

A Man's World: Opening the Door for Women in Construction Management

Shelby Akers

*Department of Construction Management, East Carolina University, Greenville, NC, USA
akerss16@students.ecu.edu*

Amelia Saul

*Department of Construction Management, East Carolina University, Greenville, NC, USA
saul12@students.ecu.edu*

Syed M. Ahmed

*Department of Construction Management, East Carolina University, Greenville, NC, USA
ahmeds@ecu.edu*

Abstract

Women are statistically underrepresented in many project management-based industries, specifically construction management. Research on this topic often evaluates the barriers and experiences of women in the construction management field, but often does not consider roundabout ways of decreasing these barriers. Thus, the present research aimed to review the current literature regarding such barriers and experiences and considered ways to minimize such barriers as based on evidence in other industries with increasing female presence. Results from such efforts found possibilities such as considering similar areas of study, skill sets, and other field-relevant characteristics to utilize as recruiting tactics for women in the construction management field. Moving forward, the industry as a whole should aim to capitalize and recruit women as based on these various predictors of women who would do well and would be successful in the construction management industry. Recommendations and future implications are discussed in hopes of improving recruitment strategies for future generations of women in construction management.

Keywords

Women, Construction Management, Recruiting, Organizational Culture

1. Introduction

Women's presence in the workforce continues to grow in a number of industries on a global scale. Although these efforts have expanded, there is still a scarcity of women in the construction management field. In fact, the Bureau of Labor Statistics reported in 2017 that approximately

46.9% of all managers were women, but only 7.4% within the construction management field were women. The discrepancy between these two statistics brings to question why women are not as well-represented in this industry as men. Research regarding this subject matter suggests the possibility of women facing difficulties with such project management-based occupations (traditionally construction and engineering) given the “masculine” nature of the industries (Cartwright and Gale, 1995). Moreover, Cartwright and Gale (1995) found that the underrepresentation of women in construction can be largely contributed to education, training, and women’s role in society (as well as the subsequent discrimination). This poses a major threat to nearly any organization, especially for construction management given the loss of potential talent and innovation by having fewer women.

Table 1: Breakdown of Women in Construction

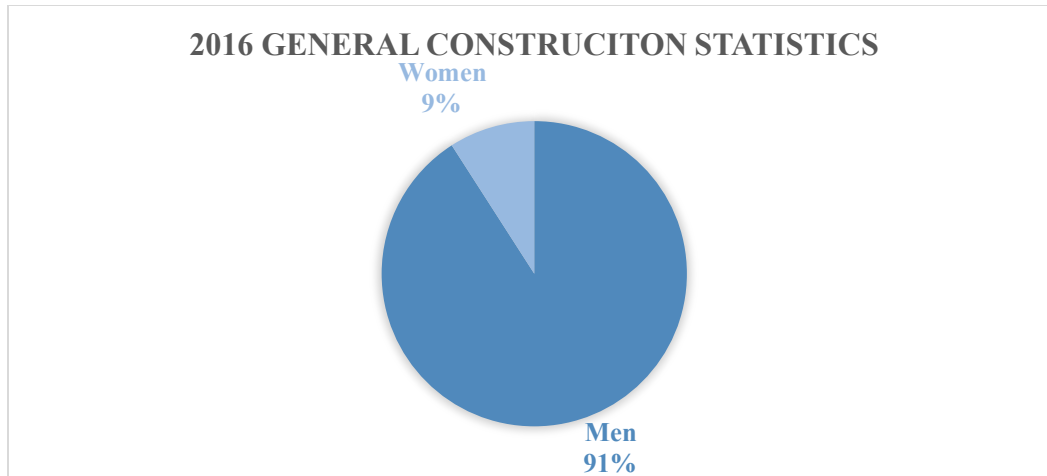
Occupation Sector	Number of Women	Percentage
Sales and Office	423,000	45%
Professional & Management	293,000	31%
Natural Resources, Construction & Maintenance	196,000	21%
Service Occupations	14,000	1.5%
Production, Transportation & Material Moving	13,000	1.4%

Source: NAWIC (2018) Retrieved from *Bureau of Labor Statistics — Current Population Survey*

Current research involving women in construction management appear to have a major focus on two major topics: 1. the barriers present that prevent women from entering the construction management sphere, and 2. the cultural experiences of women who work in construction management (e.g. behavior expectations from men, sexual harassment cases, etc.). These major subject areas are vital to the overall understanding of women in construction management, and although it is irrefutably important to investigate these matters, there continues to be a gap in the knowledge. Thus, the present paper aims to review these barriers and experiences, as well as give consideration to characteristics of the industry as they relate to other industries with healthy or growing female representation. It is believed that the identified similarities could be utilized as recruitment tactics to increase the number of women in construction management. The goal of this study is to use data gathered from various secondary datasets, official reports, and literature on the construction industry to reviews these barriers, experiences, and similar characteristics. The following sections will review the current literature of women in construction, as well as potential new angles regarding skills and characteristics present in associated fields. Findings and recommendations for recruiting tactics are also presented.

