

# Perspectives of Women in Construction to Encourage More Women to Join Construction

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## Abstract

Despite a range of equality legislation and initiatives in the United States Congress, the construction industry remains one of the most male-dominated sectors. The construction industry is one of the largest job providers in the U.S., and the construction industry suffers from critical labor shortages in the workforce. Research shows that women are significantly underrepresented in all the construction occupations and professions in the United States construction industry. For years, there has been a wealth of research and many initiatives to tackle equality and diversity in the construction industry, specifically concerning female representation. In this research a quantitative study was conducted using an online survey. Results indicate that there is a significant level of dissatisfaction within the female workforce in the construction industry. Opinions of a significant percentage of respondents indicate that they feel overlooked, that their opinions are considered and that they are underpaid. However, the respondents also provided valuable feedback to include more women to participate in the construction industry. Mentoring and equal pay were prominent answers to the question of empowering more women to join the construction industry.

## Keywords

Women in Construction, Survey, Diversity and Inclusion

## 1. Introduction

The construction industry is one of the most male-oriented industries. Construction has always had a 'macho, male-dominated connotation. There remains a pressing need to do more to encourage a commitment to gender diversity in the workplace, thereby attracting more women into the construction industry and enabling women the opportunity for senior-level positions. The status quo needs to shift, enabling a more inclusive, diverse, and gender-equal workforce in the years to come, with women comprising of just under 20% of the directly employed construction workforce. Research reflects that women get passed over for the top jobs in construction. However, a diverse workforce allows the best talent to rise to the top, regardless of gender, race, ethnicity, cultural background, or beliefs.

Of all the people working in construction, women comprise only 10.3 percent. Even smaller is the number of women on the front lines of a job site. Out of 100 employees in the field, only one is female. Considering that women make up 47 percent of all employed individuals, this means that the construction industry is only benefitting from about 1.25 percent of women in the workforce (*Women in Construction: The State of the Industry in 2022* | BigRentz, n.d.). The gender gap in the construction workforce persists, despite efforts to close it over the past several decades. Increasing gender diversity is a critical strategy for strengthening the supply of engineering professionals required to meet current and future public and private demands. Female construction workers appear underrepresented in supervisory positions as compared to their male counterparts. Female construction workers are also much more likely to leave their jobs than male supervisors. Their departure rate is higher in both the private and public sectors (*Women Construction Owners & Executives – We Create Opportunities for Women*, n.d.). These results illustrate the advancement challenges women encounter on their career paths and the consequences of these barriers. This includes less gender diversity in the pool of civil engineers available to meet the growing demand in the construction industry and fewer women available for promotion into leadership positions (Choi et al., 2022).

Rapid growth in the construction industry in the U.S. has driven increasing workforce demand. In 1998, construction spending in the United States was \$689 billion (private sector: \$534 billion; public sector: \$155 billion);

in 2019, it was \$1,326 billion (private: \$997 billion; public: \$329 billion) (Branch, n.d.). According to the U.S. Department of Labor's Bureau of Labor Statistics (BLS), the annual hiring rate grew by 20.1% between 2015 and 2019, increasing from 3,982 to 4,981 hires per year (*Table 1. Job Openings Levels and Rates by Industry and Region, Seasonally Adjusted - 2022 M02 Results*, n.d.). In addition, the construction industry has played an important role in the nation's economy, contributing 4.1% to the U.S. gross domestic product (GDP) in 2019. As the number of workers has increased in this sector, so has the job turnover rate. In 2015 the turnover rate was 21%, but it increased to 27.6% in 2019.

While the odds seem stacked against women in construction management, the outlook for female representation and opportunity in construction has improved in other areas. Social attitudes and organizational cultures are becoming more accepting of women in male-dominated fields such as construction and other science, technology, engineering, and mathematics (STEAM) fields (Norberg & Johansson, 2021). Since 2002, there has been evidence that the industry values and desires women's diverse capabilities and perspectives in construction management (Agapiou, 2002). A 2013 study in Sweden found that women scored equal to or higher in 17 out of 20 project management competencies than their male counterparts (Arditi et al., 2013), concluding that project managers are as competent as their male counterparts. Universities recruit more female construction management students (Moore and Gloeckner 2007; Sewalk and Nietfeld 2013).

