Women’s Bureau, n.d.a, n.d.e). Researchers have asked a number of questions concerning increasing numbers of women in the workforce, such as (a) Why has the number of women working in the construction industry been declining? (b) Were women not familiar with the job opportunities? (c) Did they think that construction trades were set aside for men only? (d) Did women find that the industry did not support raising a family? (e) Was there too much harassment by fellow male workers? (f) Was affirmative action not working? (g) Did women not see growth potential or was this field too restrictive? Although these questions are not answered in this study, they are valid. The questions are so important that they merit study and comprehensive answers. By acknowledging this, the conversation has started and cleared the way for future research.

This study utilized the theory of purposeful work behavior—the role of personality, higher order goals, and job characteristics—as presented by Barrick, Mount, and Li (2013). This theory explains how personality traits and job characteristics interact to influence the outcome of how people work. The theory provided a framework to address a person’s motivation process and their successful work outcome strategies.

Background of the Study

U.S. Department of Labor, Women’s Bureau (n.d.c) reported approximately 123 million women age 16 and older in the United States in 2010, or 58% were participants

(employed or looking for work) in the labor force. The U.S. Department of Labor, Women's Bureau (n.d.e) reported 47% of the total U.S. labor force was employed in the labor force. Of the women surveyed, approximately 40% worked in either management or other professions such as medicine, law, and other related occupations. Following passage of the U.S. Lillie Ledbetter Fair Pay Act (Sullivan, 2009), many women who were earning lower wages based on their gender received an increase in pay, which helped to reduce pay disparity between genders. However, even with legislative intervention to prevent inequality in pay, equity is still not a reality for all women.

Underrepresentation remains a reality for women in natural resources, construction, and maintenance occupations, with approximately 9% of employed women working in these areas (U.S. Department of Labor, Women's Bureau, n.d.a). The underrepresentation of women in some instances was due to attitudinal and organizational biases that exist (Haveman & Beresford, 2012). For example, the Associated Builders and Contractors opposed the Lillie Ledbetter Fair Pay Act but the bias of the leaders in this association and others has not kept some women from seeking and obtaining management and leadership positions or receiving fair pay. The motivation processes (Berthold & Newmann, 2008) and work outcome strategies of the few women in the construction industry who now successfully serve in management and leadership positions were the subject of this study.

Construction has historically been a male-dominated field. Things changed after World War II, when Rosie the Riveter came into being. Women working outside of the home in nontraditional fields became socially acceptable. Women found their construction skills and ideas were valuable at work sites. However, this type of work was

not traditional. Construction of all types was now open to women but because it was nontraditional, women experienced great hardship in the industry (Watts, 2009a, 2009b). Women found that in order to survive and grow, they needed to open their own companies.

Women have owned businesses for many generations but were concentrated in female product areas such as millinery and dress construction. Woman-owned businesses became a protected class in the early 1980s. Several states passed administrative codes to establish women and minority business enterprise offices. These offices opened the floodgates for women and minorities to win state contracts when they were given percent preferences. Suddenly, woman- and minority-owned businesses were being sought after and they were able to obtain loans, grants, and contracts from the state and political subentities such as city, county, and fire districts. A quota now existed. Today, several government projects in various states are in jeopardy and facing fines due to missing their target goals for woman-owned business participation (Lindblom, 2014).

Watts (2009a, 2009b) examined the plight of women in the male-dominated industry of construction and the structural lack of roles due to the skill level structure of apprentice, journeyman, and master. In addition, women as a minority were abused and intimidated by male coworkers. These behaviors increased dramatically during economically troubled times because of increased competition and the ever-present traditional role expectation of women. A need was identified for more research into woman-led businesses in relation to their use of strategic growth in Starr and Yarkin (1996).

Since the 1970s, most of the women in the construction industry worked in administrative, sales, and managerial segments (Fielden, Davidson, Gale, & Davey, 2001) Conditions have changed and women have been advancing beyond these job roles and have embraced more senior level opportunities and business ownership. In this study, the researcher sought to understand the motivation processes and successful work outcome strategies of woman leaders in construction many of whom created a niche and advanced in the workforce.

In 1953, the National Association of Women in Construction (n.d.a) was founded as a support network, in Fort Worth, Texas. Over time, it has grown from 14 to more than 200 chapters. The association now has approximately 6,000 members from all 50 states. The National Association of Women in Construction is currently developing a professional development program, scheduled for implementation in 2017. Several national organizations have designed programs to support women in the construction industry. The Associated General Contractors of America (n.d.) developed the Stempel Plan and stated their “mission of the model program is to build a broad base of emerging business enterprises capable of performing high quality construction at competitive prices” (para. 9). The National Association of Home Builders (n.d.) Professional Women in Building Council has a program to help women advance with an endowment used to fund its Strategies for Success Scholarship. The Astra Women’s Business Alliance (n.d.) offers a seminar on strategies for a successful construction business as well as leadership forums. With growth in the industry, a need has developed for more information about woman leaders in construction—specifically, their motivational processes and successful work outcome strategies.

Statement of the Problem

Women have a low level of representation in the construction industry, even though they are nearly half of the U.S. workforce (U.S. Census Bureau, 2012). Furthermore, limited information exists in the literature on woman leaders in the construction industry as it relates to motivation processes and successful work outcome strategies. This gap in the literature has made it difficult for scholars and practitioners to understand this group. Scholarly publications about women's motivational processes and successful work outcome strategies exist in some industries and have been used to help prepare young women who are just getting started (Bono & Judge, 2003). For example, woman leaders have been studied and featured in agriculture and computer sciences literature.

Gundry, Ben-Yoseph, and Posig (2002) studied women in businesses cross-culturally in developing countries. They performed this study with the intent of making recommendations for future researchers to assist educators in developing entrepreneurship programs. Gundry et al. and Gundry and Welsch (2001) found that woman-owned businesses could now be found in other areas of the economy such as construction, manufacturing, agriculture, wholesale trade, transportation, and communication.

Over the past 30 years, women's business leadership in agriculture has grown. The U.S. Census Bureau (2010) has information showing that women landowners have grown dramatically from 1990 to 1999. These women not only own the land but also work it with their families. As women learn differently than men because they use different methods for remembering information, various programs have been created to

teach agricultural skills specifically for women. For example, the University of Nebraska–Lincoln hosts an annual women’s conference on women business owners in agriculture (University of Nebraska–Lincoln, n.d.).

Purpose of the Study

The purpose of this study was to identify motivation processes and successful work outcome strategies that woman leaders in the construction trades use for advancement. This information contributes to understanding this population and towards increasing the body of knowledge on this topic.

Rationale

The rationale for this multiple-case study was to identify and understand types of motivation processes and successful work outcome strategies that successful female leaders in construction have developed and have used for advancement (Yin, 2009). For this study, the researcher interviewed 15 women who are successful leaders in the construction industry in a Northwestern U.S. city.

Research Question

The research question for this study was as follows: What may be learned from a study of the motivational processes and successful work outcome strategies used by successful woman leaders in the construction industry in a Northwestern U.S. city?

Significance of the Study

The significance of this study was to make more information available for persons interested in the study of woman leaders in construction as it relates to their motivational

processes and their successful work outcome strategies. The limited information that exists is not current and needed updating as women work to achieve new levels of success and contribute to communities through service in this industry.

The field of organizational management may benefit because approximately 50% of the workforce was female, and men and women have different motivation processes and likely use different successful work outcome strategies.

Definition of Terms

Achievement striving. “Is an employee’s desire to complete things in a timely, caring, efficient way and is characterized by a strong focus on getting things done” (Barrick et al., 2013, p. 145).

Autonomy/growth striving. “A desire to have control over what to do, when to do it, and how to do it” (Barrick et al., 2013, p. 144).

Communion striving. Is an” individual’s motivation to obtain acceptance in personal relationships and get along with others” (Barrick et al., 2013, p. 141).

Fairness to others. Distribution of justice in the workplace and policies and procedures that affect employees (Pillai, Schriesheim, & Williams, 1999).

Goal setting. An “internal representation of desired states, where states are broadly construed as outcomes, events, or processes” (Austin & Vancouver, 1996, p. 338).

Interpersonal circumplex. “A well-established neurological system that can be used for validating measures of interpersonal constructs, such as interpersonal traits (Gurtman, 1992, p. 105).

Listen. Recognize what the customer or employee truly wants or needs (Hansemark & Albinsson, 2008).

Mentoring. “A developmental relationship that exists between a mentor as the more seasoned organization member and the less experienced organization member” (Pigeon, Cook, & Nimnicht, 2012, p. 417).

Status striving. “Linked to an individual’s motivation to obtain power, influence, and prestige within a status hierarchy” (Barrick et al., 2013, p. 142).

Successful woman leaders. “Must be articulate, deliver messages, and make a case in a sophisticated, scholarly manner to various stakeholders in spoken and written work, with the use of appropriate technology, electronic messaging, and social networking” (Pate, 2013, p. 186).

Trustworthy. A behavior continually exhibited by the leader who supports cultural norms, and produces minimal incongruence between employee perceptions and expectations and their reality (Joseph & Winston, 2005).

Limitations and Assumptions

Limitations

The focus was limited to 15 female leaders in the construction industry in a Northwestern U.S. city. All participants were recruited from a Northwestern U.S. city. There were a limited number of peer-reviewed research articles written on the topic of female leaders in construction. The researcher had limited experience with multiple-case study procedures.

Assumptions

For this study, the researcher made the following assumptions:

- Theoretical
 - It was assumed that the theory chosen was suitable.
 - The researcher assumed that motivation processes contributed to success.
 - The leaders used strategies to achieve successful work outcomes.
- Topical
 - Motivation processes were linked to successful outcomes.
- Methodological
 - The researcher's bias was withheld from the findings.
 - The researcher was able to identify the themes.
 - A multiple-case study was appropriate (Yin, 2009).
 - A sufficient number of cases were identified, Yin (2009) recommended six to 10 cases and that the data analysis would follow the cross case synthesis guidelines outlined in Yin. Fifteen cases were actually studied.
 - The participants would answer the questions honestly and openly and the interview would last for no more than 60 minutes.
 - The identities of the participants would remain private and the data collected would be kept confidential and that the ethical guidelines would be adhered to.
 - The participants were female leaders in the construction industry in a Northwestern U.S. city and that the participants understood their own motivational processes and successful work outcome strategies and could articulate them to answer the questions.

Strengths

- The problem, purpose, research question, and field-tested interview guide were aligned.
- The research collected enough data to answer the research question.

The framework for this study is as illustrated in Figure 1, which depicts the designed flow and nature of this study. The theoretical basis for this study has two constructs: motivation processes and work outcome strategies. The constructs for the study were based on the theory of purposeful work behavior: the role of personality, higher order goals, and job characteristics (Barrick et al., 2013). Drawing on the work of theorists associated with motivation literature, Barrick et al. (2013) compared seven major motivation-based theories and created a “taxonomy of fundamental goals at work” (Barrick et al., 2013, p. 136), which included motivation, self-determination, implicit motives, needs in work settings, work values, need hierarchy, and interpersonal circumplex. Barrick et al. then synthesized the seven theories and designed a motivational framework with four goals: communion striving, status striving, autonomy/growth striving, and achievement striving. These goals were used to understand motivation and successful work output strategies.

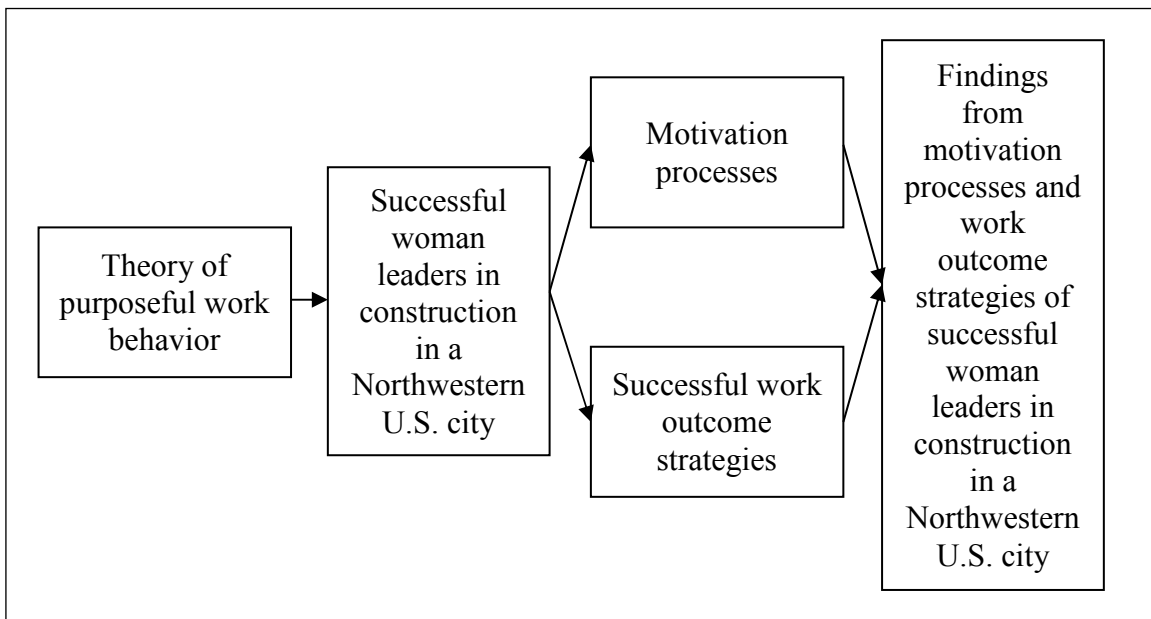


Figure 1. Study theoretical framework.

Communion striving is an individual's motivation to obtain acceptance in personal relationships and get along with others (Baumeister & Leary, 1995; Hogan, 1996). Status striving is linked to an individual's motivation to obtain power, influence, and prestige within a status hierarchy (Barrick, Stewart, & Piotrowski, 2002; Deci & Ryan, 2000; Hogan, 1983). Autonomy/growth striving is a desire to have control over what to do, when and how it is done (Morgeson & Humphrey, 2006; Mount, Barrick, Sullen, & Rounds, 2005). Achievement striving is an employee's desire to complete things in a timely, caring, efficient way and is characterized by a strong focus on getting things done (Barrick et al., 2002).

Fidler and Fidler (1978) explained the development of a person's reality or self-actualization by doing or participating in multiple types of activities to gain experiences. Edwards (1992) developed a cybernetic theory of stress, coping, and well-being in organizations as a general framework to understand organizational behavior. His theory connected multiple areas in research behaviors such as stress, goal setting, and motivation.

Expectations

Women were expected to recognize their circumstances and, through their self-motivation and various strategies, make changes in their lives and persuade themselves to think and believe that life can be made better. They could then optimistically work on an accurate path toward success using motivation and strategies (Maio & Thomas, 2007). The process of developing one's motivation processes and successful work outcome strategies is very complicated. This study was intended to understand motivation

processes and successful work outcome strategies of women who have found their way to the top.

Organization of the Remainder of the Study

Chapter 2 is the literature review, Chapter 3 discusses the methodology, and Chapter 4 presents the research, analysis, and conclusion of the study. Chapter 5 provides discussion of the study's findings, the study's implications, and recommendations for future research.

CHAPTER 2. LITERATURE REVIEW

The purpose of this study was to identify motivation processes and successful work outcome strategies that woman leaders in the construction trades use for advancement. This chapter addresses the theory that supports the study, the evolution of research associated with the theory, and relevant studies regarding the topic.

Understanding the literature will allow the researcher to have clarity regarding existing studies with content that has detailed how this theory has been used with other populations, contemporary work on the topic, and gaps needing to be filled. The researcher also reviews studies that have used the theory and studies related to the motivation and success strategies of women.

This information contributes to increasing the body of knowledge on this topic. A few articles about women in construction were found specific to the United States. Much of the major research has been done in the United Kingdom and Australia. The researcher believes this is so due to the ability of the U.K. and Australian researchers to obtain government money for their research. Academic research was identified by U.S. authors but was largely restricted to doctoral dissertations.

Why is the number of women working in the construction industry declining? Are women not familiar with the job opportunities? Do they think that this field is set aside for men only? Do women find that the industry does not support raising a family? Is there too much harassment by fellow male workers? Is affirmative action not working? Do

women not see growth potential or is this field too restrictive? Berik and Bilginsoy (2006) espoused these concerns. These types of questions were addressed in this study.

This study utilized the theory of purposeful work behavior—the role of personality, higher order goals, and job characteristics—as presented by Barrick et al. (2013). It helped to address a person’s motivation process and their successful work outcome strategies. The primary research question was: What may be learned from a study of the motivation processes and successful work outcome strategies used by successful woman leaders in the construction industry in a Northwestern U.S. city?

Theory of Purposeful Work Behavior

The theoretical basis for this study had two constructs: motivation processes and work outcome strategies. The constructs for the study were based on the theory of purposeful work behavior: the role of personality, higher order goals, and job characteristics (Barrick et al., 2013). Drawing on the work of theorists associated with motivation literature, Barrick et al. (2013) compared seven major motivation-based theories and created a “taxonomy of fundamental goals at work” (p. 136). Barrick et al. then synthesized the seven theories to produce the theory of purposeful work behavior.

Seven Primary Theories

1. Motivation (Gagne & Deci, 2005; Ryan & Deci, 2000)
2. Self-determination theory (McClelland, 1971)
3. Implicit motive theory (McClelland, 1971)
4. Needs in work setting theory (Steers & Braunstein, 1976)
5. Work values theory (Cable & Edwards, 2004)
6. Needs hierarchy theory (Maslow, 1943)

7. Interpersonal circumplex (Kiesler, 1996; Trapnell & Wiggins, 1990)

Four Primary Goals

Barrick et al. (2013) used the seven primary theories listed previously to create taxonomy to describe their motivation framework of four primary goals. Four primary goals were used to understand motivation and successful work output strategies as follows:

1. Communion striving is the desire to belong to a group, have personal control over one's life (Bandura, 2001), achieve well-being, and be accepted socially by peers (Barrick et al., 2013). Keywords for this goal include "belongingness, and warmth and sociable/friendly" (Barrick et al., 2013, p. 136); *proactive*, *allied*, and *engaged* (VanDyne, Cummings, & Parks, 1995); and *seeking help from others* (Chiaburu, Marinova, & Lim, 2007).
2. Status striving is being proactive (Chiaburu et al., 2007), intentionality to change one's environment to obtain power (Bateman & Crant, 1993), influence, and prestige within a status hierarchy (Barrick et al., 2013, p. 142). Keywords for this goal included "power, dominance, prestige, authority, pay, esteem, dominance, competition, and assertiveness" (Barrick et al., 2013, p. 136).
3. Autonomy/growth striving is gaining personal control of one's environment (Deci & Ryan, 1985). Keywords for this goal included *autonomy* and *self-actualization* (Barrick et al., 2013, p. 136).
4. Achievement striving is a person's need to be efficient, accurate, and punctual in their work (Barrick et al., 2013). Keywords for this goal included *skillful* and *successful*.

