



EPiC Series in Built Environment

Volume 4, 2023, Pages 444–452

Proceedings of 59th Annual Associated Schools
of Construction International Conference



Why are tradeswomen leaving the construction industry: An Exploratory Study

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The construction industry in the United States is currently undergoing historic shortage of skilled workforce. Several research studies have suggested to attract, recruit, and retain women in construction trades to address some of the workforce shortages in the future and also to improve jobsite productivity. Despite undertaking efforts in this direction to improve recruitment and retention of women in trades, it is observed that several women either left or considered leaving construction trades at some point in their careers. Previous studies focused on issues specific to women in administrative, managerial and leadership roles, however there is very limited knowledge relevant to issues of tradeswomen. This study exclusively focuses on tradeswomen and investigates the causes that influences tradeswomen to leave the construction industry with an intent to develop recommendations to improve their retention. To achieve the objectives, this study conducted twelve qualitative interviews with tradeswomen working in a variety of trades. The study identified important factors such as male dominant culture, inadequate attention from employers regarding tradeswomen issues, workplace and sexual harassment, discrimination such as pay imbalances, improper facilities, and misfit PPE. Furthermore, recommendations for employers and industry organization were provided to improve tradeswomen retention. Understanding tradeswomen challenges helps improve their retention thereby improving the diversity in construction industry and contributes to the success of tradeswomen.

Key Words: women in construction, tradeswomen challenges.

Introduction

The construction industry in the U.S. employs around 10.6 million people, of which under 10% are women across all roles including administration, human resources, marketing positions and just under 3% are roles that include tradeswomen (NAWIC, 2018). According to a Bureau of Labor Statistics (BLS) (2017) report, women represent 6.2% of painters, 3% of electricians, 2.1% of carpenters, and 1.7% of roofers in the construction trades. This makes construction trades one of the heavily male dominated of all positions within construction, and this needs to change to address the compounding skilled workforce shortages (Sedey, 2018) in the U.S. A recent data published in 2022 reported that

construction industry saw an increase of women participation, as women constitute currently about 14% of the construction workforce, and the same report estimates that only a third of them are in the trades, indicating a single digit percentage (about 4%) of women working in the construction trades (Bloomberg, 2022; Goldenson, 2022). This indicates that despite the increase of women participation in construction industry in the recent years, it still remains that participation of women in trades must improve considerably. Additionally, a research study by Galea et al. (2015) indicated that lack of enough women participation in the construction industry, especially in trades resulted in worsening the skilled workforce shortages in the construction sector globally. Concurrently, several studies indicate the success of high school recruitment and other programs that have been initiated in the last few years to attract women into construction (Perrenoud et al, 2020) as the number of women that are entering the construction industry is on rise (Hebert, 2020). Despite the increase in number of women entering the construction industry, the industry still has single digit percentage of women in trades, because several tradeswomen either left or considering leaving construction workforce (Maurer, 2021). This emphasizes the important aspect of retaining women in the construction industry. To improve the retention of women in construction, it is important to identify the reasons that influence women to leave the construction industry and develop recommendations to address those challenges. Some studies identified reasons for women leaving construction sector, and those studies focused on women working in administrative, engineering, and executive roles. Nevertheless, it is important to focus on women in trades to address the historic skilled workforce shortages currently faced by the construction industry. There's very limited research focusing on challenges of construction tradeswomen, and strategies to improve retention of tradeswomen. Therefore, the purpose of this study is to focus exclusively on the issues of construction tradeswomen and develop recommendations to improve their retention within the construction trades.

Literature Review

The role of women in construction has recently drawn attention on a global scale. According to the literature, numerous studies have investigated issues including gender inequity, male dominance, entry obstacles for women into the construction business, difficulties for women in advancing their careers, and recruiting and engaging women in the field (Aboagye-Nimo et al., 2019; English & Jeune, 2012). Some issues include dealing with career gaps and breaks in employment due to family commitments or work-life balance issues (Aboagye-Nimo et al., 2019), culture of presenteeism on construction sites, and unfriendly family policies (Cabrera, 2009) by construction employers. The studies focused in the U.S. informed women in the construction industry face issues such as work-life balance, male domination, unfair impression of women's abilities, delayed career advancement, socio-cultural concerns (Azhar & Griffin, 2014), aggressive conflict filler culture within the construction industry (Hatipkarasulu & Ross, 2011). Lack of knowledge and a negative perception of the field, greater educational requirements, difficulties in finding qualified candidates, sexist attitudes, cultural restrictions, and family obligations are the main barriers that prevent women from entering the construction profession (Fielden et al., 2000). These existing studies have focused on women participation in the construction industry in certain positions after completion of their higher education in roles such as project engineer and above. However, women in the construction industry also work as tradeswomen and the challenges faced by tradeswomen were not paid enough attention in the literature. Dabke (2005) identified that women in construction trades are satisfied with the nature of work, however pay, benefits and job security offered to them is not satisfactory when compared to their male counterparts. A recent survey by institute for women's policy research conducted in early 2021 reported that 44.4% of the tradeswomen respondents working in the construction industry either left or seriously considered leaving the construction industry (IWPR, 2021). A regional report from the New York Construction Industry workforce reported concerning issues specific to loss of women from its construction workforce, indicating that almost 2 percentage

