

# Bryant University

HONORS THESIS



## Women in the Construction Industry

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**ABSTRACT**

The construction industry is a male dominated field that has been known for its masculine culture. Women have faced many barriers when entering this field of work due to this culture and being the minority. This study will look into the motivational factors that make women want to pursue a career in the construction industry. This research will look at female construction workers and how their experiences have helped shape their perception on the industry. The following study will analyze how females have combated the masculine culture in the industry and what makes females want to obtain leadership positions. This is important due to allowing for more diversity in the workplace and looking at what can be done to attract more females into the construction industry.

## **INTRODUCTION**

Throughout the past two decades, the gender imbalance has grown in male-dominated industries (Struthers & Strachan, 2019). The need for women in these industries is at an all-time high due to the economic changes and political views shifting (Norberg & Johansson, 2021). Women play an important role in bringing new perspectives and leadership styles (Norberg & Johansson, 2021). Existing research shows that many women have a more democratic leadership style than men which allows others to have their voices heard (Watts, 2009). One such industry is that of construction, which has historically been dominated by male leadership as well as the workforce being primarily men (Struthers & Strachan, 2019). The industry has expressed a need for more women in the workforce but struggles to attract them (Menches & Abraham, 2007). The present study will take a closer look at the motivational factors that contribute to women wanting to join the construction industry and what keeps them empowered as female leaders. This research is important for the future of the industry due to bringing in new perspectives and allowing for growth of the industry. Women account for a large portion of the world's population so it would be wasteful to not meaningfully and effectively integrate them into the construction industry (Afolabi et al., 2019). By finding ways to motivate women into this field, this allows for more gender equality and can empower other females to join the workforce and combat different male dominated fields.

## **LITERATURE REVIEW**

### **Women in Male-Dominated Industries**

Male-dominated industries have always had a stigma about the type of environment it encapsulates (Pitroda, 2016). According to Campuzano (2019), these industries are characterized by stereotypical masculine traits, such as competitiveness, aggressiveness, and risk-taking, all of which have usually embraced historical workplace culture. Usually, these male-dominated businesses are led by men and these men share similar values. With little to no change in the leadership team in these male-dominated industries, long-standing norms of these male dominated businesses are prone to have little culture change. As women begin to enter these industries, it deviates from the norms of what these industries have had their entire existence. The male-dominated industries and female leaders can be compared to Newton's Laws of Motion. Newton's first law states every object is in a state of rest unless an outside force acts upon it. Comparing this to the male-dominated industry, the male power would be the inertia and the outside force would be women changing the momentum (Campuzano, 2019).

According to Watts (2009), male and female leaders lead with similar yet different values. The problem with the male-dominated industry is that female leaders will only succeed if they follow in the footsteps of their male peers. Women lead more with a democratic or participative style of leadership whereas men lead with an autocratic style. Considering this, many women do not thrive in male-dominated industries due to being different than the normative type of leadership. With women leading differently, it offers different perspectives, some of which are not accepted by these companies. This deters women from striving to reach higher status within companies. Not only are women limited to reaching higher status but are paid substantially less than male colleagues in these industries (Watts, 2009).

### **Construction Industry Atmosphere**

As discussed by Afolabi (2019), the construction industry is comprised of many different physical and psychological factors. The construction field involves working on job sites, being part of a team, and accomplishing goals in a certain amount of time. As construction is

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a male-dominated industry, the physical and psychological elements that play a role are targeted towards masculine culture (Afolabi et al., 2019, p. 86). With that being said, there are gender stereotypes within the industry (Menches & Abraham, 2007). As seen historically, men have been known to work in the field and hold site-based technical positions such as project and construction managers and engineers while women hold office positions (Zhang et al., 2021). According to Agapiou (2002), this is due to society's image of the construction industry and its standards such as requiring physical strength as well as being able to withstand foul language and inclement weather (Menches & Abraham, 2007). The construction industry reflects a "macho culture" where argument, conflict, and crisis are common in relationship development (Afolabi et al., 2019, p.86).