The premise of this research study was based upon the theory of purposeful work behavior. This theory combines multiple theories and allowed the researcher greater breadth in the literature review as related to the taxonomy for the theory of purposeful work behavior. The goal was to integrate the seven theories listed previously and to improve how personality traits and job characteristics come together to influence a person's work outcome (Barrick et al., 2013). Purposeful work behavior helps to describe

how a person's motivation and personality in various situations can influence both motivation and personality at work. The four goals of communion, status, autonomy, and achievement striving were then linked to both internal and external social roles and task achievement (Barrick et al., 2013); Barrick et al. (2013) were able to show that perhaps Hackman and Oldham's (1975) contention that people are more influenced by external situations than by personal drivers. Barrick et al. posited that the person's internal characteristics are the driver for work behavior and specific external situations influence behavior. Purposefulness relates to the value workers put on their job using their skills, abilities, competencies, and other attributes. Internal motivation is stimulated when individuals feel their work has value not only to themselves but also to others (Kleinginna & Kleinginna, 1981).

Motivation

Motivation affects the primary goals: communion striving, status striving and achievement striving (Barrick et al., 2002). Throughout the literature review, no clear or decisive definition of motivation was discovered. Instead, various descriptions of how motivation influences people in various circumstances were found. Motivation is an internal driver that helps a person achieve some specific tasks or state of being, and can be influenced by a person's emotional state (Kleinginna & Kleinginna, 1981). Examples of motivation include striving to accomplish a task such as gaining a new customer for a construction contract or attending continuing education classes for recertification for plumbing or electrical licenses (Hansemark & Albinsson, 2004). Both of these efforts can positively affect one's future state. Another may be performing community service to raise funds for an organization or improve another's well-being and lastly, winning an

award for superior performance. It can be deduced from these examples that motivation depends on the internal needs of the person (Barrick et al., 2013). What is the person's internal intent? The answer to this question will vary widely, based upon the person's need and their internal level of motivation. It can be inferred from this information that any attempt by an outside force, such as a manager, parent, or teacher, may not be successful.

Kajanova (2008) pointed out that motivation of employees was an important tool for managers to utilize. She wrote that a manager must understand how employees were driven to perform to their highest potential. This may be a futile endeavor by any manager because most experts suggest external forces have little chance of successfully influencing a person's motivation (Bassett-Jones & Lloyd, 2005; Deci, Eghrari, Patrick, & Leone, 1994; Deci, Koestner, & Ryan, 1999; Deci, Nezlek, & Sheinman, 1981; Levesque & Pelletier, 2003). Working environment, interpersonal communications, relationships, their economic condition, and family all may influence a person's motivation. A person's pursuit of life goals supported direct needs contribute to successful personal motivation. In short, Barrick et al. (2013) tied motivation to three of the four primary goals because the motivation has such a major impact on how people interact with others, and how they either move themselves forward or stay neutral. Motivation is an important aspect because it is the basis of creating success in business and in life. Woman leaders in construction must be highly motivated to continue moving forward against the tide in a male-dominated industry. Locke and Latham (2004) focused on task goal theory whereas Bandura (1986) studied the theory of allocation of resources and Klein (1989) focused on control theory.

Each of these aspects presented different aspects of motivation and in what manner goals and motivation come together improving the human condition and autonomy (Austin & Vancouver, 1996). Wagman, Hakansson, and Bjorklund (2012) found similar results through studies in occupational therapy. Wagman et al. found people require balance between activities to manage stress, goals, work variety, and self-determination through autonomy and competencies and in work value theory.

Self-Determination Theory

Self-determination theory fits into three of Barrick et al.'s (2013) primary goals: communion, autonomy/growth, and achievement striving (p. 136). Ryan and Deci (2000) along with Gagne and Deci (2005) discussed the self-determination theory. This theory discusses positively supported motivation and focuses on the psychological needs of "competence, autonomy, and relatedness" (p. 68). Ryan and Deci as well as Gagne and Deci found that when needs were met; motivation would be positively and conversely affected. If needs were not met, self-motivation would be stifled. Benabou and Tirole (2003) built upon Deci and Ryan and focused their study on a person's competence, autonomy and relatedness. Benabou and Tirole found that when a manager creates a motive that influences an employee it may work in the short term, but over time that motive might not be strong enough to overcome obstacles such as poor working conditions or performing work that, to the employee, does not seem to be worth her while. In other words, unessential or menial work that is beneath her skill sets or her competence level. Gagne and Deci's discussion of motivation included efforts, goals, fortitude, or personal potential in relation to a person's motives or purpose. Innumerable things such as wages, job satisfaction, personal feelings, family, or the need to reach

heights could affect personal motivation. Gagne and Deci agreed with Benabou and Tirole as well as Deci and Ryan. These same work needs were found in Warner and Hausdorf's (2009) work.

Warner and Hausdorf (2009) reviewed work and family and found that quality of life was impacted by a person's needs. Warner and Hausdorf focused on three of the primary goals set out in Barrick et al. (2013): autonomy, competence, and relatedness. Warner and Hausdorf found positive and negative impacts of jobs might either enrich or harm the family. People want to strive to achieve their fullest potential; they want to learn, to fulfill their natural curiosity, create and build upon previous knowledge (Deci & Ryan, 2000). Brown and Ryan (2002) furthered the discussion of autonomy, competence, and relatedness. This work focused on a person's psychological needs in regards to the overall physical and emotional health by looking at a person's attentiveness to various situations. Self-determination theory is important to woman leaders in construction because women need to continuously seek control over what they do, when they do it, and how they do their work. They also need to be highly competent and open to communication and input from outside sources to help them make critical decisions.

Implicit Motive Theory

The primary goals affiliated with this theory are communion striving, status striving, and achievement striving. The behaviors associated with this theory include a person's ability to be successful in various work situations, a sense of personal freedom to act and do as deemed appropriate, and sovereignty (Barrick et al., 2013). Van den Broeck, Vansteenkiste, De Witte, Soenens, and Lens's (2010) theory aligned with those of Brown and Ryan (2002) and Deci and Ryan (2000) as each found that workers need to

be in supportive work environments that allow for personal freedom and a sense that their work is meaningful. Accordingly, all of the aforementioned authors were aligned in that implicit motives were imperative to personal success strategies.

Volunteers, over time, have told their motivation stories to help develop implicit motive theory (McClelland, 1971). The act of the implicit motive has been attributed giving the person pleasure because the activity of the goal the person set was achieved in a short time period. Implicit motives tend to fulfill basic human needs (McClelland, Koestner, & Weinberger, 1998). This type of motivation tends to be short term and is specific to a certain desired event. Contrasted to explicit motives, implicit motives are internalized; explicit motives are used to achieve acceptance into a group (affiliation). The literature review for implicit motives found that it was associated with self-attribution; implicit motive is caused by a person's desire to accomplish something physical such as graduating from school, landing a new job, or buying a new car. Implicit motives are affiliated with unconscious desires and affected by culture (Schultheiss & Brunstein, 2010).

Little research occurred about implicit motives between 1989 and 2010 because previous research on the subject found it difficult to measure people's unconscious behavior and there was a lack of tested quantitative tools available. Implicit motive theory has, more recently, been used to study human behaviors. This theory has been used to predict personality traits such as arrogance (Robinson, Ode, Palder, & Fetterman, 2012), modify behavioral traits such as prejudice (Glaser & Knowles, 2008), and study how implicit motives might identify political movements (Maguire & Konrath, 2014). Implicit motives are internal to the person but might be influenced by external stimuli.

Woman leaders in construction must have strong implicit motives to enable them to move forward even when it looks like there is nowhere to move.

Needs in Work Setting Theory

The primary goals affiliated with this theory are communion striving, status striving, autonomy/growth striving, and achievement striving. Needs in work setting theory grew out of Murray's (1938) work. Steers and Braunstein's (1976) work developed and validated the Manifest Needs Questionnaire. Murray's contention was that a person's needs are set around achievement, affiliation, autonomy, and dominance. These four needs are the primary goals of Barrick et al.'s (2013) theory of purposeful work behavior. These same four basic needs were the foundation of the work of Steers and Braunstein as well as Kooij, De Lang, Jansen, Kanfer, and Dijkers (2011). Kooij et al. built upon research done by Steers and Braunstein as well as Murray by looking at how employee needs change over time. Kooij et al.'s findings help show the importance of teamwork and showed that younger workers had different needs from their work than did older workers.

According to Barrick et al. (2013), the behaviors associated with this theory include a person's ability to be successful in various work situations, a sense of personal freedom to act and do as deemed appropriate, mastery of skills, and sovereignty. The needs in work setting theory developed by Steers and Braunstein (1976) determined that specific behaviors are motivated by how important certain personal needs are valued. An example might be the goal of starting a new business. The degree of need may be evidenced by the effort a person takes to save money, sacrifices made, or effort put into a job. Kooij et al. (2011) used the four primary goals in relation to the importance of secure

employment over an employee's work life and recommended that older workers become mentors to aid younger workers in a servant-leader fashion. This step could potentially assist in achieving personal need in the workplace for both parties.

Servant leadership may help fill a personal need and can be empowering to others. It helps develop subordinates while strengthening the leader's position or role. Job roles at all levels may be positively influenced (De Sousa & Van Dierendonck, 2010).

Greenleaf (1977, 1998) identified 10 servant-leader characteristics, which all work to fill needs in work settings; he wrote of the power servant leadership can give to both employee and leader. The importance of needs in work theory is it ties all of the four primary goals together. Work value theory is the only theory that utilizes all four primary goals. The primary difference between work needs and work value is monetary (Barrick et al., 2013).

Work Values Theory

Work values theory fits into all four of Barrick et al.'s (2013) primary goals of communion striving, status striving, and achievement/growth striving, and achievement striving. This theory differs from needs in work theory because work values includes pay or remuneration for services rendered. This theory uses autonomy and job variety. It also includes job status, such as business ownership or management level. A key component to this theory is the worker's internal need for generosity and kindness. Fehr and Fischbacher (2003) wrote that even a minority of kindness and generosity could influence a group and turn around greedy or unkind behavior. Positive and generous behaviors can even affect long standing cultural behavior with persistence and fortitude (Kooij et al., 2011). This behavior fits into the communion striving goal (Barrick et al., 2013). The

study showed evidence that passing information and learned experience from one group to another in the form of mentoring does increase cooperation. The opposite has found to be true in this same study. Negative attitudes and bullying behavior can also affect the workers (Fehr & Fischbacher, 2003). Remuneration for work can be affected by either positive or negative influences from work groups.

Work values are influenced by power and pay levels. Executives have an explicit and implicit impact on a business and its direction (Kehr, 2004). Power and influence of owners and executives have been shown to have an impact on the success of the business. A leader's intent toward risk taking can enable her to push further into unknown areas (Kooij et al., 2011). This lack of risk aversion can aid in growth of market share and thereby strengthen the company (Davis, Bell, Payne, & Kreiser, 2010). Another work value is the prestige of firms individuals lead. If firms have a high ranking in, for example, the *Fortune* 500 group, CEOs may be more interested in the prestige of the presumed power they may wield and be willing to take less monetary remuneration (Maug, Niessen-Ruenzi, & Zhivotova, 2014). The net effect of the status fits in with the status striving goal and the achievement striving goal (Barrick et al., 2013). The culture dictates what is and is not acceptable in acquiring power (Gale, 1994; Torelli & Shavitt, 2011).

Gale (1994) asserted that construction and conflict are tightly bound together because of the masculine culture in construction. Risk is inherent in construction, which is associated with work value. Work values are based upon authority, which is how the leader interacts with peers and those she supervises or reports to (Torelli & Shavitt, 2011). Gale asserted that women prefer not to be involved in conflict, which can arise in

male-dominated industries. He argued that female role models in construction may limit their mentoring to women similar in disposition to themselves, thus creating a “self-selection” (p. 10) of “certain personalities and attributes in female entrants to the construction industry” (p. 10), because men are not willing to be mentored by women. Dainty and Lingard (2006) found that, frequently, women that put family either ahead of or equal to their work in construction would lose ground in their ability to move forward in their career path.

Dainty and Lingard (2006) used “human capital theories and noneconomic, feminist, or gender theories” (p. 108). In short, human capital theory states that a woman’s value in the economic market is less valuable than a man’s. Her primary role is that of a homemaker and his primary role is that of the breadwinner. Woman leaders in construction value their autonomy, ability to manage their work/life, and ability to use their multiple skill sets. As a result, work value can be at odds with work culture, social culture, and remuneration when gender roles play a predominant role (Anker, 1997; Brescoll, Dawson, & Uhlmann, 2010). Work values theory not only ties all the primary goals together but also complements needs in work theory (Barrick et al., 2013).

Need Hierarchy

Need hierarchy theory supports communion striving through associations, being part of the team, self-esteem, and self-actualization. McClelland’s (1971) and Heylighen’s (2007) self-actualization theory discussions were reconstructions of Maslow’s needs hierarchy theory and redefined them to include three competencies: material, cognitive, and subjectivity. Maslow’s basic needs proposed how real people should look, feel, and behave when they are happy, healthy, and mentally stable. Fidler

and Fidler (1978) explained the development of a person's reality or self-actualization by doing, or participating in, multiple types of activities to gain experiences. Woman-owned or -managed businesses have the same needs in planning a successful business as men.

Maslow's (1939) needs hierarchy theory found that humans had five primary needs, which feed human motivation: "physiological, safety, love, esteem, and self-actualization" (p. 394). Maslow further wrote that the most important need would override all other needs. Therefore, as the need is satisfied it would move to the side and the next need would move up in the order of priority to be satisfied. Maslow concluded that the human being is in constant need or "perpetual wanting" (p. 395). Maslow felt that his theory was in the "functionalist tradition" (p. 137) of James (1890) and Dewey (1884), and mixed with Wertheimer (1937), Goldstein (1995), Freud (1933/1965), and Adler (1938). Motivation and goal setting followed Maslow's human needs. Multiple authors' results supported Maslow and built upon his findings. Goal strategies were closely aligned with human needs. The literature pointed out that men and women set up and acted upon goals differently from each other.

Successful businesses have similar traits with strong business plans, goals, primary goals, and sub goals, all of which support an overarching strategy. The smaller the company, the more the strategy and all related goals reflect the owner or primary leader's ideals and autonomy (Buttner & Moore, 1997). Personal values become essential in the success or failure of the smaller business. Chaganti (1986) and Brescoll et al. (2010) believed that there was a difference between the way men and women ran and organized businesses due to the differences in personal value systems. Chaganti focused on gender roles and he used a multiple-case study of women in large businesses as his

basis. Brescoll et al. found that women were excluded from decision making due to institutionalized stereotyping. This roadblock crossed over to multiple fields of employment. Chaganti created a table that compared women business leaders to male business leader strategies. The sense or actuality of not being part of the accepted group, because the organization is male dominated, conflicts with all four of the primary goals; communion, status, autonomy and growth, and achievement striving (Barrick et al., 2013).

Goal setting is a well-known strategy for success and has been studied over many decades in the field of psychology. Motivation, in the context and structure of goal constructs, was included in Austin and Vancouver's (1996) work, which found that primary goals might also have sub-goals to aid in achieving the primary goal. Austin and Vancouver formulated a goal building process which consists of establishing the goal (any internal or external influences), planning the strategic steps to achieve the goal, the achievement of the goal, and then assessment of goal achievement. All of this supported Maslow's (1939) needs hierarchy.

Austin and Vancouver (1996) created a comprehensive taxonomy table that listed goals people frequently endeavor to attain. This table included both the positive and negative consequences for both the individuals and their environment. Goals and motivation theory were integrated closely in the literature reviewed. Locke and Latham (2002), Bandura (1986), and Kanfer and Ackerman (1989) all wrote about different aspects of goals, strategies, and hierarchy theory. Fidler and Fidler (1978) explained the development of a person's reality or self-determination by acting or participating in

multiple types of activities to gain experiences. Edwards (1992) built upon needs hierarchy through his research on stress and coping.

Edwards (1992, 2008) developed a cybernetic theory of stress, coping, and well-being in organizations as a general framework to understand organizational behavior. His theory pulled together multiple areas in researched behaviors such as stress, goal setting, and motivation. These key words relate to esteem and self-actualization in the taxonomy of the theory of purposeful work behavior through Maslow's hierarchy of needs theory. Needs hierarchy theory encompasses the need to belong to a group. Peer acceptance is important and self-esteem is necessary to allow one to move forward and take risks. This finding fits into the four primary goal strivings as discussed and described in Barrick et al. (2013).

Interpersonal Circumplex

Interpersonal circumplex theory is situated in two of the primary goals: communion striving and status striving goals (Barrick et al., 2013). As found in motivation theory the person strives to become part of the team and uses skill sets such as sociability to achieve this goal (Kiesler, 1996). Chaganti (1986) found that women tend to be less autocratic in their personnel policies and tended to remain family-oriented in their personnel policies that fit into the interpersonal circumplex theory. In Chaganti's study, women tended to have modest goals and men were aggressive; women focused on strategies for services and niche marketing whereas men dove into diverse marketing and only niche marketing to enter the marketplace. Women entered the marketplace using low capital opportunities and men were not as risk adverse. Business systems women used were informal and decentralized whereas men started out informal and decentralized

but moved into a more formal system as the business grew to help manage the diversity to enable strong growth.

Some reasons women tended to use to start their own business included inability to grow or receive promotions or pay increases, lack of job openings or opportunities, growth potential had reached its maximum, and being able to manage their personal time to fit family needs (Buttner & Moore, 1997; Caliendo & Kritikos, 2010; McGowan, Redeker, Cooper, & Greenan, 2012). Interestingly, Chaganti (1986) and Buttner and Moore (1997) found that men started their own businesses for reasons similar to their female counterparts. Chaganti as well as Buttner and Moore found that women tended to put less value on income from their business than men. Chaganti as well as Buttner and Moore showed that the women tended to fit into the communion, autonomy/growth and achievement striving goals. Some aspects of status striving goal are present in esteem and competitiveness.

Buttner and Moore (1997) found that women tended to provide a service that made them feel valued in their community or provide a quality product of which they could be proud. Strategies they used included being customer focused, niche market, exemplary customer service, and uniqueness of product or service. Women felt the need to be more financially conservative than the men did and were not as prone to financial risk taking as their male counterparts (Chaganti, 1986) Woman-owned or -managed companies were more prone to equal hiring of gender, but expected high quality of performance from whoever was hired (Brescoll et al., 2010). Women tended to be less autocratic in their personnel policies and tended to remain family-oriented in their personnel policies that fit into the interpersonal circumplex theory (Yoder, 2001). The

staffing of woman-owned businesses tends to remain small and family-like whereas men focused on aggressive growth. Men tended to become more rational as the business grew and overall performance of the woman-owned business resulted in lower profitability and little or no growth; on the other hand, man-owned businesses produced low profits and growth, but slowly grew over time (Chaganti, 1986). Interpersonal circumplex theory supports communion and status striving goals through social skill sets and personal competition (Barrick et al., 2013).

History of Women in Construction

Women have owned and operated businesses of all types for millennia. Women trended toward businesses such as millinery, childcare, teaching, and nursing (Petty & Miles, 1976). Women rarely sought out work thought of as man's work. These fields included engineering, construction, trade work, banking, and plumbing. In the West, since World War II, businesses needed women to substitute for men in traditionally male-dominated jobs as the men were needed in the military (L. M. Moore & Rickel, 1980; Petty & Miles, 1976). Women have worked in nontraditional businesses more extensively since World War II. The literature about woman leaders in construction was lacking. Specific research on woman leaders in construction did not begin in earnest until the 1980s and then, it was sporadic. Most of the literature found was published in the United Kingdom and Australia, and rarely in the United States. Literature about woman leaders focused on the differences between men and women or the difficulties women experienced in the construction industry.