## 2. Research Methodology

This research study was conducted through the utilization of a quantitative approach. Quantitative data was obtained and analyzed by surveying women working in the construction sector. A standardized survey with multiple choice and short answers was conducted electronically over the internet. The survey sought to discover the female responses to 35 questions ranging from demographics to current working conditions and what can be done to improve the numbers of women working in the construction industry. Quantitative methods were used to analyze the survey data. The survey was sent to 73 female participants, 31 of whom completed the survey, resulting in a response rate of 42.5%. This is less than desirable and the authors intend to further distribute the survey to elicit a greater response rate.

## 3. Results

The survey was completed from women in the construction industry working in the United States. Women were asked about their experiences in the construction industry. The data reveals a dark experience for a majority of the women working in the industry, as shown in Table 1.

### 3.1 Quantitative Results

The data reveals a dark experience for a majority of the women working in the industry, as shown in Table 1. Some of the highlights of the data include:

- Only 55% of the women agreed that women have good opportunities to advance in the construction industry
- 30% of the respondents do not agree that the situation in the construction industry is improving for women
- 45% of the respondents believe that men were respected more than women
- Only 35% of the respondents thought that their leadership team encouraged women to participate in decision making process
- 38% of the respondents did not believe that their opinions, ideas and suggestions were genuinely considered by others in the company
- Only 50% of the respondents believed that their company's leadership listens to them compared to men within the company
- Only 50% of the respondents believed that their company valued them as their male counterparts
- Only 55% of the respondents believed that their company paid them the same as men within the company

Taken as an aggregate, this data points to deep dissatisfaction amongst the respondents about how valued they feel with their companies. Additional comments for these questions also suggested the same, as evidenced by one respondents comment *"I have worked in the field and in construction offices for over 2 decades. I have been talked over and over-looked more times than I can count. If I could change one thing, it would be to be heard."*

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**Table 1.** Opinions of female workers in construction industry about treatment and in comparison to men

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	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Do you feel women have good opportunities for advancement in the construction industry?	0.00%	55.17%	20.69%	24.14%	0.00%
Do you feel the role of women in construction is changing for the better?	10.34%	58.62%	24.14%	6.90%	0.00%
More coworkers are respectful towards their male counterparts, then female counterparts.	13.79%	31.03%	24.14%	27.59%	3.45%
People in leadership encourage more women to participate in the decision making process.	10.34%	24.14%	31.03%	34.48%	0.00%
My opinions, ideas, and suggestions are genuinely considered.	20.69%	41.38%	31.03%	6.90%	0.00%
My company's leadership listens to women the same as they listen to men?	20.69%	27.59%	27.59%	24.14%	0.00%
I feel respected and valued as much as my male counterparts.	24.14%	27.59%	20.69%	27.59%	0.00%
At my company, men and women are paid equally for the same work?	20.69%	34.48%	24.14%	13.79%	6.90%

Respondents were further probed on these matters to include issues of discrimination, unwanted attention and growth opportunities. Some key findings related to this issues are:

- Only 30% of the respondents disagreed that they were discriminated against due to their gender
- Only 35% of the respondents mentioned they hear inappropriate comments from customers and clients
- 32% of the respondents did not agree that they had mentors within their company
- 25% of the respondents did not agree that they had an opportunity to advance within their company
- Only 47% of the respondents thought that women had good opportunities in the construction industry

Once again this data paints a bleak picture for women to advance in the construction industry. It appears that to incorporate more women to enter the construction industry, perceptions of women already in the construction industry must change. This preliminary data suggests that much remains to be done to encourage more female participation in the construction industry.