There are many expectations on how the construction workforce must perform (Zhang et al., 2021). The construction industry expects employees to perform physical labor and be active for most of the day (Afolabi et al., 2019). Many of these job sites are outside which can lead to inclement weather and tough working conditions (Afolabi et al., 2019). Although these challenges arise, the construction workforce continues to perform due to the culture of the industry. Many women are perceived to not have the qualities to withstand these conditions and carry out these types of tasks (Barnabas et al., 2009). Construction is also known for having a demanding working environment where it is designed around working long hours (Zhang et al., 2021). In this industry, men are assumed to have less family care responsibility and have extensive time to dedicate to work (Zhang et al., 2021). Women are perceived as not being able to commit to this type of work environment due to the stereotypical role women play in society (Barnabas et al., 2009). In addition to this, many construction companies want to have a reputable name, but vulgar language is not uncommon (Afolabi et al., 2019). Much of the vulgar language on the job sites can sometimes go unnoticed and not be controlled (Afolabi et al., 2019). This again relates to the masculine culture of the industry and what is expected.

### **Mentors in the Construction Industry**

Mentorship in the construction industry is a key element aiding in the success of individuals and their careers in the field (Hoffmeister et al., 2011). Relationships between the mentor and

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mentee can be short or long term due to the environment of the industry (Hoffmeister et al., 2011). Short term relationships are common due to the changing of jobs and leadership teams on the jobsite (Hoffmeister et al., 2011). Many relationships start with an experienced worker teaching and training an apprentice (Hoffmeister et al., 2011). Many mentors endure the same qualities which can include being a role model, sharing common values and beliefs, expressing concern for others, and providing emotional support for others (Hoffmeister et al., 2011). Mentors can give advice on personal and work-related topics, give them career advice, and help them with their development within the company (Amaratunga, n.d.). Many mentors in the construction industry are men due to it being a male-dominated industry (Amaratunga, n.d.). This can create a challenge for females wanting to enter the industry because there are limited number of female role models (Hoffmeister et al., 2011). This can discourage women because most women desire a female mentor to guide them, especially in an industry that is dominated by men (Amaratunga, n.d.).

### Barriers for Women in Construction

#### *Stereotypes*

Women face many challenges when entering the construction workforce and have limitations that others do not (Watts, 2009). These barriers include stereotypes, harassment, balancing personal life, and leadership limitations (Watts, 2009).

Due to construction being a male dominated field, there are many stereotypes that are presented on a job site and in leadership, especially for female leaders (Watts, 2009). For example, there is a negative perception of women's capabilities when doing physical labor on a job site (Azhar & Amos Griffin, 2014). The stereotype surrounding the construction industry conceives of “manly men” performing hard physical labor, but people cannot see a woman doing this sort of work (Azhar & Amos Griffin, 2014). This in turn creates a barrier for women because if they were to join the industry they would be perceived as different and deviating from the norms (Azhar & Amos Griffin, 2014).

Another stereotype that has been discussed in the existing literature is the masculine culture the construction industry has developed, which creates several barriers to entry for women (Menches & Abraham, 2007). Much of this masculine culture features aggression and

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conflict which is normal for male coworkers in construction, but this often deters women from the industry (Menches & Abraham, 2007). Many female construction workers report that it is very challenging to interact and achieve goals due to differing attitudes and beliefs (Menches & Abraham, 2007). In a study done by Norberg and Johansson (2021), the authors they found that men in the construction industry fear that women joining the industry will ruin the traditional masculine image of the industry therefore females are not as accepted by the workforce. This indicates that these masculine cultures are meant to exclude women and create a niche environment for men which in the end deters women from the industry (Norberg & Johansson, 2021).

Another stereotype in this field is the stigma that construction workers need to have physical and mental strength, tolerance for outdoor weather, and use foul language (Afolabi et al., 2019). This presents itself as a barrier because these are the stereotypical assumptions a person has when entering the industry and women are not perceived as possessing those features (Afolabi et al., 2019). Women are perceived as more fragile and weak individuals who should not be lifting heavy things (Menches & Abraham, 2007). Women being perceived at as weaker and less able to work in this industry presents itself as a barrier because women want to be respected and given equal opportunities before even entering the workforce (Menches & Abraham, 2007).

Based on the existing literature, women face challenges when entering the construction industry due to many different factors. This allows for further research on how women overcome these barriers leading to the following research question.

RQ1: How do women overcome the hurdle of the construction industry's masculine culture?

#### ***Harassment***

Harassment and aggressive behavior towards women in the construction industry is not uncommon (Azhar & Amos Griffin, 2014). In a study researching the female identity in the construction industry, they found that sexual harassment actions targeted at women can including non-verbal sexual assault such as touching and posturing as well as verbal forms of sexual assault including intimacy and sexual remarks (Afolabi et al., 2019). This then reflects the objectification of women in this industry (Norberg & Johansson, 2021). Many



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construction companies perform discriminatory recruitment practices, sometimes without knowing it (Afolabi et al., 2019). This can then lead to a negative effect on the organizational commitment which turns females away from the industry (Lingard & Lin, 2004).