Barriers against women entering into the construction industry continued to exist in 2000 in the United Kingdom. Fielden, Davidson, Gale, and Davey (2000); Fielden,

Gale, and Davey (2001); and Aulin and Jingmond (2011) continued the investigation into barriers posed against women. It was thought that inherently poor working conditions (such as inclement weather and dirty working conditions) made the idea of working in construction unappealing to young people and women. This idea was perpetuated because training schools in the United Kingdom would send female trainees out on their first job during January. This resulted in low retention rates and poor recruiting numbers.

The U.K. government's Construction Industry Training Board involvement in recruiting was problematic because, although they were able to recruit reasonable numbers of women trainees, remuneration was not a living wage. As a result, these trainees would either leave or not show up for work (Gale, 1994). Brockmann, Clarke, and Winch (2010) found that the same problems identified in Gale's work were still present. Recruitment continued as a concern because the Construction Industry Training Board advertised during sports games whose primary audience was male. This advertising and recruitment was deemed sexist. Gale's focus groups of both genders found that women were continually discriminated because they were thought to be too weak to do the work. All participants agreed that continuing education, recruitment, and retention were needed. Gender discrimination (Denissen & Saguy, 2013) in recruiting, retention, and pay was reported in both the United Kingdom (Gales, 1994) and United States (Berik & Bilginsoy, 2006; Byrne, Clarke, & Van Der Meer, 2005). Participants reported during some focus groups that various discriminatory practices were actively in place. Age, race, gender, and sexual orientation were common themes. Even being overqualified based on school grades or test scores were cited. In the United States,

women apprentices faced high recruiting and attrition rates in the construction trades (Berik & Bilginsoy, 2006).

1960s Through 1980s

Equal opportunities in the workplace and an end to discrimination were on the rise due to the equality movement of the 1960s. Title VI was enacted in 1964 in an effort to bolster civil rights. This act dealt with projects that were federally funded (Berg, 1964). Title VII, Section 701 (equal employment opportunity) was also enacted in 1964 which specifically prohibited gender discrimination (Vaas, 1966). Both of these titles are part of the Civil Rights Act of 1964 enacted on July 2 (Public Law 88-352). These titles not only affected education but also aided in better access to jobs for women, although access to predominantly male jobs was still hindered (Reskin, 1993). In the 1960s, newspaper ads for all types of work were classified by gender (Levinson, 1975). The opportunity to earn more income by working in jobs historically classified as for men was attractive to women. More women entered the workforce in the 1960s and the number increased in the 1970s and on (O'Farrell & Harlan, 1982).

Women entered into traditional male occupations in greater numbers. Traditionally, male job types paid more than female job types (Lazear & Rosen, 1990). Over 4 million women entered the workforce in the United States in the 1960s (Hedges, 1970). The beginnings of the Women's Movement in the mid 1960s, an extension of the Women's Suffrage Movement of the early 1900s, began to gather momentum (Shapiro & Mahajan, 1986). The Vietnam War was escalating, the draft took young men in large numbers to fight in the war, and women were needed to fill the labor gap (O'Farrell & Harlan, 1982). The construction trades needed women as well as men, yet very few

women entered these fields even though the pay was good and the type of work was acceptable to women. As a result, concern about filling construction job openings grew.

Looking ahead to the 1970s, futurists forecasted that women would continue to enter the workforce (Carnevale, 2008). Office jobs experienced the greatest increase in female employees. Women were obtaining higher education degrees and they were studying engineering, medicine, and multiple fields in the sciences (O'Farrell & Harlan, 1982). In the 1970s, more women entered the construction trades, but not to the same degree as they entered into the clerical fields. The construction manual trades did not require more than a high school degree (Beller, 1985). Hoffman (1972) reviewed data from female child development trends and found that, for the most part, girls were trained to be more dependent than boys and to please other people to gain personal satisfaction. As a result, women showed a higher need for peer acceptance. Peer acceptance was not readily available in the construction trades (Wial, 2008).

Peer acceptance might have been available if the culture was modified (Wial, 2008). Hoffman (1977) hypothesized that as gender roles were modified, and men and women shared family roles such as child rearing, housekeeping, and cooking, socialization patterns for boys and girls would change and modify adult behaviors and work opportunities. The 1970s saw a decrease in family size; life span was on the increase and more women were working outside the home. The 1970s were highlighted as the era of recognizing gender and race in the workplace (Hoffman, 1977).

The 1980s saw state legislatures across the United States institute equal opportunity legislation, administrative codes, and rules to ensure that women and minorities were afforded an opportunity to open businesses, obtain jobs, and attempt to

achieve success (McCann, 1994). L. M. Moore and Rickel (1980) pointed out that woman in less traditional work tended to see themselves as managers as and more masculine than feminine in their work skills. Women thought that a domestic role was less important to them than women in more traditional work roles (Harlan & O'Farrell, 1982; Lillydahl, 1986). The 1980s found that women in construction in the United Kingdom comprised less than 10% of the working population in construction trades (Gale, 1994). Women made up 48% of the workforce in the United States in 1980 (Westcott & Bednarzik, 1981) but women in construction made up only 2% of that workforce in 1995 (U.S. Department of Labor, Women's Bureau, n.d.b).

1990s Through 2000s

In the early 1990s, women comprised 45% of the workforce (Reskin, 1993). In 1994, women in the construction trades made up under 2% of the trade and grew just a fraction of a percentage point by 2002 (U.S. Department of Labor, Women's Bureau, n.d.c). Anna et al. (2000) were the primary researchers for women working in nontraditional roles such as construction. Barriers against women entering into the construction industry continued to exist in 2000 in the United Kingdom. Fielden et al. (2000) from the United Kingdom identified a number of barriers preventing women from either entering or moving forward in the construction industry. Some of these barriers included an overall image of the construction industry, education designed for men instead of women, sexual harassment toward women and the cultural attitude that women do not belong in the construction trades.

Human resources practices and the push to put women into the supporting roles in construction such as secretarial, administrative, or security positions was the focus of

Fielden et al. (2001). Aulin and Jingmond (2011) studied women in construction trades in the European Union. Overall, the research found that women were not accepted in the trades, but perhaps by altering the cultural acceptance of the construction trades as a viable work option for women, perhaps at some point in the future women may be welcomed. In general, it has been found that women are capable of performing any job on a construction job site as a man (Dainty & Lingard, 2006). Even so, women are still not equally represented in the construction workforce and still facing hidden discrimination (Denissen & Saguy, 2013). The hidden discrimination was directed toward women of childbearing ages. Some women were forced to work part-time or in an office environment. Both of these situations greatly reduce a woman's ability to obtain pay increases, job experience that can lead to greater responsibilities, more diversity of job roles, and so on (Denissen & Saguy, 2013).

The rate of women in construction was compared to women working in other male-dominated fields such as the timber and automotive industries. Similar experiences of discrimination and other hardships were found in those industries, possibly signaling cultural taboos as a root cause for problems in recruitment and retention. Menches and Abraham (2007) found even though there was a shortage of workers around the globe, women were hesitant to enter the construction trade because of its reputation as being hostile toward women. The common theme of these two studies is the difficulties faced by women interested in working in the trades and the roadblocks they must overcome.

Dabke et al.'s (2008) study in Cincinnati revealed that when women were paid equally to men in the construction trades, their job satisfaction was positive. Unfortunately, this study found that women's pay and benefits were not equal to men

doing the same work (Aulin & Jingmond, 2011). Opportunities included buildings (towers or homes, etc.), roadwork, electrical, plumbing, ventilation, engineering, and so on, all of which have historically been male-dominated job roles. Even though much has been done to aid women in the workplace in the past 30 years, no ground has been gained in the construction industry. One method women have used to make headway is to start their own businesses.

Anna et al. (2000) noted that small businesses create more than half of the U.S. gross domestic product. Woman-owned businesses in comparison to man-owned businesses were smaller (Carter & Allen, 2006). Many reasons could contribute to this, including capital funding. The percentage of women's business ownership in high tech, construction, and manufacturing businesses has remained considerably less than man-owned businesses (Hackler, Harpel, & Mayer, 2008). Women who had created their own businesses were still obtaining new business but any equal employment opportunities they had been afforded earlier eroded.

The cultural attitudes of employers have not changed over the past 3 decades (Anna et al., 2000). During the 2000s, a major recession greatly influenced the availability of jobs worldwide (Sobotka, Skirbekk, & Philipov, 2011). In 2010, the U.S. Department of Labor combined the occupations of natural resources, construction, and maintenance occupations and the percentage dropped. As of 2010, women comprised over 46% of the workforce and the percentage is projected to reach at least 50% by 2018 (U.S. Department of Labor, Women's Bureau, n.d.d). Over the many decades, the number of women who have entered the workforce outside the home has risen from

under 5% over 71% in 2014 (Cohn & Caumont, 2014); however, less than 3% work in construction trades (National Women's Law Center, 2014).

Mentoring

In the 1980s, there were few women working in the construction trades. There were even fewer women in the engineering fields, which supported the construction (Dainty, Bagilhole, Ansari, & Jackson, 2004). Role models were difficult to find for women. Mentoring was even more difficult for women to find. Women would look for other women to mentor them. Women were not aware that mentoring was an important process in moving up the ladder of corporate success (Dainty et al., 2004). As such, women who were entering the construction trades and the associated engineering fields, left almost as rapidly due to lack of support, feelings of isolation, and even gender discrimination (Dainty et al., 2004). In their research, it was clear that mentoring was an important component after recruitment to retaining women in the construction trades.

J. D. Moore (2006) studied how women chose to enter into the construction trades. Mentoring was a major factor in their decision making. She found that women were greatly affected by the company they chose to work for. Management styles, human resources actions, the number of fellow women workers, and mentoring were among some of the strongest impacts of recruitment and retention in the trades. J. D. Moore's findings supported other writers regarding education of women in math and science (Tobin & Gallagher, 1987; Walls, 2000; Ware & Lee, 1988), all of whom wrote about women in the sciences and found that the number of women entrants and graduates is fewer than needed to support growth in the sciences. J. D. Moore further found that it was

important for women to have role models and mentors in assisting them in choosing their career path.

Mentoring has not been as readily available to women as it has been for men (Essic, 1999; Raggins & Cotton, 1996). This theme was supported by Kalousdian (2008) through his interviews of various women working in construction. Their career choices were made due to various life circumstances, but financial and personal freedom and sense of personal achievement were common themes. Women admitted that the road was not easy but in the end, the struggle was worth it. Another common theme was entry into the trades was fostered by family support or following family tradition. Mentoring has also been used to promote advancement. Mentoring has traditionally been a male-oriented support system. As women moved out of the home and into the outside workforce, they noted that men were mentored and noted this was an important factor for their success (Washington, 2007). Many barriers have been put in front of women when attempting to enter the workforce (Noe, 1988). Women must be cognizant of events and subtleties surrounding them (Lyness, 1997; Lyness & Thompson, 2000). Washington's (2007) study did not find a difference between how men and women are mentored and how they mentor others.

It was noted that men were more effective in mentoring other men and women, but women mentors were less effective mentoring men than women (C. A. Dreher & Cox, 1996; G. F. Dreher & Ash, 1990). In her qualitative exploratory study, Washington's (2007) major finding was that the most effective way to help women gain equal footing in the workforce was to provide meaningful mentoring and that a manager must make note of this and make it a priority when working to help women make career

advancements. Eicher (2013) performed a qualitative study of mentoring women in construction management using a grounded theory format. The most important finding in the study was the continuing theme that mentoring was an important factor in female students' decisions to continue in the program or leave. An unexpected finding reported by Eicher was that students preferred mentors who were similar in age.

A first line manager's function is to promote subordinates and remove roadblocks so employees can do the work they are tasked with (Brodsky, 1993). Pigeon et al.'s (2012) study looked for the differences between gender pairings of mentors with mentees. Their quantitative study found that woman-to-woman mentoring resulted in lower wages for the mentee than when the woman mentee had a male mentor. Pigeon et al. found that their study was limited because the manager was frequently the mentor and there was no way to rate or analyze the mentor/mentee relationship prior to the study or after the study. Pigeon et al. found that companies under examination may be saving on labor costs by paying women less than men; however, eventually, the women will react, and possibly in a negative manner, and may leave, demand greater pay, require male mentors, or decline female mentors. Whittock (2002) wrote of gender discrimination in male-dominated jobs. The findings in Pigeon et al. and Eicher (2013) supported Whittock.

Gap in Literature

Women in the construction trades over time have not been significantly studied. This researcher was involved in lighting and noticed that very few women owned their own construction-related business or were in leadership positions in the construction industry in the Northwestern United States. There was a significant gap in the literature.

Very few scholarly articles or research documents were found on woman leaders in construction and none was found that discussed the effectiveness of motivational practices and success strategies. The findings in this study help to fill that scholarly gap of a few articles on the subject of woman leaders in construction, effectiveness of motivation practices, and success strategies. Understanding the literature will allow the researcher to have clarity regarding existing studies with content that has detailed how this theory has been used with other populations, contemporary work on the topic, and gaps needing to be filled. The researcher will also review studies that have used the theory and studies related to the motivation and success strategies of women.

A comprehensive search of the Internet was conducted. One dissertation by Besser (2006) wrote about women in construction management. She also conducted a comprehensive literature review and experienced the same lack of literature on the subject of woman leaders as well as women in construction. Many of Besser's sources were the same as cited in this research paper. The number of peer-reviewed articles between 2006 and 2014, an 8-year period, was very low; 11 total were located that could be used in this research. The following is a brief synopsis of each author and their country of origin.

Menches and Abraham (2007), U.S. authors, wrote of recruiting women into engineering to fill future worker shortages. Dabke et al. (2008), U.S. authors, examined job satisfaction for women in construction. Kalousdian (2008), a U.S. editor, discussed women from the state of Michigan working in construction trades. Watts (2009a) also wrote of barriers against women entering the construction trades and the impact on work life due to required long work hours. Watts (2009b), a U.S. female author, continued the

research by writing about issues women face when managing men at construction sites. Jaafar, Othman, and Jalali (2014) discussed the various construction trades women had entered over the past 30 years in Malaysia. Ness (2012), an author from the United Kingdom, posited that women can do any job in the trades the men can do and why it is a cultural problem. Greed (2013), who was from the United Kingdom, reviewed work–life balance for women in construction. McCarthy, Thomson, and Dainty (2013), also all from the United Kingdom, discussed equal employment opportunities. Sewalk and Nietfeld (2013), U.S. researchers, wrote of the barriers that women face in entering education for management in the trades. The National Women’s Law Center (2014) discussed sexual harassment in the construction trades that exist in today’s work world. Only 10 different authors were located for this literature review for dates between 2007 and 2014. Of those, five were American and five were British.

This literature review focused upon the theory of purposeful work behavior. The seven major theories and four primary goals as put forth by Barrick et al. (2013) were reviewed and discussed to aid the researcher in interpreting and analyzing the data collected during the interviews. The goals and theories were also discussed to aid the reader in understanding the reasons the researcher asked the questions she did to elicit responses which furthered the information available to future researchers and to aid in spurring further research in the field of women in construction.

Culture and Career Choice

In the 1990s, the economy in the United Kingdom was expanding, creating a shortage of workers. Women were being recruited to work in engineering, architecture, and all of the construction trades (Dainty, Bagilhole, & Neale, 2000). The construction

industry has always been dominated by men and women's entry into construction and manufacturing occurred because of the World Wars I and II and, subsequently, the drastic shortage of men (L. M. Moore & Rickel, 1980; Petty & Miles, 1976). *Culture*, as defined in this work, is what people think, do, and build. It is learned and transmitted from family, friends, and associates, and is learned by the receiver and then shared with others (Bodley, 2011).

Gender, Sex, and Minorities

Mills (1988) wrote about culture, gender, and organizations. His thesis linked gender and culture. He separated the terms *sex* and *gender* to aid in his thesis. *Sex* was described as a physiological term and *gender* was described as the "nature" (p. 352) of the person. The nature of a woman over eons has been to nurture the family and support the man. The value of a woman was based upon her nature and in many countries. This value is seen still strongly in place (Treiman & Hartmann, 1981; Waring, 1999; Waring & Steinem, 1988). Treiman and Hartmann (1981) found a large discrepancy in remuneration between men and women.

Minorities were also included in the report, but the final conclusion showed that women were discriminated against more intensively than minorities. Dainty and Lingard (2006) examined whether gender issues in construction were cultural based upon the industry or were based upon cultural issues (societal) of the country. The findings from one study showed that women did not progress at the same rate as the men. Social roles, job roles, work-life balance, and organizational culture of the companies were among the reasons for the differences. Mills (1988) strongly supported the concept that an organization's culture helped to maintain the status quo of gender discrimination. When

the construction trades, trade unions, or a construction company is seen as the organization, the culture they hold determines how women are valued. Even though women have been a key factor in growing the world's economy, the culture of construction trades, trade unions, or construction companies have remained strongly in favor of male domination and strongly against the inclusion of women. Part of the culture of construction is working long hours (Watts, 2009a, 2009b).

The Job

Ness (2012) found consistency with Watts (2009a, 2009b) and furthered the findings by noting that construction workers work long hours. This meant that if someone were at home taking care of the domestic duties, workers could stay on the job longer.

Dainty and Lingard (2006) discussed how self-employment allows women to be autonomous. It reduces many of the restrictions an organization places upon them, which can include long hours. Self-employment allows them to choose their own schedule and not diminish their skill sets. Long hours are then at the owner's discretion and choice (Watts, 2009a). In the discussion of the studies, the authors noted that indirect discrimination "shape women's careers in the construction industry" (Dainty & Lingard, 2006, p. 114). The study captured information showing that "long hours and general inflexibility" (p. 114) was a primary reason for "restrictions on women's careers in comparison to their male counterparts" (p. 114). Ness (2012) noted that very few men participated in any domestic work and very little, if any, time with children. She found that the writings of the 1980s, 1990s, and early 2000s were during a boom time in construction. This produced a lack of workers so women were viewed as a backup

resource. When the Recession of 2008 occurred, women were no longer needed, hence, the rapid decline of women in construction.

Much information was found on culture which could be applied to the construction trades. Barthorpe, Duncan, and Miller (2000) wrote specifically about the definition and generation of societal cultures and focused on the culture of construction and its impact on women. Culture can also describe the basis of how a group works together and communicates. Deal and Kennedy (as cited in Barthorpe et al., 2000) identified cultural tenants of businesses: surroundings, values, idols, mentors, ceremonies, and networking. Socialization is how culture survives and thrives. Humans build norms to guide their behavior, which allow them to get along together (Barthorpe et al., 2000).

The culture of construction is hard work, male-dominated, high levels of self-employment, long working hours and intimidation (Anna et al., 2000; Aulin & Jingmond, 2011; Bergmann, 1974). Fielden et al. (2001) further found in the United Kingdom, a high percentage of employed men whereas only half of women worked outside the home in the mid-1990s. It was also found that approximately 1% of working women held jobs in the construction trades (Fielden et al., 2001). Most of the literature to date has been focused on the barriers women were faced with. The general populace knew little about the trades (Hancock, 2004). Career counselors did not discuss the trades in schools. Fielden et al. put a positive spin on women in construction and posited that perhaps the construction trade's culture might have been in the process of being modified.