2. Literature Review of Women in Construction

As it has been mentioned, there are a number of studies and reviews that evaluate the barriers and experiences of women in construction management throughout their career stages in this field. Thus, it is beneficial to establish and recognize the precursors and cautions involved for women in the construction management field.



Source: NAWIC (2018) Retrieved from *Bureau of Labor Statistics — Current Population Survey*

Figure 1: Comparison of Male to Females in Construction

2.1. Barriers and Experiences for Women in Construction Management

The barriers women face in construction management can be summarized in three major ways: (1) sexism and masculinity associated with the industry, (2) assumed characteristics of the job, and the actual characteristics of the jobs, and (3), the lack of information and resources available to women.

Table 2: Age groupings and individual top barrier issues

	Age (years)					
	18-24	25-35	36-45	46-55	56-65	65+
Attitudes, Behavior and Perceptions	1	36	35	9	10	0
Inflexible working practices	0	11	32	13	2	0
Lack of training opportunities	2	4	15	8	12	0
Lack of support, networking and mentoring opportunities	5	17	9	4	1	0
Other Issues	1	0	3	1	0	0
Total	9	68	94	35	25	0
Sub Total						231

Source: Worrall, Harris, Stewart, Thomas, and McDermott (2010)

There is no secret that men dominate the construction industry worldwide. Even despite job role or profession, the male-dominated organizational culture (recognized by Harrison [1972] as power culture) and inflexible working practices stand as a major barrier to women (Worrall, Harris, Stewart, Thomas, and McDermott, 2010). Notably, women interested in construction maybe deterred from entering the field as due to fear of sexism and potential to not be seen as an equal in the eyes of their male counterparts. Moreover, not only is it a fear that this covert sexism will have an impact on the way women are perceived, but also there is a concern about being harassed either verbally, sexually or otherwise. This sexism can manifest as either overt, such as harmful sexual harassment, or subtle comments, such as calling women “baby” or “sweetie.” Either way, it can still act as a major deterrent for women.

In addition to the relational components being of concern to women, so are the physical and mental. Women express concern regarding their physical strength as being a necessity for this industry, although this is often rebutted by the fact that a professional or management position within the industry does not call for the physical strength needed for labor in the field. Additionally, given the still salient status of women as primary caretakers, the concern for the lack of work-life balance and assistance in familial relations remains as a major barrier for women in construction management. Thirdly, the challenge for flexibility in work hours also creates barriers for women in their assessment of the workforce construction management has (or does not have) to offer to women.

Industry	Percentage
Human Health & Social Work	79
Education	72
Real Estate	57
Public Admin & Defense: Social Security	49
Wholesale, Retail & Car Repair	48
All Employment	46
Administrative & Support Services	44
Financial & Insurance	44
Professional, Scientific, & Technical	40
Information & Communication	29
Agriculture, Forestry & Fishing	27
Manufacturing	25
Mining, Energy & Water	20
Transport & Storage	19
Construction	12

Source: Barker (2014)

Table 3: Breakdown of Women in Each Industry

A final major set of challenges faced by women in their involvement with the construction management industry is the general lack of information and resources for women. Likely the greatest consideration is the lack of information available to women regarding construction management as a career option. Moreover, given this identified lack of women in construction management, there also stands a lack of mentorship and leadership from fellow women in the field. Because of these lacking qualities present in the construction management industry, the greatest challenge of all, perhaps, is the network of women not having knowledge about what this industry is and subsequently how to get engaged in it. If women were to break down these barriers, perhaps challenges presented above would be diminished if not resolved.

2.2. Experiences for Women in Construction Management

Gale (1994a; 1994b) conducted research regarding the perceptions of men and women in the construction industry, most notably surrounding a student sample of graduate and undergraduate women who would be entering the field. Findings revealed these women rejected feminist ties, though had contradicting concerns pertaining to the career opportunities that that would be available to them, as well as the sexism they felt they would face from their male colleagues. Moreover, the response of this student sample suggests an explicit need to behave and align

one's self with that of traditionally masculine conduct, although feeling conflicted by an implicit acknowledgment that there is a chance of experiencing negative treatment for their gender.