#### *Balancing Personal Life*

As women enter the workforce, many want to find a job that will balance with their personal aspirations (Watts, 2009). As they get older, many women want to start a family. The construction industry is known for working long hours and overtime which does not balance well with having children (Watts, 2009). This industry creates a limitation to working mothers due to working excessive hours (Watts, 2009). Most of the time in this industry, workers go to work early and leave in the evening (Menches & Abraham, 2007). This creates a difficult situation to balance work and family including primary childcare pressures (Menches & Abraham, 2007). Many women want to be present in their young child's life and the construction industry is limiting to that (Menches & Abraham, 2007). In fact, one of the largest barriers for women was the difficulty in balancing personal and career goals (Watts, 2009).

#### *Leadership Limitations*

Women only represent 5% of top management in construction and make 32% less than their male colleagues (Watts, 2009). As mentioned above, the construction industry has a stigmatization about female leadership that women at different levels of leadership will only be successful if they follow in the footsteps of their male counterparts (Watts, 2009). This includes acting and behaving the same way a male leader would (Watts, 2009). For example, female construction workers are advised to be less feminine in their working style (Giraldo, 2010). In addition to attitude, appearance plays a role in how leaders are looked at. Many men are not distracted by other male leaders' appearances and bodies but when it comes to women that seems to change (Watts, 2009). Achieving invisible bodily status is necessary for women for the advancement in leadership which includes not drawing attention to physique, dress, and adornments (Watts, 2009). This is a limitation to gaining leadership positions because women are being judged by their appearance and have to make changes to themselves, so others do not think differently of them (Watts, 2009). In a United States Army Corps of Engineering-South Atlantic Division (USACE) case study, findings indicate that it was

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challenging for women to attain leadership positions in their companies for two reasons (Dainty et al., 2000). The first reason is that men social isolate women intentionally and secondly men want to continue to dominate this industry, so they take women's contributions less seriously to maintain their position of power (Dainty et al., 2000). Men can socially isolate women because of the small representation on job sites and the lack of female leaders in the industry (Mohammadi et al., 2019). Female leaders are expected to mimic males' aggressive behaviors when in a position of authority which can create an environment where women cannot lead with their own values (Azhar & Amos Griffin, 2014).

Another limitation for women in leadership is that females face a slower career progression than males (Azhar & Amos Griffin, 2014). Slow career progression can lead to the thought of never reaching top leadership positions (Menches & Abraham, 2007). In addition to slow career growth, the lack of female mentors and role models is a limiting factor for women looking to gain leadership positions (Afolabi et al., 2019). Females looking to reach higher status in a construction company do not have the same number of role models to guide them through the journey in comparison to their male counterparts which puts females at a disadvantage (Lingard & Lin, 2004).

As seen through existing literature, there are many limitations to females in the construction field, however although there are limitations to women in the workforce, women continue to pursue careers in this field (Lingard & Lin, 2004). This leads for further research into female's motivational factors to work in this industry.

RQ2: What has motivated women to overcome these barriers and pursue a career in this industry?

### Female Leadership Style

It is seen throughout existing literature that many women have a differing leadership style in comparison to men (Amaratunga, n.d.). Leadership is when an individual aids a group of people to reach a common goal and helps guide them through the process (Northouse, 2004). Women are perceived as democratic leaders who are shown to be more understanding and supportive when leading a team (Norberg & Johansson, 2021). There are several characteristics that are looked at to be more feminine that differentiate women leaders from

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men (Amaratunga, n.d.). This includes perceiving power as something to be shared, creating a space where people feel safe and supported, and having a diverse working environment (Amaratunga, n.d.). In contrast female leaders are perceived at to have an interactive leadership style that encourages self-worth, using interpersonal skills, and having better performance when feeling good (Trinidad & Normore, 2005). This indicates that women are transformational leaders while male leadership has characteristics that represent transactional leaders (Amaratunga, n.d.). In contrast a transformational leader is one who takes other people's thoughts into consideration and can do well with change, reflecting a democratic leadership approach (Amaratunga, n.d.). A transactional leader is one who solves problems immediately, communicates clear expectations of what the outcome and goal is, and rewards others due to their performance, reflecting an authoritative leadership approach (Thurairajah et al., 2007). With the construction industry being dominated by male leadership, it reflects the limitation of transformational leadership characteristics and the benefits this type of leadership can bring to an organization (Amaratunga, n.d.).