Gale (1994) took the position that the roles of men and women in the construction industry were greatly determined by socialization from childhood to adulthood. He

posited that the opposing viewpoint was the biology of men and women greatly influenced which job types they selected. Women and men tended to grow up and work in fields that were socially acceptable and comfortable to be in. In his conclusions, he stated that if culture were to be changed, it would be by people who have “a vested interest in promoting and maintaining that culture and to resist change” (Gale, 1994, p. 11). Culturally, it is more acceptable for a man to spend less time at home and with family than it is for a married woman with children.

The culture must be altered and it will take many years, if not decades, to achieve equality in the workplace. An important finding was the value that women put on their work–life balance. This factor was further investigated by Watts (2009a, 2009b). Ness (2012) had generated much information on how men viewed women in *their* line of work and also generated information on how employers view women in *man’s* work. Women were viewed as a human resources problem area. If no women were hired, then there would be no sexist behavior to contend with. This information is important because it is very similar to data in other studies and also in findings from this present research study. The conclusion is the same as in previously introduced reviews. In order for more women to successfully enter and remain in the field of construction, doors must be opened and kept open.

Professional Education and Training for Women in the Trades

Successful learning was highly dependent upon a person’s intrinsic motivation (Deci, 1971, 1975; Hancock, 2004). Berik and Bilginsoy’s (2000a, 2000b) study focused on how women entered into the trades and how they exited the trades. Their data were gathered from the U.S. Department of Labor. Berik and Bilginsoy’s (2000a, 2000b) study

found that the number of women trainees was diminishing instead of growing as anticipated based upon their research from the 1990s (Berik & Bilginsoy, 2006). Berik and Bilginsoy's (2006) work showed it was not union apprenticeship training that was responsible for the rise or fall of women's entry or retention into the trades. Instead, they showed that contracting companies treated women as unequal to men. They also found that the quality of government regulations, which supported them, made the greatest impact on retention of women working in construction.

The U.K. government was concerned over the shortage of skilled labor and the lack of women in construction and engineering so it established the Construction Industry Training Board (Lloyd, 1999). The construction industry in the United Kingdom and in the United States has been a large portion of the general economy, and grew an average of 4% per year in the 1980s and 1990s in the United States (Lloyd, 1999). It was thought that inherently poor working conditions (such as inclement weather and dirty working conditions) made the idea of working in construction unappealing to young people and women (Lloyd, 1999). This idea was perpetuated because training schools in the United Kingdom would send women trainees out on their first job during January. This resulted in low retention rates and poor recruiting numbers (H. A. Halepota, 2005). Lloyd (1999) and H. A. Halepota (2005) noted that education, recruiting, and retention are impacted by the quality of training women are afforded.

Fielden et al.'s (2001) action research allowed participants and researchers to actually change behaviors based upon educating the subject by being actively involved and open to changing their various viewpoints and existing behavior. Focus groups were used to explore situations, outlooks, behaviors, attitudes, and barriers presented (Fielden

et al., 2001). As one focus group analysis was completed, the planned research question or focus for the next focus group was modified to establish a progression in modifying attitudes and behaviors through education. Four different focus groups used the same pattern of training. The following concepts were focused upon: “Improving knowledge of barriers to women’s entering and working in construction, . . . development of practical steps for building contractors to ensure quality, . . . [and] identifying the costs and benefits of good practice” (p. 296). Berik and Bilginsoy (2006) supported this study by finding that female apprentices were not afforded appropriate training.

Berik and Bilginsoy’s (2006) research on training for women in the construction trades for the years of 1995 through 2003 determined that training was inadequate and interfered with recruitment and retention rates. The Civil Rights Act of 1966 was very successful in raising the number of African American men in the construction trades through active recruitment and effective training. This same story was not true for women (Dabke et al., 2008). Because most training in the construction trades is done by unions, unions have received the brunt of the blame for not properly training women (Berik, Bilginsoy, & Williams, 2011). This information supported several aspects found in the literature review. Organizational culture guides acceptance of specific behaviors. When the organization does not accept a group of people, they will not be properly trained or mentored.

Chapter Summary

The introduction gave a brief overview of subjects such as legislation and equal employment opportunities that were opened up in the 1960s and were expanded in the 1970s, 1980s and 1990s. The theory of purposeful work behavior was introduced and

described. The primary research question for this study was: What may be learned from a study of the motivation processes and successful work outcome strategies used by successful woman leaders in the construction industry in a Northwestern U.S. city?

The subject of motivation was reviewed in relation to the seven major theories and four primary goals. The seven major theories and four primary goals were reviewed and discussed. Motivation, self-determination, implicit motive, needs in work setting, work values, need hierarchy, and interpersonal circumplex were each defined, described, and discussed.

A brief history of women in construction was reviewed. This included a history of women's entry into working outside the home and some of the reasons why it became necessary to do so. The definition of culture was reviewed and the reason for norms. This was done to help explain the articles reviewed. Timelines were created to aid in understanding the movement of women into the construction trades and to aid in understanding some of the roadblocks that have existed. The first timeline block was the 1960s through the 1980s. This period of time was filled with federal legislation and societal movements to open doors or windows or opportunities for job entry into the construction trades. The 1990s through 2000s discussed the stagnation of opportunities.

Culture and career choice and mentoring were reviewed. Discussion of the difference between terms of gender and sex was added to help readers understand why the term *gender* is found in the literature and that the term *gender* is the nature of the person. This helps to put culture into context and explain how culture impacts women in the working world, especially in construction.

The literature review on availability and style of training and education in the construction trades showed that they are designed to help men, not women. Trade unions are primary sources of training and education. This tied back to cultural roadblocks women face in successfully moving into the construction trades.

Mentoring was found to be important in the success of women in the trades. Barriers of all types which make it difficult for women to enter and stay in the construction trades were found in all articles reviewed. Each article had similar findings and supported each other to a great degree. There is little literature regarding women in construction in the United States so information from the United Kingdom was primarily reviewed. The gap in the literature was reviewed, the number of U.S. versus U.K. authors was noted and only 10 different authors and 11 articles between 2007 and 2014 were located for this literature review.

The gap in the literature was how few peer-reviewed articles exist about successful woman leaders in construction. No peer-reviewed articles were found about motivation processes and successful work outcome strategies of woman leaders in construction.

CHAPTER 3. METHODOLOGY

This study method and design were chosen to understand what can be learned from a study of the motivational processes and successful work outcome strategies used by successful woman leaders in the construction industry in a Northwestern U.S. city. With so few women in construction relative to the size of the industry in the United States, limited research has been completed to understand this segment of the population.

This study may make more information available for persons interested in understanding woman leaders in construction, as it relates to their motivational processes and their successful work outcome strategies. The limited information that exists is not current and needed updating. As women work to achieve new levels of success and contribute to communities through service in this industry, their practices and achievements merit documenting.

Research Design

The study was conducted by this researcher using an exploratory multiple-case study method (Yin, 2009). The use of this method for this research made it possible for the researcher to complete a comprehensive study of the motivation processes and successful work outcome strategies of women working in construction in a Northwestern U.S. city selected.

A case study is one of many methods categorized as interpretivist. Case studies are defined in two ways: the scope of the case and the features of the case (Yin, 2014).

A case study is an empirical inquiry that

- Investigates a contemporary phenomenon (the case) in depth and within its real-world context especially when
- The boundaries between phenomenon and context are not clearly evident” (Yin, 2014, p. 16)

A case study inquiry

- Copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result
- Relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result
- Benefits from the prior development of theoretical propositions to guide data collection and analysis. (Yin, 2014, p. 17)

Further, Yin (2014) explained that every study required a plan or research design in which the design represents a way to get from here to there in the study. This study was carefully reviewed to ensure that the all sections were aligned with the research question, in a manner that was consistent with all sections of the case study design.

With the research question and the design, the researcher prepared an interview guide that was used during interviews to collect data from woman leaders in construction. In that the design called for multiple “sources of evidence” (Yin, 2014, p. 105) to triangulate the data, the researcher also used documentation and observations.

Population and Sampling

Population

The population for this study was woman leaders in construction. These leaders represented the various construction specialties.

Sample Size

Yin (2014) explained that a multiple-case study could have as few as three participants, with a preferred size of six to 10. Even though the sample could be small,

this researcher identified a sample size of 20 woman leaders. The larger sample of 20 participants ensured that the researcher collected sufficient data to answer the research question for this study. The researcher also had enough participants to check the data for the point of theoretical saturation (Yin, 2009).

Sample Frame

The sample frame for this study was 20 woman leaders in construction. All of the woman leader participants met the following inclusion criteria for the study:

- Women who are in managerial positions
- Women in leadership positions
- Women mentors to others (male and female)
- Women who work in the construction industry
- Women construction business owners
- Women who are executives in the construction industry

Exclusion criteria restricted women who were under the age of 24, not in leadership positions or mentoring to others, not in a Northwestern U.S. city, not working in the construction industry (i.e., maritime, automobile, aviation), not English speaking, and unable to provide informed consent.

Sampling Procedures

- Recruiting—the researcher utilized a database of woman-owned businesses in a Northwestern U.S. city.
- Selection—a letter of introduction and a recruitment letter were sent via e-mail to women business owners in a Northwestern U.S. city. A signed letter of informed consent was required. Upon acceptance and agreement of understanding of what was required, the interview was scheduled.

Participants were made aware that they could stop participation at any time

without consequence. Each participant received a number to ensure anonymity and protect their identity and privacy.

Setting

The researcher sent each recruited woman a recruitment e-mail; the first 20 women who provided a response with the informed consent were scheduled and interviewed. All interviews were held in a secure location to protect the privacy of the participants and the researcher.

Instrumentation

The researcher used a self-designed interview guide (see Appendix A). The interview guide was field tested by obtaining input from two terminally degreed people and one person who worked in the construction industry. Their input was utilized to create the final interview guide used in this study. The guide consisted of 25 questions that were divided into three categories: demographics, motivation processes, and successful work outcome strategies.

Units of Analysis

- Motivation processes—these processes were behaviors employed by woman leaders in the construction industry that made it possible for them to achieve their professional goals.
- Successful work outcome strategies—these strategies were deliberate plans and associated actions used by woman leaders in the construction industry.

Woman leaders in the construction industry in a Northwestern U.S. city were the participants interviewed in this study. The researcher sought to understand motivation processes and successful work outcome strategies used to achieve their goals.

Data Collection

Data collection was begun after Capella University Institutional Review Board approval and took approximately 2 weeks to complete. Data generated consisted of demographics, what motivated the participant toward success, and what strategies were used to achieve success as successful female leaders in the construction industry in a Northwestern U.S. city.

An interview guide was used to conduct a “focused interview” (Yin, 2009, p. 107). Responses were recorded. Participants were woman leaders in construction who reside and work in a Northwestern U.S. city. They had a leadership role in either a company they own, manage, or work in. The researcher observed verbal and nonverbal evidence. Fourteen participant interviews were completed. One interview was in person. The researcher completed direct observations during the in-person interview. All data were analyzed and findings shared in Chapter 4.

After Capella University Institutional Review Board approval, data collection was begun and took approximately 2 weeks to complete. Information was not shared between participants. Each participant was identified by a number code during the interview, to ensure privacy and to ensure that they could not be identified in the study.

The researcher used a field-tested interview guide to collect data for the study by completing recorded 14 telephone interviews and one in-person interview for 15 purposefully selected participants. One of the types of data collection was done using a “focused interview” (Yin, 2009, p. 107), via telephone and in person. Each interview was recorded three different ways and the researcher took field notes. Interviews were limited

to 60 minutes. At the end of each interview, the researcher transcribed the data. The transcription was completed immediately following the interview.

In that the role of the researcher is to serve as the primary instrument for data collection, this researcher consistently presented the questions, and observed each participant's verbal and nonverbal responses, such as word usages, pauses, emotions, and tones. When participants asked questions, the researcher promptly responded.

Because the risk of bias remains a consideration for a careful researcher, measures were taken to minimize bias in this study. For example, the researcher held in abeyance her personal biases, intuition, and values to understand all that each participant shared. This bracketing of personal information ensured that the researcher only used the data shared by the participants for the data analysis and the presentation of the findings.

Data Analysis

For the data analysis, research was completed using a “cross-case synthesis” (Yin, 2009, p. 156) which Yin (2009) identified as an appropriate data analysis method for the multiple-case study. Data, notes, documents, and observations were coded to identify themes and patterns (Leedy & Ormrod, 2001). The coded information was organized into Word tables, which allowed the researcher to understand responses and complete tabulations and ordering. The concepts were reviewed to determine how they allowed the researcher to understand the motivation and success strategies of the woman leaders. The bias was minimized with bracketing. The results of the analysis were used to prepare the findings.

Each interview was transcribed following the interview. Handwritten notes were taken and multiple backup recordings were made using a cell phone application, tape recorder, and digital recorder.

Each participant was a case. Yin (2009) wrote that each case is a “whole study, in which convergent evidence is sought regarding the facts and conclusion for the case; each case’s conclusions are then considered to be the information needing replication by other individual cases” (p. 56). In this way, “the technique does not differ from other research syntheses—aggregating findings across a series of individual studies” (pp. 164-165).

All of these observations along with the transcribed recordings were used during the data analysis, and assessed for triangulation. Yin (2014) encouraged researchers “to collect information from multiple sources” (pp. 120-121) to corroborate data from other sources of evidence. Triangulation of data occurs when the researcher has “multiple sources as part of the same study” (p. 121). In this study, the researcher used interviews, documents, archival records, and observations (p. 121).

Validity and Reliability

The researcher followed the four tests as explained in Yin (2014) for judging the quality of the research design: construct validity, internal validity, external validity, and reliability.

Construct validity was included in that design includes multiple sources of evidence, the use of a chain of evidence, and a review of the draft findings by participants.

Internal validity was addressed with the explanation building and the use of explanations for the results. These steps were part of the preparation of the findings.

External validity was evident in the design because the researcher used replication logic in carefully selecting the participants for each case, which predicted similar results for the woman leaders in this multiple-case study. The researcher also used replication logic as part of the data analysis. Given careful selection of the cases, one can explain the similarity across the results of the cases.

Reliability, as a test, was evident in that the researcher followed procedures that would allow for the study to be done again. This test was used to minimize the errors and biases in this study, which the researcher addressed with the design of the case study protocol (Yin, 2009) as well as the development and use of the case study database (Yin, 2009).

Additional criteria were also used to prepare, conduct, and judge the research. Specifics follow.

Credibility/Validity

Credibility is described as an evaluation of the findings to assess how well they match the data shared by the participants. Participants were in the best position to assess credibility of the findings. Credibility is included in “construct validity” (Yin, 2014, p. 45). Yin (2014) recommended three steps: “use multiple sources of evidence, establish chain of evidence, and have key informants review draft case study report” (p. 45). The researcher collected responses to the same set of questions from multiple sources (Yin, 2014). To ensure credibility, the researcher reviewed and analyzed the precise data shared by the participants.

Following preparation of the draft findings, the researcher tested her tolerance for contrary findings with “three critical colleagues” (Yin, 2009, p. 72) familiar with the

research, asking that they review and share “alternative explanations and suggestions” (Yin, 2009, p. 72) as peers. The researcher also member checked the draft, by inviting some of the participants to review and comment on the interpretation of interviews and observations. This process minimized bias and helped to ensure validity.

Transferability

Because this was a multiple-case study, the findings may be transferable and they may be generalized or transferred to similar situations because the reader decides what applies (Erickson, 1986).

Trustworthiness

Trustworthiness, according to Lincoln and Guba (1985), has to do with whether the findings are “worth paying attention to” (p. 290). Strategies to address trustworthiness in qualitative research include audit trails and triangulation. In this study, trustworthiness was established through the use of triangulation and careful analysis, as set forth in Yin (2014).

To address the importance of triangulation, as explained by Yin (2014), the researcher used multiple sources of evidence: interviews, documents, archival records, and observations. The researcher used the “interview” (p. 110) to have participants respond to the questions in the interview guide. Because the interviews focused on actions, they were considered “verbal reports” (p. 113). In a less formal way, the researcher also completed “direct observations” (p. 113) while interviewing, noting the “occurrence of certain types of behaviors” (p. 113). The direct observations were appropriate sources of evidence for data collection for case studies (Yin, 2014), and were included in the analysis and shared in the findings.

To corroborate the responses of the participants, the researcher reviewed documentation. Documents were used to understand the types of construction specialties, verify spellings, obtain specific details regarding construction, and better understand the work of the participants. No citations or references are shared to comply with Capella University Institutional Review Board requirements for human subject's privacy and confidentiality protections.

Archival records were also used and included "public use files, such as the U.S. census and other statistical data made available by federal, state, and local governments" (Yin, 2014, p. 109). "These and other archival records can be used in conjunction with other sources of information in producing a case study" (Yin, 2014, p. 109). The archival records were used to understand the population. These records validated the responses of the participants, for example the low numbers of women in the industry and absence on work sites. As such, archival records joined the evidence and supported triangulation (Yin, 2014). Because each participant had a different reality and shared from different perspectives, the researcher focused on being a reliable data collection instrument via thick, rich descriptions (Yin, 2014). Archival records were used to best understand the context of the women in this industry.

Ethical Considerations

Ethical issues concerning data collection are highlighted in this section. The researcher reminded participations their participation was voluntary and they had the option to withdraw at any time. The researcher did not compensate participants who were interviewed for the study. The researcher took steps to ensure privacy and confidentiality for all participants involved in this research.

Informed Consent

All participants received notice, both oral and written, of the details of the study preceding their participation. The researcher provided the alumni association representative with a copy of the informed consent form. The alumni association representative e-mailed the signed form to the researcher. The participants were asked to provide verbal acknowledgment, which was recorded prior to the interview, and sign the informed consent form indicating they had read and understood the form.

Privacy

No one knew the identity of the participants. The researcher ensured their privacy by coding all participants' names and reporting data anonymously and in aggregate.

Confidentiality

None of the information collected from the participants was reported in such a way that the participants were identifiable. The participants remained anonymous. Thus, the researcher ensured that interview data were kept confidential.

Risk

No study is without some risk. This study was considered to present minimal risk and did not bring any harm to participants. The researcher took reasonable steps to ensure the computer security was not breached and the data were properly stored, thereby minimizing and limiting risk to participants in the study.

Benefits

No direct benefits were provided to the participants for contributing to the study. However, the findings of the study may be used by scholars and practitioners.

Bias

Many researchers have personal bias. However, steps such as bracketing were used to minimize the introduction of bias into the study. Yin (2009) wrote the researcher should be open to contrary findings and report the preliminary findings in the data collection phase. To minimize researcher bias, the researcher focused on participants' responses to the interview questions during all stages, specifically during the interview and analysis.

Security

The researcher will store and protect all documents and files for 7 years. At the end of 7 years, the documents and the disk will be destroyed.

CHAPTER 4. RESULTS

This multiple-case study was designed to learn more about the motivation processes and successful work outcome strategies used by successful woman leaders in the construction industry in a Northwestern U.S. city. This chapter is a presentation of the findings and includes an answer to the research question concerning the motivation processes and successful work outcome strategies of women in construction. The researcher used Yin's (2014) fourth reporting format that "applies to multiple-case studies only" (p. 186).

The central research question was: What may be learned from a study of the motivation processes and successful work outcome strategies used by successful woman leaders in the construction industry in Northwestern U.S. city?