Women tend to express an experienced shift in their behaviors to reflect that of traditionally masculine behaviors in order to minimize the possibility of acting wrongfully feminine. Additionally, some women have even reported cases where the men they were in charge of were bewildered by their presence, and thus, had to curb their leadership to coddle this perplexity. Despite feeling the need to change behaviors, there are several organizations in existence that serve to support women in construction management. Organizations of this nature include the National Association of Women in Construction (NAWIC), the Women Contractors Association (WCA), Women Construction Owners & Executive USA (WCOE), Professional Women in Construction (PWC), and Hard Hatted Women (HHW) just to name a few.

Despite these common notions about the potentially negative experiences for women in construction management, there is a slight upswing to the alterations of behavior: trust and comfortability. Although there are reports of unpleasantness associated with having to shift one's behavior, women have reported that shift to more "masculine" behaviors allow for their male coworkers and subordinates to feel more at ease and subsequently foster trust and comfortability. Doing so has been reported as helping all parties involved feel more inclusive and cohesive in tackling projects.

2.3. Valued Skills and Characteristics in for Women in Construction Management

There are several skills and characteristics in construction management, as both suggested by women and the field and research efforts, that women tend to possess that makes them especially fit for construction and project management. The major characteristics that make women strong project managers include humor, confidence, and innovation.

2.3.1. Humor

Much of human interaction and connectivity is based on humor shared. Subsequently, it is a common skillset many women in construction management recommend women to have in an effort to be successful in the field. Not only does this help to aid in gender relations among the male presence, but it also allows for a more comfortable work environment. That said, it is also recommended to maintain a zero-tolerance policy regarding the nature of the humor, as jokes and behaviors of a sexual type should not be accepted. By doing so, an appropriate balance between respect and comfortability can be made.

2.3.2. Confidence

Although confidence is a key component that nearly any working professional is recommended to have, confidence is of particular importance to women in construction management. This is tied largely to the fact that successful women in construction management are often warned about not being intimidated by those in the work environment who may try to underestimate their abilities. Moreover, it is forewarned by many women in the field to anticipate having to go the extra mile to prove skill and competency.

Many testimonies of women in the field; however, have noted that once this respect and acceptance of competency is acknowledged, any experiences of sexism tend to dissipate. Likewise, it is often noted that men (both inside and outside the construction management field) have a tendency to self-promote and show pride regarding accomplishments, whereas women have a tendency to downplay their successes. Thus, it is a valuable skillset for women to embrace their accomplishments and show similar displays of pride for achievements.

2.3.3. Innovation

One of the greatest skill a woman in construction management could have regards her ability to bring a new perspective to the table. Given that the industry has a large male presence, it is beneficial to women to have new approaches and attitudes concerning the way in which projects are handled. In fact, one such study found that women in project management director positions tend to contribute in a significantly positive way to the organization's innovative initiatives (Torchia, Calabro, Gabaldon, & Kanadli, 2018).

3. Methodology

The purpose of this study was to determine skills sets that are prevalent in industries similar to construction management with healthy or growing female representation. Information was collected via secondary data from journals in industries related to construction management (i.e. project management-related) as well as fields with a growing number of female representation (i.e. STEM careers). The data was reviewed from a meta-analytic perspective with intentions of highlighting various themes present in such literature.

4. Results

The results of the study found a variety of skills that are prevalent in industries similar to construction management with healthy or growing female representation. Such skills include being assertive, emotional intelligence, and transformational leadership. Although these skill sets are common and necessary among a number of fields and occupations, these appear to be especially prevalent in the related industries, as well as, important skills to narrow in on for recruiting women in the future.

4.1 Similar Skills for Construction Management and Female-Healthy Industries

When reviewing the literature, there are a number of skills that are widely recognized among many male-dominated industries. Some of these skills include being assertive, having emotional intelligence, and transforming leadership.

4.1.1. Be Assertive

While confidence skills are already a skill present in women of construction management, the need to be assertive is prevalent in many male-dominated industries with women making a break-through. Many anecdotes and themes of women in such fields stress the importance of keeping to one's convictions and being sure that everyone is also on board. Likewise, as it relates to project management, this also includes being

assertive enough to properly delegate tasks. This is particularly important as the lack of proper delegation may lead to bottlenecks in project completion.

4.1.2. Emotional Intelligence

Although all professionals may benefit from emotional intelligence, women have a tendency to have greater emotional intelligence and empathy (Petrovici & Dobrescu, 2014). Given this notion, it would be wise to have women in a project management position and see success as this ability gives way to being able to work effectively with people. Especially in the context of construction management, often recognized by brute and bronze, there appears to be a lack of emotional substance, which may harm the industry. Subsequently, emotional intelligence has made its place in many STEM fields, and it has also shown great success. This can be further noticed in the increased number of women doing well in the STEM industries. Much like the construction management industry, many of those in such associated fields are often very science- and logic-based, which leaves little room for human emotion and feeling. Thus, it is to the benefit of women to play into their abilities towards emotional intelligence.