#### Importance of Women in the Industry

Women play an important role in the growth and future of the construction industry. Women have different skills than men such as initiating softer skills including peacekeeping and politeness (Norberg & Johansson, 2021). As many male leaders lead with aggressiveness, women present a different leadership style which can be useful to have in a business environment (Norberg & Johansson, 2021). This allows different perspectives and ways to communicate. There is also a shortage of workers in the industry (Menches & Abraham, 2007). Currently, one in five construction workers is approaching retirement, while almost 26% are reaching 55 years of age (Afolabi et al., 2019). This presents women the opportunity to play a significant role in the industry and strive for more gender equality (Afolabi et al., 2019). Women account for a large portion of the world's population so it would be wasteful to not meaningfully and effectively integrate them into the construction industry's development process (Afolabi et al., 2019).

Seen throughout existing studies, the construction industry is dominated by male leadership (Afolabi et al., 2019). There are few females that pursue a leadership position which presents potential research on why women would hold such a position.

RQ3: Why do women want to pursue leadership positions in the construction industry?

## **METHODOLOGY**

### Study Type

The present study will analyze the motivational factors that contribute to women's desires to enter the construction industry and the characteristics that empower female leaders. In an effort to address these research goals, the present study will obtain quantitative data through survey research. This survey will gather data relevant to participant demographics, opinions towards anti-feminine characteristics prevalent in the construction industry, changes necessary for promotion of gender equality, and measures in balancing the female identity in the construction industry. This research is important for the future of the industry due to bringing in new perspectives and allowing for growth of the construction world. By finding ways to motivate women to join the field, this allows for more gender equality and can empower other females to join the workforce and combat different male dominated fields.

### Sample

The sample for the study was comprised of 15 female participants who currently work in the construction industry. Recruiting began by contacting the National Associations of Women in Construction and targeting their New England chapters. In addition to targeting the NAWIC, local New England construction companies were targeted, and the survey was sent to their female employees within the business via email.

### Procedures

#### *Demographics*

The first section of the survey are questions focused on demographics some of which include age, highest academic qualification, number of years in the field, and which state their

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place of work is located within the United States. For all questions including age, academic qualification, and number of years in the field, there will be four options to choose from. For the question regarding which state the participant works in, there will be a drop-down menu where the participant is able to select a state.

#### *Anti-Feminine Characteristics*

The next section of the survey focuses on the anti-feminine characteristics that are present in the construction industry. In accordance with the Afolabi et al. (2019) survey conducted, there will be 18 characteristics listed and participants will rank each one from 0-5, where zero represents that respondents do not feel that a characteristic is prevalent in the industry and five indicates high degrees of prevalence. A score of five would indicate that respondents were personally affected by said characteristics. Some characteristics listed include participants experience with macho culture, lack of respect towards women, and sexual harassment (Afolabi et al., 2019).

#### *Promotion of Gender Equality*

The following section will include changes necessary for the promotion of gender equality in the workplace. Similar to the work of Afolabi et al. (2019), participants will be asked to rank a list of 15 components. Similar to above, respondents will rank these items on a 0-5 scale, where zero represents that respondents do not believe changes need to be made in the industry whereas 5 represents that the participant strongly feels the change needs to be made. Some examples include bully culture, sexual orientation to coworkers, and aggressive and competitive nature of the construction industry (Afolabi et al., 2019).

#### *Balancing the Female Identity*

The last section will focus on components that potentially could affect women entering and staying in the construction industry. In accordance with the Afolabi et al. (2019) survey conducted, there will be 17 components in this section. Similar to above, participants will rank items on a scale from 0-5, where zero represents that participant don't believe the item plays a role in attracting or deterring females in the industry and five if the item is detrimental to the success of balancing the female identity in the construction workforce. Components include women mentors and role model programs, amount of women in top management, flexible working conditions (Afolabi et al., 2019).

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#### Data Analysis

All participants will rate all components from 0 - 5. A mean score will be computed for each component out of all participants' rankings. Each section of the survey will have a ranking index. The ranking index will be measured by the highest overall mean score ranking first and will continue to rank from highest mean score to lowest. These rankings comprise the present study's dependent variable. The independent variable, participants experience in the field, serves to impact these rankings and participants' overall perspective. The components are affected by what the participant has experienced in the construction field which makes the responses from participants the dependent variable.

## **RESEARCH FINDINGS**

In my research, three critical areas that pertain to the question of why there are so few women leaders in construction industry. The survey conducted was taken by 15 female participants that are part of the construction industry. Although the goal of the survey was 100 to 200, with female construction workers being the minority in the industry, it was difficult to find participants.