Chapter 4 includes an analysis of the data collected from the 25 questions answered by participants during the telephone interviews and associated descriptions of the findings. The researcher utilized the theoretical framework (see Figure 1) discussed in Chapters 1 and 2. Chapter 5 has the discussion, conclusions, and recommendations.

Researcher's Interest, Background, and Training

The researcher was in the energy conservation lighting industry 30 years ago. At the time, she was the only woman-owned business in that field. The Northwestern United States experienced a building boom and a number of questions arose. Are there any woman-owned construction-related businesses or woman leaders working in the

construction industry at the time this paper was written? Were there many woman leaders? What were their motivational processes and successful work outcome strategies to help make them leaders? In addition to working in construction in commercial lighting, the researcher also spent 15 years as a career counselor in the U.S. Navy Reserve and earned a bachelor's degree in business administration and a master's degree in organizational behavior and management. The researcher bracketed her experience in the industry to minimize bias, and limited all data analysis to the data collected from the responses shared by participants, the documents, and observations. Any bias was carefully noted to reduce the potential for bias in this work.

Description of the Sample

The participants for this study were all woman leaders between the ages of 24 and 65. They all worked and lived in a Northwestern U.S. city. Each woman has been involved in a leadership position. Some of the women were mentoring, to assist other women in the construction trades. Each participant met the inclusion criteria noted in Chapter 3. The recruitment letter specified the inclusion and exclusion criteria. When the woman leaders responded, they each shared that they met the criteria. A brief phone conversation was held with three potential woman leaders who were invited to participate to clarify the purpose of the study, they agreed to participate. None of the participants needed to be removed from the study due to the exclusion criteria noted in Chapter 3. No participant asked to be removed from the research study.

The potential woman leaders were located via a public document from a government website that listed woman-owned businesses. Woman leaders who were willing and able to participate were e-mailed the recruitment letter, an informed consent

form, and the description of the research. When potential woman leader participants expressed interest in participating in the study, the researcher requested that each potential participant answer *Yes* or *No* to the inclusion and exclusion criteria.

Out of 670 e-mails sent, 10 had invalid e-mail addresses, and one person responded and stated she was very bitter and did not respond to any further inquiries. Out of 670 potential woman leaders, 16 woman leaders responded. No potential participant was excluded due to those criteria. One person investigated the researcher and mentor to determine if the request to participate was valid. After providing further information, that person agreed to participate. One potential participant withdrew prior to being interviewed due to business legal concerns.

The interview process took 10 days. The study was done over the phone and in person; no interview lasted more than 60 minutes. According to Yin (2014), a multiple-case study can have as few as three woman leaders and the preferred is between six and 10. This study went beyond the suggestion of six to 10 participants.

At approximately the 10th interview in the analysis, theoretical saturation was determined when the researcher did not have new data or concepts in the responses that addressed the theory. The answers, concepts, and links were evident and started to become very similar and followed a pattern found in the theory and literature. Data in this study with the replication of cases reached saturation in a way that was similar to that of Hersen and Barlow's (1976) work.

In the theory of purposeful work, communion striving is a need to belong to a group, the ability to have personal control over one's life (Bandura, 2001), well-being and to be accepted socially by peers (Barrick et al., 2013). Keywords for this goal include

“belongingness, and warmth and sociable/friendly” (Barrick et al., 2013, p. 136); *proactive, allied, and engaged* (VanDyne et al., 1995); and *seeking help from others* (Chiaburu et al., 2007).

Some examples of the responses that were aligned with this element of the theory and not new data were as follows: the women had family and friends for social support (Washington, 2007). As in the literature women were influenced by a father and a need for independence. As noted in the literature, mentors played a role in their success (Washington, 2007).

Interview Guide

Interview Questions 1, 2, and 3 related to demographics. Interview Questions 4 and 5 related to motivation processes. Communion—emotional state and agreeableness—was covered in Interview Questions 6 through 12. Status (extraversion) was studied in Interview Questions 13 through 15. Autonomy, the openness to experience and extraversion, was studied in Interview Questions 16 and 17, and task variety was addressed in Interview Questions 18 and 19. Successful work outcome strategies of achievement through task identity and feedback from the job were studied in Interview Questions 20 and 23. Interview Question 24 asked about recognition from others for the woman leader’s efforts.

Methodological Approach

The methodology used in this research was a qualitative multiple-case study, as described by Yin (2009, 2014). The researcher used a multiple-case study design (Yin, 2014) to answer the research question. The research model for this multiple-case study approach has six parts: plan, design, prepare, collect, analyze, and share (Yin, 2014).

The researcher transcribed the interviews. She then coded the observations from the interviews such as tone of voice, emphasis on words, and word repetition.

As the one in-person interview and the 14 recorded telephone interviews were transcribed, the researcher's ideas, observations, thoughts, or assumptions were captured after the interview and noted during the transcription and review process. The tape recordings were reviewed multiple times. The interview was e-mailed to the researcher's e-mail account from TapeACall. MP3s from TapeACall were saved to the researcher's computer through iTunes.

Data Sources

Multiple sources of evidence were used for this study, the document (recordings and transcription), the interview (to collect the data), and observation (to collect tone of voice, repeated words, emphasis on words, sighs, apparent emotions, etc.; Yin, 2014). "Participant observation is a special mode of observation in which the researcher is not merely a passive observer" (Yin, 2014, p. 115). "Observational evidence is often useful in providing additional information about the topic being studied" (p. 114). "Similarly, observations of a . . . organization unit . . . [participants] . . . add new dimensions for understanding either the context or the phenomenon being studied" (p. 114).

Data Collection

The interviews were one of the data collection methods used. The researcher reviewed documents such as Internet recordings of interviews from women in construction organization websites, newspaper articles, and a dissertation about women in construction. The researcher also completed direct informal observations (in-person

interview), which was an appropriate “source of evidence” (Yin, 2014, p. 103) for data collection for case studies.

The researcher completed the prescreening of the 15 woman leaders and recorded the telephone calls using three devices: a tape recorder, a digital recorder, and the iPhone app TapeACall. The researcher created a contact sheet for each participant identified it with the woman leaders’ assigned code to maintain anonymity. The personal thoughts were bracketed to help identify any bias.

All woman leaders provided a signed informed consent and each agreed to be recorded. NCH software had been proposed to record and transcribe the interviews; however, the researcher needed to alter this strategy due to technical problems discovered during the testing phase of the research. In lieu of NCH as proposed, the researcher identified and used an iPhone application.

Each interview was recorded three ways: a digital recorder, a tape recorder, and an iPhone app entitled TapeACall. The researcher then transcribed the interviews verbatim. During the interviews, the researcher took notes following the interview guide. In addition, during the interview and during the transcription, the researcher noted voice inflections and frequency of word repetition. Field notes were made for each interview, noting tone of voice, any noted emotions, and the researcher’s thoughts.

Each woman leader was considered an individual case to create a multiple-case study consisting of 15 cases. Yin (2009) wrote that each case study stands alone but commonalities may be found to “reference the facts and conclusions for the case” (p. 56), as they are compared to each other using similar themes and patterns. Yin (2014) explained that researchers should apply principles of data collection, such as “use

multiple sources of evidence” (p. 118), “create a case study database” (p. 123), “maintain a chain of evidence” (p. 127), and use care with “data from electronic sources” (p. 129). The researcher complied with these principles of data collection. Of special importance was the creation of the case study database, which the researcher structured to increase reliability in the study and facilitate retrievable or auditable data (Yin, 2014).

Multiple Sources of Evidence

The researcher used multiple sources of evidence explained by Yin (2009) for data collection for this study. Documents and interview data were used to allow for “converging lines of inquiry, a process of triangulation and corroboration” (Yin, 2014, p. 120). Archival records and observations were other data collection methods. No citations or references of archival records are shared to comply with Capella University Institutional Review Board requirements for human subject privacy and confidentiality protection.

Case Study Database

The researcher created a case study database for this study. The data included articles, documents, transcripts, and notes that represent an “orderly compilation” (Yin, 2014, p. 123). Reliability of the entire study, according to Yin (2014), can be increased through the use of the database, with the following four items that the researcher used:

1. Field notes—Interview notes, jottings, audio recordings, and visual observations, and document analysis notes, in a variety of forms, were prepared, and constitute the most common component of a database. Some are handwritten, typed, audio-taped, or in word-processing or other electronic files.
2. Case study documents, including physical copies, electronic data, and other PDF documents retrieved for inspection.

3. Tabular materials of various phenomena that were documented by the researcher, organized, and stored as a database.
4. New narrative compilations—the database then can be the subject of separate, secondary analysis, independent of any reports by the original researcher. The needed case study database is a separate and orderly compilation of all the data from a case study.

Each interview was transcribed immediately following each interview. This step was taken to prepare the data for analysis, using the “cross-case synthesis” (Yin, 2014, p. 167) method.

Data Analysis

The researcher used the cross-case synthesis to complete the data analysis for this multiple-case study. Each interview represented an independent case. The researcher studied each individual case, and then analyzed the findings across the series of cases. After the analysis of responses to the questions for each case, the researcher created an aggregate response that included the converged evidence from the multiple sources for data triangulation. The response is detailed in this chapter using the fourth reporting format that only applies to multiple-case studies (Yin, 2014). Using this report format, each section is devoted to a specific question with the information for all of the cases explained in the section.

Demographic Data

Demographically, the women were working in a Northwestern U.S. city. They all spoke English as a first language. They owned their own businesses anywhere from 5 to 30 years. All of the women owned businesses in some type of construction trade such as painting, architecture, electrical work, building construction engineering, construction transportation, road construction, and environmental engineering and construction.

Presentation of Data and Results

This presentation of findings is organized to reflect the convergence of evidence: the aggregate findings resulting from the analysis of the interview data, documents, and observations. Aggregate findings are categorized as motivational processes (communion, status, autonomy, and task variety) and the successful work outcome strategies (task identity, feedback from job, and feedback from another). The documents and participant observations associated with the interview questions are used in the findings. Findings are ordered by the interview questions.

Demographics

Interview Question 1: How many years have you worked in the construction industry?

Eleven women had obtained a 4-year degree, three had a high school diploma, and one will be graduating with a 2-year degree in 2015. See Table 1 for data regarding responses to this question.

Table 1. Participant Years in Construction Industry

1 to 10	11 to 20	21 to 30	31 to 40
1	7	5	2

Interview Question 2: In what type of construction do/did you specialize (e.g., home, commercial, roads, etc.)?

Woman leaders worked in multiple construction fields that included architecture, commercial, highway, landscape, lighting, traffic control, and trucking. None of the

woman leaders did manual labor on construction sites but they were all actively engaged in the specifics of leading in these areas of specialization. See Table 2 for data regarding responses to this question.

Table 2. Participant Type of Construction

Landscape	Commercial	Lighting	Highway	Architect	Trucking	Traffic control
3	3	2	2	2	2	1

Interview Question 3: What is your current employment status? Do you have any outside interests and if so, what are they?

All 15 of the woman leaders reported working more than full-time, in excess of 8 hour days. They were asked if they worked full-time or part-time. After the first three interviews, it became apparent due to the uproarious laughter that erupted from each woman that this question was meaningful in that they all worked much more than the normal 40-hour work week. Every woman leader laughed when she answered and said she wished that she could work part-time. All of the women said they put in long hours and had very little free time.

Seven of 15 woman leaders said they would like to have more free time. They expressed the desire to schedule time to enjoy greater participation in their varied vocational interests.

Motivation Processes

Interview Question 4: What motivated you to work in the construction industry?

When asked what motivated each participant to enter their field of construction, the responses represented four themes: the influence of men in their lives, their experience in the industry, an opportunity to contribute, and the opportunity to work outside.

Seven of the 15 woman leaders were strongly influenced by their fathers or husbands to enter into the construction industry. These women had role models who loved the industry and this drew the women to the field.

Three of the woman leaders entered their field because they loved their specialty. One woman leader continued in construction because it was a carryover from her first job. She started in traffic control, continued with it, and started her own company as a result.

The two architects said they loved to design life-altering structures for people. They said they felt their designs helped make people's lives happier. The two landscapers said they were concerned about the environment and felt that their work had a positive impact on protecting and restoring the environment. One woman leader, who had restored a salmon spawning stream and protected the stream bank from eroding and endangering the stream, had great pleasure sharing her. Another woman leader worked on restoring the environment around commercial structures and around road construction. The benefit she described was prevention of erosion, which could endanger the environment and wildlife.

Another woman leader said she knew she just wanted to work outside. She hated working indoors as it was too confining and boring.

Woman leaders responded as follows:

- P1: I would say I was a reluctant participant and then entrepreneur. Because I felt like it kind of selected me. My dad was a diesel mechanic at a construction company and when I was going to college, they asked me to help move the office and they ended up hiring me full-time to do what they call a floater position and do anything they needed, like a gopher. . . . Then [I] worked into the receptionist position and then went through accounting and about every other position in that construction company. Not what I planned on doing.
- P4: We started our own company. We ran that company for 15 years that company and successfully built it from nothing to extremely large. We then got divorced. He got the company and I got the house. So after 15 years of building the company and the construction crew, I had no job, I had exhausted all my savings. It was in 2009, the worst possible time to start a construction company. So, basically, I just thought, well, I can start my own thing. I prayed about it, I thought about it, and I started my own company.

Interview Question 5: Please briefly describe your work history, including your positions in the industry.

When asked about their work histories, 14 of the 15 women started the conversation by describing their education. Although education was not requested, all woman leaders volunteered their education without prompting.

All participants had a college degree, except one woman. They expressed the importance of education and how it provided a foundation for their success in business. The pattern used for their career success started with college first. College provided a foundation that was the basis for work in their current field.

Beyond college, half of them gained experience working in large companies where they got experience but lacked promotions, creativity, and responsibility. As a result, some of them moved to smaller companies for periods of time. However, once again, they experienced a lack of upward mobility but felt they acquired skill sets to start their own companies.

One woman started out in customer service, moved to project management, ran a medium-sized company and learned all of the different jobs inside that company such as bookkeeping, project management, purchasing, sales, and marketing. An opportunity was presented to her to start her own business and she decided to take the plunge and do it.

One woman went to school to study international business and wanted to work overseas. She had no idea that construction was in her future. During the recession, her dreams had to be put on hold as she went to work for her father's construction firm.

One woman started her own business after her divorce. She leveraged her home, contacted former customers from the business her ex-husband kept, and started her own company. She grew it into a sizeable company. She sat on several governmental panels about women and minority businesses. Another woman said that as a child, she always knew she would grow up and open her own business. One woman came from a large family and was the eldest. She said she was used to being in charge and fell into the role of being a business owner. She also said she would not give it up for anything.

Woman leaders responded as follows:

- P1: I was working for a clothing retailer at the time. I worked my way up from the floor to purchasing.
- P10: Went to college and got an engineering degree. Went to work for another, bigger company. It was not what I wanted to do. I came out to the West Coast and ran out of money on my way to [a Northern U.S. state].

Communion (Emotional State and Agreeableness).

Interview Question 6: What processes do you use to manage your career and family? Describe your social support.

The responses to Interview Questions 6 reflect the processes used and social support that made it possible for the women to manage their careers and families.

Processes were described as how the women scheduled the activities needed to manage their life requirements, specifically care for the home, cooking, and care for children at various ages and at different stages during the day.

Social support was described as how family, friends, and church provided aid to help with children at various ages of the children and at different stages during the day.

Twelve of the participants employed a child care system of some sort when the children were small. The process was to drop children off during the workday, have them engage in after school programs, and pick them up or have them picked up. As they got older, the children went to school, participated in after school sports, and received childcare near a school or had a family member pick them up and take them home.

Six participants used a process in which they worked part-time from their homes. This process allowed them to address the obligations at home, retaining work and building their careers. Using this process, the women increased their work experience, grew their businesses, and generated needed income.

Social support was primarily provided by family, friends, and church members, who were the mainstay for the woman leaders in this study. Women made comments that if it had not been for the social support of mothers, sisters, and neighbors, they did not think they would have been able to continue.

One woman said she had no outside support and no spousal support. This circumstance meant that she had all of the home responsibilities and her career. Because she had no one to assist with home and family responsibilities as she developed her

career and business, she was very organized to manage her time, life, and business to succeed.

One woman hired a student cook from a cooking school to prepare all of the meals. This novel idea, as a form of social support, was described as “the best dollar ever spent.” This woman had more time available to devote to family and career.

In all instances, except for the woman who hired the cook, the women performed the usual household duties of cooking, cleaning, laundry, and the like. As such social support was available to help with children, but household responsibilities remained primarily that of the women. In the literature, all the women with children utilized childcare (Denissen & Saguy, 2013). When possible, women worked from home or worked part-time.

Woman leaders responded as follows:

- P4: I worked from home. It worked really well because I worked a lot of hours but they were from home. My situation is very similar to that now. I work from home.
- P9: Support is a major issue. It is a significant challenge if you don't have a support network and I was fortunate enough to have my family close so, ah, my mother assisted, my sister assisted, other relatives and also some close friends who provided some daycare services as well. It depended really on their age. When they were very, very small my family watched them. Then when they go a little older, before- and after-school care tended to be by others.

Interview Question 7: Did you have mentors to guide you in your career and do you serve as a mentor?

Mentoring was an important factor in the literature reviewed for this study. Various authors explained the benefits of mentoring, which had descriptors that included coaching, exposure, protection, sponsorship, and challenging work (Barrick et al., 2013;

Pigeon et al., 2012; Washington, 2007). All of the women (15 of 15) experienced mentoring at some point in their career. Mentoring, according to the participants, was considered a very important factor for career development, for most of the woman leaders. Based upon the literature reviewed (Eicher, 2013; Essic, 1999; Kalousdian, 2008; Lyness, 1997; Lyness & Thompson, 2000; J. D. Moore, 2006, Pigeon et al., 2012; Raggins & Cotton, 1996; Washington, 2007), women who found mentoring important as leaders would put effort into mentoring other women either in construction, women who wanted to learn more about the industry, or women who were thinking about entering the industry.

Each woman leader remembered a time in the past when she received important information that was useful or that came at a crucial point in her career. The information was used to help her make a critical decision that positively impacted her career or business.

One woman described the value of mentoring information this way: “I worked for a company and it was recommended that I move out on my own due to my strong abilities.” Her mentor helped her, answered her questions, guided her in how to approach certain situations, and shared special techniques for different types of projects.

Woman leaders responded as follows:

- P1: Yes, It is ironic that we are having this conversation right now because at 7 o'clock, I'm having one of my mentoring phone calls because I not only mentor a lot of business owners in the minority and women business owner community, I also mentor other female business folks that just want some assistance navigating through a male-dominated industry, so . . . I formally mentor through programs and then also do a lot of informal mentoring.

- P15: Well, yes, I guess I do. I am always training them. But, I do have younger women that I talk to, and we have those relationships. Pretty much informal.

Interview Question 8: Have you mentored, either formally or informally?

Mentoring occurs formally and informally. Mentor is also done internally and externally. Women serve as mentors formally and informally, inside their organizations and outside. Women describe the experience as a way to develop others and give back.

Eight of the 15 woman leaders in this study were mentoring other women on an informal basis. These women accepted the responsibility of professional development of other women in their companies. They ensured that other women were provided special training, tips, and special projects to prepare them for career advancement.