In an effort to validate the internal consistency of the survey instrument, respondents were asked a few questions where the possible answers were 'Yes', 'No' and 'Uncertain'. Respondents were allowed to provide verbal answers to qualify their response. The results from this data presented in Table 3 correspond to the findings presented in Tables 1 and 2. Key findings from this data indicates:

- Only 32% of the women disagreed that they were given different jobs compared to men
- Only 29% of the women disagreed they have had a negative experience in the construction industry due to their gender
- Only 32% of the participants felt that they were not disadvantaged in the construction industry due to their gender
- Only 29% of the female participants agreed that they feel that they are treated the same as men at work

**Table 2.** Opinions of female workers in construction industry about treatment and opportunity

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
During my career in construction, I have been discriminated against because of my gender	20.69%	31.03%	20.69%	24.14%	3.45%

I have received inappropriate comments or unwanted attention from customers or clients.	17.24%	37.93%	10.34%	27.59%	6.90%
I have access to mentors in the industry or in my company.	21.43%	46.43%	17.86%	7.14%	7.14%
I have the opportunity to advance in my company.	25.00%	50.00%	7.14%	14.29%	3.57%
There are good opportunities for women in construction.	10.71%	35.71%	46.43%	3.57%	3.57%

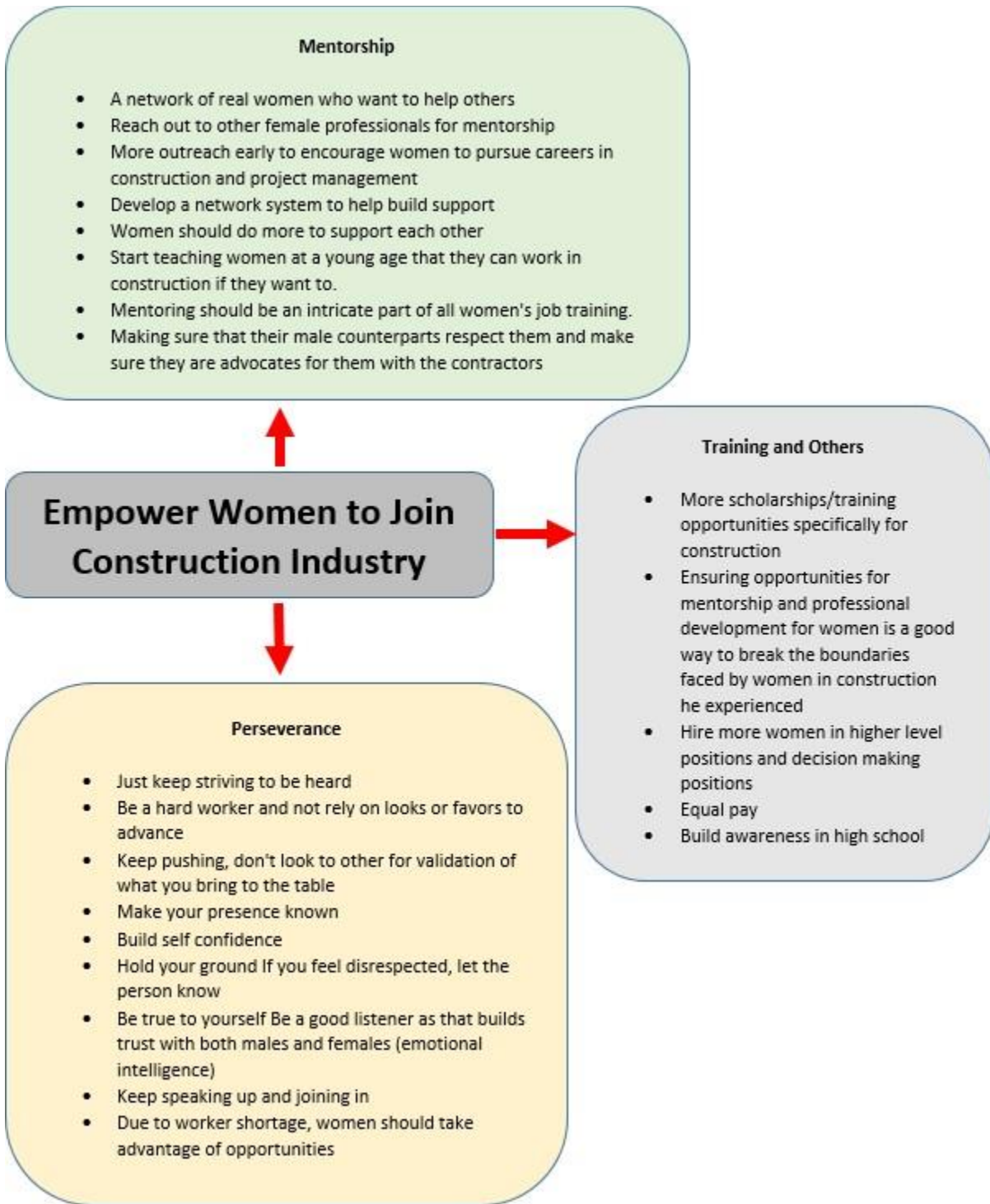
The results shown in Table 3 once again point to a significant level of dissatisfaction of working in the construction industry. These descriptive statistics are similar to those presented in Table 1 and Table 2 indicating that more needs to be done to make women feel included and appreciated within the construction industry.