4.1.3. Transformational Leadership

Transformational leadership, in its nature, has a greater sense of being less authoritarian and more coaching-based. Thus, while men have a tendency to be more oriented towards being in control and having a hard hand in managing, women tend to take more of a nurturing approach to develop their leaders. Moreover, this skillset holds gravity in many management-based industries. This skill allows for even greater improvement for all those involved in the organization(s) in question as it allows for the evolution of the workforce.

5. Discussion

A participant in Gale's (1994a; 1994b) research commented on not "dragging" women and "less aggressive" men into the industry if they are uninterested, to begin with; that said, as the results of this study have shown, appeal for the project management-based industries can organically garnish if the power culture can be minimized. By doing so, the "visionary" approach (as opposed to "traditional") women bring in their management style (Vinnicombe, 1987) can help progress and transform the industry, often an asset to many businesses. Thus, as the literature and results combined may suggest, women being able to capitalize and harness skills already present for women in construction management and similar industries may boost women's status in the field.

The results of this study are important as they give insight as to what still remains constant as barriers and experiences for women work in construction management to the field. Although the participant's commentary from Gale's (1994a; 1994b) research holds some validity to not bringing in individuals into the industry against their will or interest, this is discredited by the findings that a sincere interest and care for the industry from those who traditionally do not "fit in."

That said, if the skillsets present in other women-healthy and growing female representation industries can be harnessed, the general lack of women in the field may be able to grow.

Subsequently, there has been evidence from other male-dominated industries of such skills being fostered and used in such a way that women have been able to break further into said industries. Thus, being able to market and recruit women from the perspective of the benefits of being assertive, having emotional intelligence, and being a transformational leader, all stand as a way to get women into the construction management industry. Moreover, seeing as these skills are empirically shown to be particularly prominent in women, it could be recognized that these skills can be used to recruit women based on a natural career move to make.

6. Recommendations and Conclusion

One of the greatest assets the construction management industry has for women is its narrow pay gap between men and women in the construction industry (Bureau of Labor Statistics, 2017). Thus, while this may be a way to initially grab women's attention, drawing on the results also gives attention to the fact of natural skillsets women possess that may aid their ability to be involved in the construction management industry.

In order to break down the barriers that are hindering women from joining the construction field, multiple recruitment methods need to be used. Recruitment can begin as early as elementary school when children are learning about career opportunities for the future. Instead of telling children that there are specific fields that are suited for women and others that are suited for men, teach children about multiple fields and let them decide based off their interests. But, the recruiting cannot stop there, it needs to continue through high school, college and into the workforce. In the future, the industry as a whole should aim to capitalize and recruit women based on these various predictors of women who would do well and would be successful in the construction management industry.

7. References

- Bureau of Labor Statistics. (2017). Women in the labor force: a databook. Retrieved from <https://www.bls.gov/opub/reports/womens-databook/2016/pdf/home.pdf>
- Bureau of Labor Statistics. (2018). Women managers statistic from 2017. Retrieved from <http://www.bls.gov>.
- Cartwright, S. & Gale, A. (1995). Project management: different gender, different culture? A discussion on gender and organizational culture – part 2. *Leadership & Organization Development Journal*, 16(4), 12-16.
- Gale, A. (1994a). "Women in construction: an investigation into some aspects of image and knowledge as determinants of the under-representation of women in construction management in the British construction industry," PhD thesis, University of Bath.
- Gale, A. (1994b). "Women in construction", in Langford, D.A., Fellows, R.F., Hancock, M., and Gale, A. (Eds), *Human Resources Management in Construction*, Longman Higher Education, London.
- Harrison, R. (1972). How to describe your organization. *Harvard Business Review*, 51, 119-128.
- National Association of Women in Construction ([NAWIC], 2018). Statistics of Women in Construction. Retrieved from <https://www.nawic.org/nawic/statistics.asp>
- Petrovici, A. & Dobrescu, T. (2014). The role of emotional intelligence in building interpersonal communication skills. *Procedia – Social and Behavioral Sciences*, 116, 1405-1410.

- Torchia, M., Calabro, A., Gabaldon, P., & Kanadli, S. (2018). Women directors contribution to organizational innovation: A behavioral approach. *Scandinavian Journal of Management*
- Vinnicombe, S. (1987). What exactly are the differences in male and female working styles? *Women in Management Review*, 13(1), 13-21.
- Worrall, L., Harris, K., Stewart, R., Thomas, A., & McDermott, P. (2010). Barriers to women in the UK construction industry. *Engineering, Construction, and Architectural Management*, 17(3), 268-281.