Five of the 15 women said they just did not have time to mentor someone due to family commitments and business commitments. However, upon reflection of the question, three of the woman leaders began to reconsider their original responses. They then started to think about instances when a woman had asked a question about a construction-related topic in their specialty. Originally, they had answered the question in relation to formal mentoring. They realized that they were moderately too heavily involved in informal mentoring.

One woman said she had never thought to mentor another woman. She started to describe how she had benefited from mentoring and expressed that she will start to pay more attention to possible opportunities to mentor another woman.

Some of the woman leaders explained that at times they felt isolated and did not have access to other woman leaders in their specialty. In some instances, the women had

never seen other women in their trade. This comment corroborated the statistics regarding the fact that few women work in some of the trades.

J. D. Moore (2006) wrote that it was important for women to have role models and mentors in assisting them in choosing their career path. Formal mentoring was not readily available to these women, as noted in Essic (1999), and Raggins and Cotton (1996).

Woman leaders responded as follows:

- P8: In my construction crew, yes, I have. I have really good mentors!
- P13: Absolutely! I think it is one of the keys to success!

Interview Question 9: How do you view interdependence in your work? Do you take steps to promote interdependence? If so, how?

Interdependence and promoting interdependence are considered ways that leaders stay involved with others, acknowledging that success is dependent on the involvement of many persons who contribute in various ways to the achievement of goals.

Woman leaders were asked to describe the strategies they used to promote interdependence among their employees. They shared actions taken that indicated their dependence on others to get their work done. They also explained that others depended on them. Together they worked with employees to achieve the company goals.

Each of the 15 women said that interdependence was crucial to the success of her business. They viewed interdependence as collaboration and team building.

Twelve of the 15 women said that they meet regularly to discuss various aspects of company business and projects, to keep all employees informed. These meetings often included training that is continual for all employees. In addition to sharing information in

meetings, cross functional training was considered important to ensure that each person has someone else who is knowledgeable as a back fill when the primary is absent. This strategy ensures continuous customer support.

Five of the 15 women mentioned the need to effectively delegate responsibilities to employees. They used an open door policy, which fostered interdependence

One woman said that she makes requests and does not micromanage her employees, which has given her greater freedom. Using this approach has made it possible for her to help her employees learn their jobs, meet standards, and develop expertise to be successful in their work.

One woman has an open office design so that employees can collaborate on projects. This physical setup has made it possible for employees to dialogue, with a free flow and transfer of information and ideas.

Woman leaders responded as follows:

- P7: Our work is very interdependent in that you cannot do architecture work without collaborating with people from other disciplines. You cannot do it yourself.
- P8: I think one of the things I love about the construction industry is the collaboration that is required, and the team building, which I think is another key to success. The independence, um, I would say, on a scale, is very low for a requirement for success and collaboration and, you know, successful team building, and building relationships is very, very high and I think that takes a lot of dependence on other folks.

Interview Question 10: Describe the steps you have taken to address issues such as (a) sexual harassment, (b) sexual orientation, (c) leadership challenges, (d) isolation, and (e) stress.

This question examined how women handled situations such as sexual harassment, leadership challenges, isolation, stress, and personal spirituality. This question was asked to better understand how these woman leaders addressed common issues that at times delay and prevent career achievement and success.

The women interviewed responded to the question by sharing a number of similar strategies to address the issues. Rarely were more than two types of responses shared to address the issues.

Sexual harassment. When faced with sexual harassment, the women responded that they either confronted it (9 of the 15) or they ignored it (6 of the 15). The confrontations occurred as they matured and became more self-confident in their roles and in their job positions. Those who confronted the issue had early on been among those who ignored it. See Table 3 for data regarding sexual harassment responses to this question.

The participants did not explain where the issues surfaced within their companies or outside. However, in five cases, the women called a meeting to address harassment or leadership challenges from employees.

Table 3. Participant Responses to Interview Question 10: How Sexual Harassment Has Been Addressed

Confronted	Ignored	Held a meeting
9	6	5

Leadership challenges. Twelve of the 15 women said they had to learn to act more assertively and as result were able to command more respect in their industry. See Table 4 for data regarding leadership challenge responses to this question. They all noted that it took years to learn this skill but they now feel confident in that skill. This trait was noted by the researcher during the interviews. The woman leaders all spoke with strength and conviction in their voices when they were answering this question. The concept of modeling good leadership behaviors was common and tied with commanding respect and acting assertively.

Table 4. Participant Responses to Interview Question 10: How Leadership Challenges Have Been Addressed

Modeled good leadership behaviors	Acted assertively	Did not tolerate challenges	Commanded respect
14	12	12	10

Four of the woman leaders have faced problems being paid for projects. They explained that they have had to go to court to resolve contract issues.

One woman shared how she addressed a leadership challenge. She told of a time she went to a very important meeting with one of her male employees. She was introduced as her employee. Her male employee was addressed throughout the meeting as if he was the owner and she was ignored. She decided to play it out to see what would happen. At the end of the meeting, she made it clear that she was the owner and she would advise them of her decisions. She said it was an interesting moment and enjoyed

the discomfort that appeared on their faces. She was treated with respect at all future meetings and her information and opinions were actively sought.

Woman leaders responded as follows:

- P4: I just won a legal battle in relation to Title VI.
- P8: I have not experienced in a strong way. I generally just try to act like myself and I try to suffer no fools. On the construction site, things can get tense and I can stand my ground.

Isolation. Isolation was the most emotional aspect of this question and it was mentioned throughout the interviews. Whenever possible, the woman leaders mentioned how alone they have been and how they wished there were more associations and women in the same specialty as they so they could communicate with them and essentially, cross pollinate their ideas and concepts. They wanted to be able to share more information, experiences, and feelings about their work and troubles with people who understood where they were coming from. They all hoped that more women would enter their specialty and speculated on how that might be accomplished. Mentoring other women and young women and attending career days in local high schools entered into the conversation. The researcher speculated that this thought may have been triggered as a result of the mentoring question earlier in the interview. See Table 5 for data regarding responses to this question.

Table 5. Participant Responses to Interview Question 10: How Isolation Has Been Addressed

Surround self with friends	Still frequently feel isolated	Started own business
15	13	12

Woman leaders responded as follows:

- P9: Yes! I mean you're the only female, yes, but did I overcome it? Yes, and I think that part of that was by building teams, you know, building relationships, with champions within either the company or within my group at the business I worked at before I started my own.
- P10: Sure, there is always that. There are never any women. I mean, when I started out, I was the only woman. There were no women in engineering, ever. When I went to college, I was the only woman in the engineering college.

Interview Question 11: Describe how you view interactions outside the organization.

Interactions outside of the organization were a difficult question for all of the woman leaders. The general response from all of them was that interactions outside the organizations were related to building long-term relationships with customers. Each woman leader answered the question in relation to communication with customers and integrity.

Interview Question 12: Would you describe your work as purposeful? If so, in what ways?

“Purposefulness refers to having a sense of desired end states or directedness to one’s behavior” (Barrick et al., 2013, p. 133). The woman leaders were asked if they viewed their work as purposeful and how they viewed their work as purposeful. Table 6 shows the thematic responses to this question.

All 15 woman leaders said that their work was purposeful and all of them communicated great pride in their accomplishments. They expressed that their work and their companies allowed them to be independent, employers of others, and contributors in their communities.

Table 6. Participant Responses to Interview Question 12: Ways Work Is Purposeful

Provides jobs	Supports the economy	Helps customers	Likes to see what she built	Helps families	Helps the environment
12	10	9	7	4	2

Four of them were emotional in their replies, especially when they spoke of their impact on their employees and their families. The jobs that they were able to provide to their employees meant that they received a good living wage with benefits.

One woman leader was very proud of providing a good living for 50 families. This translated to several hundred family members who benefitted from the income earned by the employees.

Another woman was proud of the roads and bridges her company built. These roads and bridges allowed people to move about safely.

Another woman was proud of helping to save the environment and even improve it. At a time when many communities are threatened with polluted air and water, she took pride in keeping her community healthy.

Another woman expressed pride in the accuracy and completeness of her projects. These work outcomes had a positive impact in the families of the employees.

Woman leaders responded as follows:

- P1: One of the most rewarding things about my job is that I feel like. . . . I like having results or building something that is a legacy. Whether it is permanent, something I've constructed or someone I've impacted. And it makes me feel like I have a purpose at the ability to impact other folks positively.
- P4: Yes, very much. I can see it, I can pretty much drive through pretty much any town in the state and I can point out, "I did that intersection," or "I did that project." I can put my name on the projects.

- P5: Highway construction, repairing, repaving, or putting in a new bridge or something.
- P7: I have clear goals for providing a particular service and make sure that my work is clear and directed. It is my responsibility to make sure I provide what they need to be successful. Spaces that are designed well, self-directed.

Status (Extraversion).

Interview Question 13: How significant are power and influence to you?

Power and influence are related to status striving, which is explained as being “linked to an individual’s motivation to obtain power, influence, and prestige within a status hierarchy” (Barrick et al., 2013, p. 142). Power and influence are necessary to complete work. One must have the power and influence to make a decision and request that others take action.

This question surprised all of the woman leaders. Initially, they shared that power and influence was not significant. After some time to ponder and reflect upon the question and after some discussion some of the women altered their responses a bit and offered up a few more thoughts. The question turned out to be a closed ended question so more prompting by the researcher was needed to draw out more information.

Four of the 15 explained that power and influence were very significant, four shared that power and influence are significant, two said that power and influence are somewhat significant, and four expressed that power and influence are not significant. See Table 7 for data regarding responses to this question.

In trying to understand why some women would share that power and influence are very significant whereas others would say that it is not significant is a dilemma. Power and influence appeared to be important for women who had leadership challenges,

sexual harassment, limited opportunities, and pay issues regarding work in predominately male areas. Woman leaders who did not have these types of experiences shared that power and influence was not significant.

Table 7. Participant Responses to Interview Question 13: Power and Influence

Are very significant	Are significant	Are not significant	Are somewhat significant
4	4	4	2

Woman leaders responded as follows:

- P7: There is competitiveness. I decided to start my own firm because I was not happy with the power relationships in my previous employment. . . . In addition, architecture firms tend to be pretty hierarchical.
- P13 and P15: It's not important. I don't seek it.

The second part of this interview question was, describe your level of power and influence. What processes have you used to attain power and influence?

One participant took a deep breath and essentially said this question must be a man's because power and influence were not something she considered. Other women made similar comments.

When asked to describe their level of power and influence, 13 of the 15 participants said they do not seek power and influence or felt they did not need to seek it.

Two of the 15 participants admitted they seek it. They did not give reasons why they seek power and influence. One participant said she sought it once but no longer felt the need to do so.

To aid in soliciting responses, the researcher shared examples from Barrick et al. (2013). Each woman leader was asked which statement best described how she viewed herself. She could select more than one.

- A: I am highly motivated to achieve meaningful contact and to get along with others.
- B: I have a desire to exert power and influence over others within the organizational hierarchy.
- C: I am motivated to gain control and understanding of important aspects of the work environment and to pursue personal growth opportunities.

Woman leaders responded as follows:

- P1: I feel I am highly motivated. I think I am only a little motivated to gain control. Maybe that's because I own my own business.
- P2: I seek it over my own actions. I don't seek it over other people necessarily. I seek a collaborative relationship among equals, which is hard to achieve. I don't have any employees.
- P4: While it is not something I have sought out necessarily, it's a byproduct of the work that I've done but it has allowed me to be able to influence public policy for the [disadvantaged business enterprise] advisory board, the Department of Transportation, etc. It comes your way from just being involved and from doing good work.

Table 8 shows the priority level of the woman leaders' selections.

Table 6. Participant Responses to Interview Question 13: Processes to Attain Power and Influence

A: I am highly motivated to achieve meaningful contact and to get along with others.		B: I have a desire to exert power and influence over others within the organizational hierarchy.	C: I am motivated to gain control and understanding of important aspects of the work environment and to pursue personal growth opportunities	
First choice	Second choice	Third choice	First choice	Second choice
8	6	1	7	7

Interview Question 14: Please describe your work tasks and their significance.

The following options were used as a way to help the participants to focus on the tasks they found significant. During the testing phase, it was discovered that women as successful business owners, and leaders were not truly conscious of all the steps they went through on a daily basis because their actions had become innate. These options were pulled from Barrick et al. (2013) as used to supplement the interview guide. Table 9 shows how many women chose each option. In some instances, upon further discussion and reflection, some women chose more than one option which is why the over total is greater than the number of participants.

- A. “Greater task identity (completing a whole piece of work from start to finish)” (Barrick et al., 2013, p. 137)
- B. “Skill variety (the opportunity to use different skills on a variety of tasks)” (Barrick et al., 2013, p. 137)
- C. “Task significance (work outcomes having a substantial impact on others)” (Barrick et al., 2013, p. 137)
- D. “Autonomy (discretion in decision making, work methods, and work scheduling)” (Barrick et al., 2013, p. 137)

- E. “Feedback (information regarding performance) is more motivating” (Barrick et al., 2013, p. 137)

Table 9. Participant Responses to Interview Question 14: Work Task Types

A: Greater task identity	B: Skill variety	C: Task significance	D: Autonomy	E: Feedback
7	11	8	11	8

Tasks B (skill variety) and D (autonomy) were most frequently identified by the women. Given the responsibilities of leaders and the required flexibility, these selections are reasonable.

Woman leaders responded as follows:

- P5: Work Task A—that is exactly what I do, start to finish. We don’t have a lot of opportunity for variety. When we get done, the next sub can come in.
- P6: I can see myself in all of these. I delegate a lot of work, I use multiple skill sets on a daily basis. I set the business strategies. I am the boss so I am pretty autonomous. I tend to get feedback in an indirect way. I believe that the feedback comes from the trust my customers have in me because we have developed a strong relationship.
- P7: I have a lot of autonomy. I have to generate my own feedback and I have a lot of variety for sure. I do have the opportunity to do things from start to finish.
- P8: I am continually at the jobsite and I am continually self-critiquing.
- P9: I can identify with A and C. I am a good listener and I try to understand my employee’s viewpoints. I participate on a daily basis and get involved in hiring and the bookkeeping.

Tasks B (skill variety) and D (autonomy) were most frequently identified by the women. Given the responsibilities of leaders and the required flexibility, these selections are reasonable.

Woman leaders responded as follows:

- P5: Work Task A—that is exactly what I do, start to finish. We don't have a lot of opportunity for variety. When we get done, the next sub can come in.
- P7: I have a lot of autonomy. I have to generate my own feedback and I have a lot of variety for sure. I do have the opportunity to do things from start to finish.

Interview Question 15: Did equal employment opportunity, diversity, etc., affect you? If so, how did it affect you?

Equal employment opportunity has been available for women and minorities officially since the early 1980s. The government programs and laws have afforded women access to business opportunities that they would otherwise not have had available to them. They have also been provided terms and conditions suitable for woman-owned businesses and management.

All of the woman leaders of this study were certified as business owners at the state level or through the Small Business Administration.

Eleven of the 15 woman leaders felt that the equal employment opportunity programs helped them and provided opportunities to get their foot in the door. Four of the woman leaders in commercial and highway construction expressed grave concerns that equal employment opportunity programs are being cut back; they feared that doors of opportunity may be closed and negatively impact their businesses. See Table 10 for data regarding responses to this interview question.

Table 7. Participant Responses to Interview Question 15: Equal Employment Opportunity/Diversity

Affected by	Not affected by	Helped to open up work opportunities
11	4	11

Four of the 15 woman leaders did not receive any assistance from either type of equal employment opportunity. Consequently, they were not affected in a positive manner by equal employment opportunity.

The major contractors involved in highway construction and support are currently required to have a certain percentage of partition from woman- and minority-owned businesses. Because there are not a sufficient number of woman- and minority-owned businesses to support their quotas, government agencies are exploring the possibility of reducing the quotas. This creates a double-edged sword. Smaller quotas could result in fewer new woman- and minority-owned businesses being created.

Woman leaders responded as follows:

- P5: I am a [woman business enterprise], so to some extent, I may be in terms of going after work. I may in the future but not in the past.
- P14: Yes, because of the percentages. It gave me my first job.

Autonomy (Openness to Experience and Extraversion).

Autonomy.

Interview Question 16: What are your views on actively seeking opportunities to have control over what you do, when you do it, and how you do it?

Autonomy was defined as individuals' being responsible and accountable for their own actions. As such, participants were asked about the ways that they used their

autonomy to affect their lives and in some instances to change the work environment. The strategies used to take control of their lives included taking personal actions and employing others to share the work, which freed time for planning and other responsibilities often uniquely shouldered by business leaders. All 15 of the woman leaders said that the primary way they sought control was to open their own business and none of them regretted that decision.

Women made decisions in their own businesses. Brescoll, Dawson, and Uhlmann (2010) found that women were frequently excluded from decision making due to institutionalized stereotyping when working in male dominated lines of work.

After starting their business, 14 of the 15 women admitted to seeking control continuously, when they were asked about seeking opportunities to control their work and how they executed it. Seeking control meant that they were not simply subject to situations and conditions that left them feeling powerless. In fact, five woman leaders were adamant when they shared that if they did not seek opportunities to have control over what they do, when they do it, and how, they probably would not be in business today.

Twelve of the woman leaders stated that they always worked for control over their opportunities. This important proactive stance was used to move from employees to employers and to grow their businesses to achieve their goals. The businesses that they have created reflect their dreams and visions, using their gifts, talents, and formal and informal education.

Five of the 15 women said they continuously did their best work. Continuously doing the best work built credibility with customers, which was another aspect of

controlling their lives and businesses. Doing the best work allowed one woman to build credibility. After repeatedly being told that she was skilled, based on an established record of high level performance, she worked harder to grow her business. When others believed, she believed, too.

Two women said that they always sought the best way to work and did not give in to pressure. They stayed focused. This approach to completing work is consistent with ways that business leaders seek constant and never ending improvement for quality in performance and product.

Two women said that it was necessary to hire good supervisors or managers. One woman hired a good manager as a way to free time to better plan her business. She was emphatic in sharing the importance of this action. The manager was responsible to run the daily operations.

Woman leaders responded as follows:

- P1: I think that for me, having worked through the challenges of credibility, building a reputation and having success in the industry you need choices that a lot of other people in general, but women in business don't have. I have the luxury of being able to be the master of the direction I want my business to go and the relationships I choose to be in both personally and professionally and financial decisions.
- P11: A lot of my work is things only I can do. This work has a greater impact on my company. I spend a lot of mental awareness about what I have to do.

Interview Question 17: How important is it for you to be effective in producing changes in the work environment? What processes have you used to produce changes in the work environment?

Twelve of the 15 woman leaders said that producing changes in the work environment were very important to them; three women thought it was somewhat

important or not very important. See Tables 11 and 12 for data regarding responses to this question.

Some of the processes they used to produce change focused on communication, training, documentation, and delegation of responsibilities. These processes were used and continually assessed for business effectiveness and growth.

Table 11. Participant Responses to Interview Question 17: Importance of Being Effective in Producing Changes in the Work Environment

Very important	Somewhat important	Not very important	Not important
12	1	2	0

Table 12. Participant Responses to Interview Question 17: Processes Used to Change or Manage Work Environment

Constant feedback	Classes/ training	Open communications	Documents/ written policies and procedures	Delegation
5	5	4	3	3

Communication was important for all of the women. Five of the 15 relied on constant feedback from customers and employees to keep open lines of communication with them. In these ways, they could see in real time the effect of the different decisions they were making on their customers and the employees in their businesses. Four of the 15 woman leaders stressed that open and clear communications at all levels were important to effect change.