#### Section One

The first section focused on unfavorable characteristics that affected women in the industry. This section asked participants how much of an impact these factors had on deterring females away from the construction industry. 61.53% of females said that the macho culture presented in the industry significantly deterred them from entering and remaining in the industry. 42.85% of women in the construction industry said low career advancement had a major influence on them as well as sexual harassment. 50% of females said the negative perception of women's capabilities had a significant or major influence on them. 57.14% of women said the male dominated culture had a large impact on females. 38.46% of respondents said being under-recognized/under-employed had a significant or major influence on their position in the industry. Factors that had little to no effect over participant's entering and remaining in the construction industry were intolerable working conditions (35.71%), inflexible working hours (35.71%), and restriction on type of clothes (42.86%).

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#### Section Two

The second section focused on factors that are present in the industry that women believe can change to promote gender equality in the workspace. Participants ranked them on the level of change needed to see positive growth within equality. 35.71% of women said that significant change needs to be seen regarding the belief in women capabilities and the comparison between capabilities of sexes. 42.86% of respondents said that major or significant change needs to be seen in regard to the aggressive and competitive nature of the industry and leadership commitment. 50% of females said that major or significant change needs to be seen among individual's mindset as well as discrimination at all levels, work-life balance, and socio-cultural beliefs. 64.28% of participants said major or significant change needs to see regarding societal expectations. 71.42% of women said major or significant change needs to be made with wage equity among sexes. The majority of participants ranked all factors as needing some level of change to promote gender equality among the industry.

#### Section Three

The last section focused on factors that influenced women to enter/stay in the industry. Women were asked how much of an influence the characteristics had on attracting and retaining females in the industry. Many of the factors listed had high influence over women. 53.85% of women thought that women mentors/role model programs had major or significant influence on women remaining in the industry. 57.14% of females said more women in top management and client request for equal women had major or significant influence. 71.43% of participants believed increased career mobility had major or significant influence over females. 64.28% of females believed attractive career paths and equal salary schemes has major or significant influence as well as training opportunities for women, improved unbiased recruitment systems, and commitment from senior managers. 50% of respondents said that collaboration between employers and schools has major or significant influence on women entering/staying in the industry as well as flexible working hours, broadened thinking of construction stakeholder, increased awareness about construction careers, support from professional bodies and unions, and sponsorship of female construction students.

## **INDUSTRY IMPACT**

This research can be used by construction companies to make a positive impact on the industry. This research can be used to better understand females in the construction industry and create a more diverse culture within their business. This research can help businesses understand what females are looking for in a construction company and how to promote women to remain in the industry. Construction industries can also introduce different leadership styles and perspectives to encompass all employees' beliefs and attitudes.

## **CONCLUSION**

It is clear that women have several barriers to entry into the construction industry due to the masculine culture and atmosphere (Afolabi et al., 2019). As seen through the literature, the construction industry has been dominated by males (Campuzano, 2019). Although there are women in this industry, they are historically small in numbers and face difficulties previously described (Mohammadi et al., 2019). Understanding the struggles that women face in this industry allows for further advancement to look into the motivational factors that contribute to why women enter this industry. It allows for further research into why women want to pursue leadership positions in this industry when they would be the minority. It is shown that if women have increased access to the industry, it is proven to be an effective way to rework the existing construction industry's current culture and overcome barriers within the workforce (Greed, 2000). It is important that women find their way into this industry due to the need for female leaders (Amaratunga, n.d.). As addressed above, women have a different approach to leading a workforce (Amaratunga, n.d.). By bringing in new leadership styles and perspectives, it can help change the culture of the construction industry and combat the masculine culture that it has endured throughout history (Norberg & Johansson, 2021).

There were four main factors contributing to overcoming the masculine culture and barriers that were reflected in the survey results. It includes equal opportunity, inclusive culture, unbiased environment, and mentorship. When these factors were present, more women were opted to enter and become leaders in the construction industry. When equal opportunity was seen in the industry, it presented equal wages and leadership positions for



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both men and women. Unbiased environment was an important factor for motivating women because it created equal treatment regardless of gender. Having an inclusive culture fostered acceptance of diverse attitudes and beliefs which contributed to females' motivation to enter the industry. Mentorship was a crucial factor in bringing women into the construction industry due to women guiding other women into the industry and being able to learn from their experience.

**FUTURE RESEARCH**

It is assumed women want to pursue leadership positions to bring more diverse thought into the industry, but data needs to be collected to support this.

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