**Table 3.** Opinions of female workers in construction industry about treatment and opportunity

	Yes	No	Uncertain
Are you sometimes given different jobs or tasks to do, compared with the men you work with?	53.57%	32.14%	14.29%
Have you ever had any negative experiences being a woman working in the construction industry?	57.14%	28.57%	14.29%
Have you ever felt disadvantaged in the construction industry because of your gender?	50.00%	32.14%	17.86%
Do you feel you are treated the same as men at work?	28.57%	46.43%	25.00%

### 3.2 Qualitative Results

Finally, respondents were asked about how more women can be empowered to participate in the construction industry. This question required the participants to provide a verbal answer so that they may offer some overarching thoughts about the topic. The results were analyzed using thematic analysis techniques and are presented in Figure 1. The main themes that emerged were grouped under ‘Mentorship’, ‘Perseverance’ and ‘Training and Others’. Responses indicate that participants encouraged female professionals in the industry to mentor junior members as they enter. Respondents suggested that women should build a professional network to help build a support system and to be advocates for each, as evidenced by the comment *“One of the greatest ways for women in the construction industry to be empowered is for other women to empower them”*. Another issues mentioned was how the construction industry was inherently male focused and that issues pertaining to women must be considered, as evidence by the comment *“Jobsites are set up generally with men in mind; more thought to what women need would be good”*. Participants also encouraged women to persevere in the industry despite the obstacles as evidenced the comment *“Ignore the stigma people may have related to women in construction and keep moving forward. The more women enter the construction industry the lower the stigma will become”*. Participants encouraged women to take personal responsibility despite obstacles to grow within the construction industry. Participants also mentioned that women should be provided with more scholarship and training opportunities to advance within the industry. They also recommended the companies should do more to hire more women in higher positions to serve as role-models to others. It was also brought up that women are not advancing as fast as they could be, as evidenced by the comment *“Allowing higher graded positions to be readily available. We are losing many great people because they are topping out at a flat ceiling of advancement”*.



#### 4. Conclusions and Recommendations

This research sought to gather the opinions of women working in the construction industry with the intention of increasing numbers of women working in the industry. Results from the online survey indicate that there is significant amount of dissatisfaction in the female workforce regarding current working conditions. The results from the survey

conducted has 31 respondents from the 73 respondents invited to participate. The authors acknowledge that these results are preliminary and that further efforts will be made to include opinions from a wider audience of female construction professionals. The preliminary results, however, indicate that nearly 50% of the respondents felt that they were treated differently than men, more than 50% have been made to feel uncomfortable at some point in their careers and more than 50% of them felt disadvantaged working in the industry due to their gender. This paints a dark picture for women in the industry and shows that in order to bring more women in to construction, we have to improve the perception of women already working in the industry. Participants did have several suggestions to increase the number of women to enter the construction industry. These suggestions included thoughts such as female professionals mentoring women entering the construction industry, providing more training opportunities for women, recruiting more women to decision making roles to serve as role-models for women entering the industry and females entering the industry to persevere and continue on the path forward.

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