Twelve of the 15 woman leaders forcefully expressed the need for continual training—personal and professional. Training, according to the leaders, was important to produce positive changes in the work environment. To ensure that the companies could compete for certain types of work, the employees had to maintain stay current with required training for their licenses and governmental certifications. The implication was that this had to be managed closely for business survival, understanding that without current certifications and licenses they could not do work or be on worksites.

Documentation was considered an essential internal and external practice for orderly and effective tracking of policies, procedures, contract, and business records. The leaders expressed the need to be meticulous in having written work policies and procedures, and using them to enable equality in company discipline.

Delegating responsibility to employees was important. This practice made it possible for the leaders to leverage the time, expertise, and other contributions of the employees. Employee contributions were valued and acknowledged in this way.

Woman leaders responded as follows:

- P4, P5, P13, and P15: Started my own business.
- P6: I am always looking for ways to do it quicker, smarter, better.
- P8: Constant feedback and reoccurring interaction with every level of person, every colleague, within my business from the laborer in the field to the accounting folks, to the sales folks, to the estimators, to the operations folks, always having an open door policy and asking for feedback, open to better ways to do things, and asking questions of others. I use that to make decisions, often times.
- P14: I'll get feedback from a bunch of different people and decide what rings true to me and decide from there and it helps me make decisions and effect change.

Task variety.

Interview Question 18: What is the significance of actively seeking growth goals for you? Describe your growth goals. How have you pursued these growth goals? Is there essential information about your professional growth that may be beneficial to others?

The participants were asked about their professional growth goals. The goals could be personal to benefit themselves or professional goals regarding the business. The intent of the question was to better understand the significance of their goals; a description, whether they were pursuing their goals, and what they believed would be helpful for others about goals, if they shared.

When the researcher asked about the significance of goals, the participants seemed puzzled and asked for further clarification. The researcher explained the question a bit further and made some possible suggestions. The woman leaders then shared a number of thoughts.

Seven of the 15 woman leaders shared that the significance of goals was they could be used to grow their businesses. They wanted to grow the businesses, but did not have specific thoughts about how to do so beyond what they had done. As a result, some were stuck.

One woman expressed the significance of being a lifelong learner. She explained that this was significant because in her work, so much was changing that she needed to be willing to continue to learn in order to be competitive.

Another woman wanted to improve her work–life balance. Having improved work–life balance was significant because doing so would allow time to engage more with her family, which would alter the impression that she worked much of the time.

When asked to describe their goals, the responses were varied and included these examples: complete personal and professional training, learn how to improve skills such as communication, and learn how to get focused and stay focused. One participant set out her goals for the year, wrote them in a journal, and reviewed her progress at least quarterly. These descriptions of their goals indicated that the women were concerned about competencies that would likely make them more effective in their business interactions and work performance.

When asked if they were pursuing their goals, the responses indicated that work was their highest priority. With family and business responsibilities, little time was left for other goals.

Thirteen out of 15 participants admitted that they did not have time to pursue their professional goals. Even so, one said she met regularly with peers that provided her with opportunities to give and receive support.

Another participant said that she had mandatory recertifying training. The completion of this goal kept her current in her industry.

When asked what essential information about their professional growth may be of benefit to other women, many offered information that had been learned from personal experience and things that they heard or witnessed.

Several comments focused on the individual. These comments were as follows: Always be prepared for whatever may come; Always be prepared to take advantage of

opportunities; Do your research on the industry before entering it; Be true to your mission and yourself; Always maintain your integrity as that is who you are; Always make your work a labor of love; and Get an education in how to start and operate a small business, preferably before starting one.

One participant suggested that a woman find a same-gender mentor. Historically, this practice has often been recommended as a way to ensure that the relationship stays professional.

Woman leaders responded as follows:

- P4: Learn more about technical advances in the field. Learn how to run a business. Learn how to market.
- P7: Be a lifelong learner and constantly improve. One of the best indications of success in that arena is the ability to balance my professional life with my personal life. Being a mother, having children, balancing wanting to be a good mom, and a good business person. And I spend a lot of time trying to improve and seeking the advice of others who I think are successful in that arena.
- P8: I would say somewhat significant. I enjoy and choose to spend time with others in the industry, other professional people, um, at trade functions, in meetings that can impact public policy.

Interview Question 19: What are your views on environments characterized by freedom, independence, and discretion? Have you found a way to work in such an environment? If so, what steps did you take to work in such an environment?

The study participants were asked about their views on working in environments characterized by freedom, independence, and discretion.

Eight of the 15 woman leaders thought that improving and impacting their work environment was very important and seven woman leaders thought it was important. No

one selected not important. All of the woman leaders had been able to work in these environments.

Practices and steps they took included not asking for permission before starting the work, moving forward with the work, and living with the consequences of a mistake. Being patience and delegating work were important to many as well as being equally fair with all employees.

Six of the 15 woman leaders said they learned to call their own shots. This process was important because as the head of the business, there was no one else to turn to and the responsibility was ultimately theirs.

Three of the 15 women said it was important to encourage employees to speak up. This practice indicated trust in the wisdom of employees and their contributions to strengthen and grow the business.

Woman leaders responded as follows:

- P3: Yes, I call my own shots. Your independence grows over time with experience.
- P12: Very important. I think that's a very strong part of the culture that my company has. Autonomy of others is important. I am not a micromanager. I never have been. I expect people to ask for help when they need it, and to work together as a team, but I don't [pause] inject myself into the process unless there is a challenge or I am asked to.
- P13: Independence in the workplace is very important. It all depends on the circumstance.

Successful Work Outcome Strategies

Achievement (conscientiousness and emotional stability).

Task identity.

Interview Question 20: Do you feel that certain tasks were more beneficial than others to prepare you for your current position? If so, what were those tasks? What strategies did you use to get to do those tasks? Did they increase your competence? If so, how?

The woman leaders were asked if certain tasks or jobs had been beneficial in preparing them for the position they currently held. An interesting variety of responses followed.

All of the 15 women shared that training and working with a mentor ranked at the top of the list of actions taken to prepare them for their current positions. These responses were consistent with the reasons why businesses succeed. The responses also highlighted the reasons why many businesses fail: lack of training and guidance. All mentioned that knowledge was power, so it was important to learn continually. This learning was specifically applied to learning from their mistakes. Striving for success and staying positive were also shared as beneficial in preparing them for the positions they hold and being successful in their positions.

The learning went beyond personal benefits. Half of them shared that their overall competence had been helped because they had learned to build relationships. Building relationships had helped them to connect with other to give and receive support and information.

Other tasks that were frequently shared by the leaders were mastering the written language, communication in all forms, and training in psychology. Mastery of the language was often the result of formal training and ongoing practice.

One participant explained that her answer would be unique, which was to obtain a liberal arts education. Her explanation for this is as follows: “[A liberal arts] education teaches a person how to think critically. It teaches a person how to write clearly and concisely. It also teaches a person how to argue a point and win.” She learned to be complete in all of her research and to always come prepared to the table. She felt very strongly that a liberal arts education helped her win bids and negotiations, in which she would enter into negotiations for contracts and be the only woman present. The men would attempt to intimidate each other. She was always prepared, had investigated all aspects of the contract, and always won. She said that she would make her points with confidence and the opposing side would just scratch their heads and give in because they could not counter her claims, facts, and data.

One woman learned how to make her company recession-resistant. She explained that this practice was critical when work opportunities were not as prevalent.

Woman leaders responded as follows:

- P2: Yes, communication with people is more of a skill than a task from understanding, broad relationships and goals.
- P6: So, I think mastery of the written language. You know, the primary communication method in business is written. If you don't have effective business writing skills, it's very challenging to be a good business person.
- P8: Being involved in marketing discussions with clients has been beneficial.

Interview Question 21: What were some of the decisions you made that resulted in your success as a leader in your industry?

All leaders are required to make decisions and take action, if they are to succeed in business. These practices are indispensable in leadership. The decisions and actions are often used to shape the organizations future, which affects employees and customers.

When asked about the decisions that resulted in the success of their companies, these woman leaders were clear and brief. They shared decisions that applied to themselves, their employees, their customers, and their business operations.

All 15 of the women said that the decision to start a business was the first decision that resulted in their success. This decision required many of them to move beyond their comfort zones. In some instances, they completed academic programs and got licensed or certified.

The next decision that was described by 10 of the 15 leaders was to take care of employees. When the employees were cared for, they cared about the customers in ways that made the businesses successful.

Another decision that was shared by the leaders was maintaining high expectations and producing quality work for the customers. This common theme meant that the customers were willing to be repeat customers because the businesses had healthy operations and delivered quality results. To make the quality results possible, the leaders said that they supported continual learning to stay current and to use state of the art practices.

Woman leaders responded as follows:

- P4: To bite off a lot more than I thought I could chew. I got my certification as a [woman business enterprise] and [disadvantaged business enterprise] so that I could compete. I still had to fight and claw my way. I am certified by the state as an electrical administrator. I could either hire somebody or be it

myself. So, I decided to get my license. Stay in contact with my clients from my other business.

- P13: I would take luck over anything. I just happened to be lucky. If you give me brains or luck, I would take luck.

Interview Question 22: Do you use any specific leadership philosophies? Please explain.

Leadership practices stem from leadership philosophies and models that include trait, group, great person, transactional, transformational, group, team, situational, servant leadership, and others. Leaders often explain that they use the philosophy that seems appropriate for the situation.

When asked about leadership philosophies, the woman leaders in this study shared a range of philosophies and the reasons for their use. Leadership philosophies shared applied to themselves, relationships, and work practices.

The woman leaders shared these leadership philosophies related to them. They explained that they should continue to learn, be honest, have fun, and always do long-term thinking. One respondent said when stress or anger enter the picture, it is always better to speak more softly because it forces people to become quiet and listen to what is being said.

Regarding leadership philosophies that apply to relationships, the leaders shared that they had learned that it was important to never burn one's bridges, care for each other, lead by example, respect others, build consensus, and keep long-term relationships. These philosophies made it possible for the leaders to establish and maintain effective work relationships.

The woman leaders shared leadership philosophies as they apply to work practices. Ten of the 15 women shared that they always worked to produce the best quality product. Some other practices were to implement policies fairly.

Woman leaders responded as follows:

- P1: To never burn a bridge, to always think long term, to build long-term relationships with everyone at every level. For me, in construction, its subcontractors, employees within my own company, and clients. So, if you are taking a long-term view, long-term relationship building strategy, you don't fight over \$500 because it might jeopardize that relationship and not be a 5-year relationship. It may end—it may be your \$500, but it may end a long-term relationship. So, that philosophy is thinking in the long term.
- P10: People support that which they create—a team approach. I have attracted people with an entrepreneurial spirit. Live by the golden rule.
- P11: Talk softly if you want to get your point across. Talk quieter. Don't talk a lot. Just be quiet. Come in and go out.

Feedback from job.

Interview Question 23: What were the strategies and achievements that you believe set you apart from your peers? Have you received feedback regarding their effectiveness? If so, what type and from whom?

Leaders who excel often have strategies that are used to be successful. These strategies are rarely shared as they are considered business competitive advantages. When they are disclosed, the leaders share what is done but not how it is done. The concealed *how* makes it possible for the leader to remain an industry leader. For this question, the woman leaders shared some strategies that they have used to be successful. Of note was the balance of work and life.

Among the women, all 15 leaders shared that the deep listening, fairness, hard work were strategies that set them apart in business. Methods and reasons for listening

varied among the women, but when listening, they paid close attention to the information shared by customers and employees; in doing so, they were able to make distinctions in offerings to be more competitive.

Fairness was another theme identified among all of the participants. It ranged from being fair to others and being treated fairly. Fairness was directed toward employees, customers, and family. The golden rule was mentioned by three women. Fairness ensured that they could be trusted—always.

When the leaders modeled hard work, they set the standard. They explained that their employees followed what they did, not just what they said.

Although 13 of the 15 leaders said that trustworthiness was used as a strategy that set them apart, few details were provided. However, previous responses helped the researcher understand the importance of this strategy for success in their businesses, given the quality of the relationships with the employees and the customers.

Strategies that set the woman leaders apart were the following:

- Listen (15 of 15 participants)
- Be fair to others (15 of 15 participants)
- Hard work (15 of 15 participants)
- Trustworthiness (13 of 15 participants)

Achievements are not always recognized publicly. However, when leaders and their businesses receive recognition and feedback for achievements, the recognition and feedback is welcomed. When asked about their achievements and the feedback and recognitions, the women offered several different types of responses that are detailed as follows.

Twelve out of 15 women stated they received feedback regarding their effectiveness.

The entire group of woman leaders felt that the feedback they received from returning customers was good, and where appropriate, was used as references for other potential clients.

When asked about formal feedback from customers, six of 15 successful woman leaders had not given it much thought. The women said that they would perhaps set up a formal feedback system of some sort, acknowledging the benefits of receiving and using the input.

Two of 15 successful woman leaders said that they had just instituted a formal feedback system from customers, and one of the 15 successful woman leaders said she constantly requested feedback from employees on ways to improve business operations.

One woman said her achievement was that she built her business from nothing to being a financially successful business, which had allowed her to help many families to have a comfortable living in a short period of time. This achievement, which was expressed with such awe and seemingly reverence, set her apart from many others.

P4 responded, "I recognize individuals' talent."

Feedback from another.

Interview Question 24: Have you received recognition for your strategies and work achievements? If so, how important was it and why?

When asked about formal recognition, the reactions were mixed. Some had received official recognition or awards from organizations but not all. They said that if an award came their way, it would be nice and would make them feel good about their work.

Many felt formal recognition was not necessary. Instead, all 15 said that praise, recognition, and positive comments from customers were more important than from an organization, government agency, or trade association. They said that meaningful recognition came in the manner of referrals and positive comments about the quality of the work done. The emotional response associated with this type of recognition made them feel good about what they had built, designed or accomplished.

Woman leaders responded as follows:

- P8: Ya, I have won many awards that evaluate on criteria, a wide variety of criteria whether it was on growth, impact on industry, employees, and all the rest of it.
- P9: It's fun to win an award and I think it has directly impacted the business positively. To say that I was an award businessperson or that we were an award-winning business, not only is it fun, it's effective in assisting the business growth.
- P10: No, but I am starting to seek post-job feedback from clients.
- P14: Overall, they like our work, they are happy we get our work done and don't complain all the time. Our feedback is 'knowing' we get the job done.

Final Question: Is There Anything Else That You Would Like to Share on This Topic?

Final comments were very forceful from most of the women. They all spoke as though they were face-to-face with a person looking to enter into the world of construction. Suggestions included being strong, speaking up, being patient, and being professional. The women said with great emphasis that more women need to enter the field of construction and the specialty is not matter.

The general consensus of the participants was that construction is not for all women but those women who may have an interest in the construction trades should take the risk, be strong, and not be afraid to move ahead.

Ten woman leaders said that there are so few women that they rarely, if ever, saw a woman on a construction site. This means that opportunities exist for women wanting this career field.

Mentoring was an important factor in their growth and skill building. They recommended that women entering into the field or already in construction would be well served to find a mentor if they did not already have one. They said that in choosing to work in the career field, it was important to continuously learn, take risks, and be fearless. Physical safety and potential missteps were identified as significant risks. As such, 4 of the 15 women highlighted caution and the need to be aware of one's surroundings at all times as very important.

They all said, in one way or another, working in the construction trades was difficult work but very fulfilling and rewarding. They would recommend the field to other women.

Woman leaders responded as follows:

- P1: I think women need to speak their mind more often. They need to take more risk. And by risks, I mean saying something even if you don't know whether it's right or not, not being afraid to look bad or look bossy or look a certain way that might be negative way to others, because when I first started in my career, I would sit in meetings, board meetings, or, you know, client meetings, and somebody would ask a questions and I thought I knew the answer. I wouldn't say something and somebody else would say the answer and it would be exactly what I was going to say and they would get credit for it and they would move on in their careers. So, being willing to take risks in that aspect of a career is pivotal in, in um, growth!

- P4: Dream big. Do something important. Don't lock yourself in a traditional field because you think that is all you can do. When I was at a crossroads, I decided to move forward into the electrical field because of the huge potential. I did one job that year and I had some huge bills I was concerned about paying. I would make more money on that one job than I would by working for somebody else. If you are going to—not that we all can be self-employed, but if you have the constitution for it, the rewards are greater. Now I know, because of my persistence and my faith and the support of my employees, I am going to end up much better economically than if I had just thrown my hands up and said “Woe is me!” Dream big. Go for it. When your back is against the wall, like mine was, if you push yourself and don't give up, then it is worth it.
- P5: I am physically on the job sites, all the bridge jobs, all the road jobs. I don't see any women out there. None, zero—except flaggers. Where are all the women in construction? Where are they? I don't see them. I have put ads in craigslist and I have not had one woman respond. I would like to see more women out there. I have seen 3 over the past 30 years. We did have a few but they all retired or sold out. I wish the women would get out there and be more aggressive. Don't ever say you're sorry. I was so afraid when I was 18 and 20 but I am not that way anymore.
- P7: Well, I think that in an office, in schools gender balance is pretty even. Once they get out of school, things start to shift when women start having families because the demands of the field are not particularly conducive to women with families. Leadership tends to still be male dominated. . . . Out in the field, there are almost no women. You don't see a lot of women building stuff. I also think that there is a challenge for women in architecture because they often have less experience building, like physically building doesn't have the experience of building because of family history and I think that is a great disadvantage. Because they are missing out on a connection and they are missing out on skills and experience and the connection to contractors.

CHAPTER 5. DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

Chapter 5 includes a review of the results that were shared in Chapter 4, a summary, an explanation of the results of the research for the main question, and recommendations for future research.

Summary of Results

Research Question

The central research question was: What may be learned from a study of the motivation processes and successful work outcome strategies used by successful woman leaders in the construction industry in a Northwestern U.S. city?

Significance of the Study

The significance of this research was to study woman leaders in construction, their motivation processes, and their successful work outcome strategies. The limited information that exists was not current, and was in need of updating, as women work to achieve new levels of success and contribute to communities through service in this industry.

The field of organizational management may benefit because approximately 50% of the workforce is female, and men and women have different motivation processes and likely use different successful work outcome strategies (U.S. Census Bureau, 2012; U.S. Department of Labor, Women's Bureau, n.d.a, n.d.e). This information may contribute to increasing the body of knowledge on this topic. The findings may be of value to scholars

and practitioners, providing them with a better understanding of these woman leaders, clarity regarding motivation process, and knowledge associated with their work outcomes

Literature Reviewed

The literature review covered the theory of purposeful work behavior and its components, including the primary theories and primary goals supported by the theories. Also reviewed was the history of woman leadership in construction. Primary literature was found in the United Kingdom and Australia. Little research on woman leaders in construction was found from U.S. authors. Seminal researchers on the primary theories were reviewed to further understand and explain Barrick et al. (2013).

Methodology

The methodology used in this work was a qualitative multiple-case study. This multiple-case study differed from the single case study because it included multiple cases. Due to the type of research question, no need to control behavioral events, and the focus on contemporary events from the perspective of many individuals, this study was best supported with a multiple-case design (Yin, 2014). Yin (2014) explained that when a researcher conducted an exploratory study, *what* questions might be used.

Fifteen woman leaders in construction were interviewed via telephone or in person using a guided interview format. Woman leaders were coded with a number to ensure privacy. To satisfy Yin's (2014) triangulation the researcher used multiple sources of evidence. Using interviews that are focused was one of the multiple data collection methods, explained by Yin as a verbal report. For the second step the researcher reviewed documents and completed observations described as "physical artifacts" (p. 117). Observations of joy, sorrow, and difficulties were appropriate sources of evidence for

data collection for case studies (Yin, 2014). Data from government sources were cited to identify the number of women in the workforce and the corresponding number working in construction over periods of time (U.S. Census Bureau, 2012; U.S. Department of Labor, Women's Bureau, n.d.e).

Yin (2009) wrote that multiple-case studies allow for replication using between “six and 10 cases” (p. 54). The cases provide “compelling support” (p. 54) that would allow the findings to be used for an “initial set of propositions” (p. 54) about the woman leaders in construction.

The researcher used an interview guide to collect data for the study by completing recorded telephone interviews with 15 purposefully selected woman leaders. The questions in the “interview” (Yin, 1994, p. 63) were appropriate because they were based on the selected theory (Yin, 1994).

Recording and transcribing were practices supported in Yin (2009) for the data collection. For the data analysis, this researcher completed a “cross-case synthesis” (p. 164), which Yin identified as an appropriate data analysis method for the multiple-case study. The cross-case synthesis—“a fifth technique [—]only applies to the analysis of multiple cases” (p. 164). Data were coded to identify themes and patterns (Leedy & Ormrod, 2001). The bias was minimized with bracketing and the researcher only used the data to complete the analysis and prepare the findings. Each interview was transcribed verbatim immediately following the interview. Handwritten notes were taken and multiple backup recordings were made using a cell phone application, tape recorder, and digital recorder.

Findings

Barrick et al. (2013) developed the theory of purposeful work behavior: the role of personality, higher order goals, and job characteristics. Using this theory, the researcher focused on purposefulness and meaningfulness, and discussed the subsequent performance motivation processes that lead to work outcomes. This research was relevant for this study because the researcher reviewed all of the major motivation frameworks and segmented motivation into communion, status, autonomy/growth, and achievement striving.

The findings from this study resulted from the analysis of motivation strivings, using processes that lead to successful work outcomes for successful woman leaders in the construction industry. The findings may be of value to scholars and practitioners, providing them with a better understanding of these woman leaders, clarity regarding motivation process, and knowledge associated with their work outcomes. That the findings were related to the processes of the leaders, existing philosophical questions were discussed and new questions were identified.

In a similar manner, findings may be used by practitioners who are interested in understanding the motivation processes and successful work outcome strategies of these leaders. Persons involved in leadership development for women in the construction industry will have findings that may be used to structure more effective development programs to help women succeed in this industry. In this way, the findings should help promote improved workforce development plans for women seeking career progression in the industry.

Research Design

A multiple-case study was chosen for this study because the research question supported it (Yin, 2014). The purpose was to gather information from women in the field of construction. The boundary of this study was woman leaders working construction in a U.S. Northwestern city.

Sample

Participants for this study were woman leaders who are currently working in the construction industry. They were leaders in their field, business owners, or executives in corporations or managers.

Instrumentation

The instrument was an interview guide with 25 questions. The researcher was the interviewer, and listened to and recorded all responses. No interview lasted more than 35 minutes.

Motivation

Motivation is an internal driver that helps a person to achieve some specific tasks or state of being, and can be influenced by a person's emotional state (Maslow, 1939, 1943). Examples of motivation included striving to accomplish a task, such as keeping/gaining a new customer for a construction contract or attending continuing education classes for recertification for plumbing or electrical licenses. These efforts can positively affect one's future state. Motivation is the basis of creating success in business and in life. Woman leaders in construction were highly motivated to continue moving forward against the tide in a male-dominated industry (Berthold & Newmann, 2008).

Success Strategies

Common success strategies found among the women in construction interviewed for this study included risk taking, starting out small and growing the business in a financially conservative way, and maintaining high personal expectations for themselves and their employees. Other important strategies included maintaining leadership philosophies of long-term business and personal relationship maintenance, long-term business planning, honesty, integrity, firmness, respect of others, and fair implementation of policies and procedures.

Discussion of Study Results as Related to the Literature

The findings in this study support the literature reviewed. Fielden, Davidson, Gale, and Davey (2001) along with Menches and Abraham (2007) noted that women in male-dominated work industries experienced discrimination against women. Each of the woman leaders interviewed experienced discrimination in upward mobility and harassment. They were not immobilized by it but chose to work around and through it.

Each of the woman leaders experienced discrimination in pay in the same manner described by Dabke et al. (2008) and Aulin and Jingmond (2011). The architects, engineers, and landscape architects who started a business did so because of the lack of upward mobility, because the firms they worked for had a patriarchal attitude and restricted them. These findings were in alignment with Wial (2008), and Watts (2009a, 2009b).

The plight of woman leaders in the construction trades (Watts, 2009a, 2009b) is very similar to women in all of the other male-oriented employment fields such as finance, real estate, automotive, maritime, and aerospace (Whittock, 2002). Menches and

Abraham (2007) wrote that women were hesitant to enter the construction field. Some of the woman leaders in construction were influenced either by a spouse or father; initially, they had not chosen the field and it was not their intention to enter it.

Communion striving is a need to belong to a group, the ability to have personal control over one's life and well-being (Bandura, 2001), and to be accepted socially by peers (Barrick et al., 2013). The participants found social acceptance from family, friends, and church members, who were the mainstay of support for the woman leaders in this study. Women made comments that if it were not for the support of mothers, sisters, and neighbors they did not think they would have been able to continue. This finding was consistent with research completed by VanDyne et al. (1995).

Each woman leader remembered a time in their past when they received important information. This information was useful or came at a crucial point in their career and was used to make a critical decision that positively impacted their career or business. This finding aligned with the sentiments of respondents seeking help from others surveyed by Chiaburu et al. (2007).

- Status striving is being proactive (Chiaburu et al., 2007) with the intentionality to change one's environment to obtain power (Bateman & Crant, 1993). The woman leaders interviewed did not put a high priority on status striving.

When asked to describe their level of power and influence, only two woman leaders admitted that they seek it and all others said they do not seek power and influence or felt they did not need to seek it. One participant said she was seeking it at one time but no longer felt the need to do so. The alignment with the literature was not complete. The question of status striving was felt to be more masculine than feminine in nature.

- Autonomy/growth striving is gaining personal control of one's environment (Deci & Ryan, 1985). The participants interviewed owned their own business because it allowed them the freedom to run their own life and be responsible

for their successes or failures. When they were asked about seeking opportunities to seek control in their work and how they executed it, all but one of the women admitted to seeking control continuously. This was in alignment with the literature review.

- Achievement striving is a person's need to be efficient, accurate, and punctual in their work (Barrick et al., 2013). All of the women interviewed firmly expressed that tasks they had been involved in prepared and helped them to be successful. They said that they were competent because they had learned to build relationships and they learned from earlier mistakes. One woman learned how to make her company recession-resistant. All mentioned that knowledge was power, so it was important to learn continually. Striving for success and staying positive were both important. The results of the research were in alignment with the literature. Three primary insights found in the documents that corroborated the responses of the participants in this study concerning achievement striving were the importance of education, willingness to risk starting a business, and longevity in business.

The women said that they needed education to join the industry. This was true across all specialties of the construction industry. They did not just decide to learn on the job. In almost every document that featured women in construction, they were educated. This was true even though construction is considered by some to be the work of persons with skills, but not formal education.

Last, following work in companies in which they had jobs with limited career advancement, when women chose to start businesses in this industry, they stayed. Many of the women had been in business in excess of 10 years.

Implications of the Study

Useful Implications

The societal implications of this study point to the continued need for women to push for their place in the workforce outside of the home. Working inside the home is equally as important as working outside the home, if not more so. Women continue to

perform dual roles when working outside. Strong support systems inside the family and in the workplace are essential in aiding women in becoming leaders and in supporting their motivation practices and success strategies.

Many of the women interviewed cited the need for communication skills, listening skills, and strong support from family and friends. Each woman had similar issues, but spoke about different experiences and had widely varying situations and circumstances. Yet, each woman persevered to become a leader in her industry and specialty. As such, the traits, strategies, and personal motivation found in each woman leader in construction may be insightful for women who work in other male-dominated industries such as banking, finance, aerospace, engineering, and maritime.

The construction industry has faced a culture change across the decades. Some expect that it will change rapidly as more women enter the field. Others think it will never happen, and some feel that it is changing, but slowly. Historically, change of any kind is slow to occur. The United States fought a civil war to affect change over 150 years ago. Although some things have changed, some of the same feelings, thoughts, and practices that created discrimination and limitations for women still exist. Over many decades, the number of women who have entered the workforce outside the home has risen from under 5% to over 71% in 2014 (Cohn & Caumont, 2014); however, less than 3% work in construction trades (National Women's Law Center, 2014).

The government has attempted to write legislation to create opportunities for women in the construction industry, but even that has been slow in areas (U.S. Department of Labor, Women's Bureau, n.d.a). The change will likely occur by the

cultural acceptance of women in the trades. Women will be viewed as workers and leaders in the industry.

This research was designed to find what could be learned from a study of the motivational processes and successful work outcome strategies used by successful woman leaders in the construction industry, shed more light on woman leaders in construction, provide them a voice, and share with other women some of the insights from woman leaders who are active in the industry now. A quote from Margaret Houlihan of *M*A*S*H* speaking to Hawkeye Pierce is fitting at this point: “Respect—simple respect. I expect nothing more and I will accept nothing less” (Alda, Gelbart, Hooker, & Heinz, 1977). This quote is indicative of the common thread of the participants of this research.

Potential Impact in the Field of Business

With growth in the construction industry, a need has developed for more information about woman leaders in construction, specifically their motivation processes and successful work outcome strategies. Business leaders interested in understanding the motivation processes and successful work outcome strategies of woman leaders in the construction trades may find this study useful. This study may influence future literature about woman leaders in many male-dominated fields such as aerospace, automotive, maritime, legal, banking, and finance.

Limitations

Success has many different definitions and it varies from person to person. Some may find success in working and successfully raising their children, maintaining a long-term relation with their spouse, elevating their level of education, varying and broadening

their experience, or moving to different companies to broaden their scope. The researcher was not greatly experienced in multiple-case study prior to this study. She did have experience in face-to-face interviews, but limited experience with telephonic interviews. Therefore, this study reflects the level of research expertise of a person new to this discipline.

The researcher observed voice inflections during the phone interviews and was able to observe body language in one of her interviews. This practice allowed the researcher across the course of the interviews to develop participant observation skills in much the same way that an emergency operator hears and understands beyond the words, to take appropriate action. This practice took time, but helped the researcher to understand what the responses meant, why they mattered, and how the participants felt about each question.

Because each interview was duplicated, the individual case studies were considered as scientific replication or multiple experiments (Yin, 2014). This study is based upon the findings and the literature reviewed. The researcher noted similarities and differences in the responses from the woman leaders as well as the findings in peer-reviewed articles, when the findings were compared and contrasted.

Recommendations for Further Research

Women in construction seek career opportunity, autonomy, and control over the level of security and pay. There is an opportunity for future research to investigate the risk level women are willing to endure to move up the ladder of success and strategies they may use. Another opportunity would be a longitudinal study following women entering into the construction industry or other male-dominated fields of employment and

follow their career paths and the strategies and processes they used to achieve success and chronicle their progress. Each woman leader as they were self-motivated to work hard, and perform well and become successful in whatever they worked at. Their strategies included having mentors, searching for advice when they felt they needed guidance, displaying high ethical standards both personally and professionally, and leading rather than micromanaging employees. All of the women believed in themselves. They were all determined to succeed in a male-dominated industry by being independent, hardworking, but most significantly, by being genuine and true to themselves. This study could be completed in other fields such as medicine, aerospace, banking, finance, and maritime.

Conclusion

The introduction included a brief overview of subjects such as legislation and equal employment opportunities that were opened in the 1960s and were expanded in the 1970s, 1980s and 1990s. The theory of purposeful work behavior was introduced and described. The primary research question for this study was: what may be learned from a study of the motivation processes and successful work outcome strategies used by successful woman leaders in the construction industry in a Northwestern U.S. city?

The researcher expected that women were aware of their circumstances and through their self-motivation and various strategies made changes in their lives, persuaded themselves to seek options, made career decisions, and believed that life could be made better. They optimistically worked on an accurate path toward success using motivation and strategies. The process of developing one's motivation processes and successful work outcome strategies was very complicated. This study was intended to

learn more about motivation processes and successful work outcome strategies of women who have found their way to the top.

The subject of motivation was reviewed in relation to the seven theories and four goals. The following theories were reviewed and discussed: motivation, self-determination, implicit motive, needs in work settings, work values, need hierarchy, and interpersonal circumplex. Each theory was defined, described, and discussed. The four primary goals at work were communion striving, status striving, autonomy/growth striving and achievement striving (Barrick, et al., 2013

A brief history of women in construction was reviewed. This included a history of women's entry into work outside the home and some of the reasons why it became necessary to do so. The definition of culture was reviewed as were the reasons for norms. This was done to help explain the articles reviewed.

Timelines were created to aid in understanding the advancement or decline in numbers of women in the construction trades and to aid in understanding some of the roadblocks that have existed. The first timeline block was the 1960s through the 1980s. This period of time was filled with federal legislation and societal movements to open doors or windows of opportunity for job entry into the construction trades. The 1990s through 2000s was a period that had stagnation and limited opportunities.

Culture and career choice and mentoring were reviewed. Discussion of the difference between terms of gender and sex was added to help readers understand why the term *gender* was found in the literature and that the term *gender* was the nature of the person. This assisted in putting culture into context and helped to explain how culture impacts women in the working world, especially in construction.

The literature reviewed on availability and style of training and education in the construction trades showed that much of the training is designed to help men, not women. Trade unions were primary sources of training and education. This tied back to cultural roadblocks that women face in successfully moving into the construction trades.

Mentoring was found to be important in the success of women in the trades. Barriers of that make it difficult for women to enter and stay in the construction trades were found in all articles reviewed. Each article had similar findings to each other to a great degree. Very little literature regarding women in construction in the United States was located, so literature was primarily from the United Kingdom. The gap in the literature was reviewed, the number of U.S. versus U.K. authors was noted, and only 10 different authors and 11 articles between 2007 and 2014 were located that were relevant to the literature review.

A gap in the literature exists in regards to the few peer-reviewed articles available about women in construction. No peer-reviewed articles were found about woman leaders in construction regarding motivation processes and successful work outcome strategies.

Chapter 3 included discussion of the methodology, instrumentation, population and sampling, data collection, data analysis, and ethical considerations. Actions were taken to ensure that the researcher followed steps appropriate for a multiple-case study.

Chapter 4 was presented and analyzed to learn what processes and strategies of woman leaders in the construction trades used to become successful. A guided interview form was used to solicit information that was recorded over the phone, transcribed and verified by each participant. It was gratifying to learn that each woman leader's responses were in line with information gathered from the information reviewed in the literature.

It became clear during the interviews that the women were optimistic and passionate about their work. It was also clear that they had all been through some rough times, which may explain the extremely low number of women who responded to the invitation.

Another point of interest in this study was how quickly the researcher reached the saturation point in data gathering. Many of their experiences were similar. Findings in this study regarding the replication of cases to achieve saturation were similar to that of Hersen and Barlow's (1976) work.

This study about woman leaders in construction was a multiple-case study designed to learn more about their motivation and success strategies. The information gained from the research was similar to information found in the literature reviewed from the United Kingdom and Australia, Europe, and India. Women face the same trials and tribulations around the world. This study may be a source of ideas or concepts for further writing for publications of interest to both men and women.

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APPENDIX A. INTERVIEW GUIDE

Hello, Participant #___. Have you provided informed consent to participate in this study? Yes No

Demographics

1. How many years have you worked in the construction industry?
2. In what type of construction do/did you specialize (e.g., home, commercial, roads, etc.)?
3. Have you retired or are you still employed? If you are retired, what are you doing now? Do you have any outside interests? If so, what are they?

Motivation Processes

4. What motivated you to work in the construction industry?
5. Please briefly describe your work history, including the positions in the construction industry.

Communion (Emotional State and Agreeableness)

6. What processes did you use to manage your career and family (number of children)? Describe your social support.
7. Did you have mentors to guide you in your career?
8. Have you mentored, either formally or informally?
9. How do you view interdependence in your work? Do you take steps to promote interdependence? If so, how?
10. Describe steps you have taken to address issues such as (a) sexual harassment, (b) sexual orientation, (c) leadership challenges, (d) isolation, (e) stress, and (f) spirituality?
11. Describe how you view interaction outside the organization.
12. Would you describe your work as purposeful? If so, in what ways?

Status (Extraversion)

13. How significant are power and influence to you? Describe your level of power and influence. What processes have you used to attain this power and influence?
14. Please describe your work tasks and their significance.
15. Did equal employment opportunity, diversity, etc., affect you? If so, how ?

Autonomy (Openness to Experience and Extraversion)

Autonomy.

16. What are your views on actively seeking opportunities to have control over what you do, when you do it, and how you do it? In what ways do you seek these opportunities for control?
17. How important is it for you to be effective in producing changes in the work environment? What processes have you used to produce changes in the work environment?

Task variety.

18. What is the significance of actively seeking growth goals for you? Describe your growth goals. How have you pursued these growth goals? Is there essential information about your professional growth that may be beneficial to others?
19. What are your views on environments that are characterized by freedom, independence, and discretion? Have you found a way to work in such an environment? If so, what steps did you take to work in such an environment?

Successful Work Outcome Strategies

Achievement (Conscientiousness and Emotional Stability)

Task identity.

20. Do you feel that certain tasks were more beneficial than others to prepare you for your current position? If so, what were those tasks? What strategies did you use to get to do those tasks? Did they increase your competence? If so, how?

21. What were some of the decisions you made that resulted in your success as a leader in your industry?

22. Do you use any specific leadership philosophies? Please explain.

Feedback from job.

23. What were the strategies and achievements that you believe set you apart from your peers? Have you received feedback regarding their effectiveness? If so, what type and from whom?

Feedback from another.

24. Have you received recognition for your strategies and work achievements? If so, how important was it and why?

Is there anything else that you would like to share on this topic?

Thank you for your participation in the study.

APPENDIX B. STATEMENT OF ORIGINAL WORK

I understand that Capella University's Academic Honesty Policy (3.01.01) holds learners accountable for the integrity of work they submit, which includes, but is not limited to, discussion postings, assignments, comprehensive exams, and the dissertation. Learners are expected to understand the Policy and know that their responsibility is to learn about instructor and general academic expectations with regard to proper citation of sources in written work as specified in the APA Publication Manual, 6th Ed. Serious sanctions can result from violations of any type of the Academic Honesty Policy including dismissal from the university.

I attest that this document represents my own work. Where I have used the ideas of others, I have paraphrased and given credit according to the guidelines of the APA Publication Manual, 6th Ed. Where I have used the words of others (i.e., direct quotes), I have followed the guidelines for using direct quotes prescribed by the APA Publication Manual, 6th Ed.

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Date: 3/30/14