points of tradeswomen working in the New York construction industry left and moved to other industries for employment (Construction Dive, 2016). Studies by large construction firms indicated the need to stop the flow of skilled tradeswomen out of construction industry (Naoum et al, 2020) to ensure the construction industry has a balanced and diverse workforce that is critical for the success of the industry. Therefore, it is important to understand the challenges the tradeswomen in the construction sector are facing and understand the reasons that influence them to leave the construction industry. This study bridges the gap by performing a qualitative study to explore the challenges faced by tradeswomen, understand success factors that influence retention of construction tradeswomen and further develop relevant recommendations. This will help construction firms, trade organizations, unions and policy makers determine relevant strategies to retain construction tradeswomen. During a time in which the greatest challenge U.S. industry faces is the acute shortage of skilled workforce (Hoover et al. 2016), it is imperative that actively addressing the tradeswomen retention issues can fill the increasing gap of qualified workforce needed in the construction industry.

Research Objectives and Scope

The purpose of this preliminary exploratory study is to review literature on women in construction trades and qualitatively identify the challenges faced by them, causes that influence them to leave construction industry and to develop strategies that improve retention of the understudied and underserved women population within the construction trades. The objectives are as follows: (1) determine the factors that influence women in trades to leave the construction industry (2) determine and develop strategies that help retention of women in construction trades. Through accomplishing this research objective, the authors aim to stimulate the interest of researchers across the globe and their engagement in research related to development and success of construction tradeswomen. Such research is essential not only for successful tradeswomen careers but also to inform public policy that is relevant to addressing the skilled construction workforce shortages.

Research Methodology

A qualitative research approach was selected for this study, and the data were collected through a series of semi-structured virtual or phone interviews that also focused on additional follow up questions with tradeswomen that are currently working in the construction industry and have considered leaving the construction industry at some point in their career. The authors designed the study around an in-depth literature review and conducted semi-structured phone interviews with tradeswomen from across the U. S. Building from the information collected in the literature review, the next phase in the research was developing a qualitative interview protocol that focuses on identifying tradeswomen challenges and recommendations for contractors to ensure success of tradeswomen in the construction industry. Prior to scheduling the qualitative interview, a survey questionnaire was sent to the participants to capture basic information such as name, background trade (drywall, plumbing, etc.), sector (commercial, residential, etc.), position (apprentice, journey level, superintendent etc.), years of experience, and other demographic information. The open-ended semi structured interview questions mainly focused on challenges faced by tradeswomen that influenced them to leave the construction industry, as shown in Table 1. The development of interview questions followed DiCicco-Bloom and Crabtree's (2006) recommendations to include experience/behavior questions, and opinion/values questions. To recruit participants for this study, the authors adopted a snowballing sampling approach, wherein the authors reached out to few known tradeswomen that are working in the construction trades, initially extending an invitation to participate in the research. For each interviewee that accepted the opportunity to participate, they were asked for further contacts and introductions. This led introductions to 30+ construction tradeswomen that wanted to participate in this research and voice their challenges. However, due to time, location and schedule constraints, the authors selected 12 of them to be a part of the interviews for this study based on the information

gathered from the initial demographic survey questionnaire. The criteria adopted by the authors to select potential participants is as follows:

- 1) Trades woman currently employed in the construction industry (or)
- 2) A minimum of six months experience in the construction trades
- 3) Willingness to participate in this study

The participants once selected, were sent emails containing the interview protocol and consent letter explaining the aims of this research and requesting their availability for the phone interview. The interviews were recorded with permission from the participants and transcribed for accuracy. The purpose of using a semi-structured interview approach was to initiate each interview with a set of open-ended questions that would lead to a thoughtful discussion and the flexibility to pursue appropriate follow-up and clarification questions regarding individual participant response. This gave the authors an opportunity to explore the respondent's perceptions and opinions regarding the challenges participants faced, and recommendations they have for employers and their men colleagues to provide a safe workplace, ensure success of women in trades such that women don't leave the construction industry.

Table 1

Open-Ended Interview questionnaire

Challenges as women working in the trades:

- 1) What challenges (personal, professional, workplace, etc.) do you face being a woman working in the trades?
- 2) How often the facilities (such as women only toilets) provided at the work site are women friendly?
- 3) Do you feel safe and secure being at the jobsite with other men?

Factors for leaving and recommendations:

- 1) Have you ever considered leaving the construction industry? Why? Why not?
- 2) What were/are the main reasons for leaving/considering leaving the construction trades?
- 3) What helped you feel comfortable / what do you think will help make you feel comfortable to continue working in the construction trades?
- 4) What do you think would be most helpful to increase the number of women in the trades?
- 5) Is there anything else you would like to share with me about your challenges being in the construction trades as woman?
- 6) Do you have any recommendations for employers/policy makers regarding women in trades?

The analysis primarily focused on identifying different themes relevant to the factors that influenced tradeswomen to either leave or consider leaving the construction industry. Manual thematic coding was used by the researchers to analyze the collected data to identify patterns and themes in the qualitative responses (Gibbs, 2007). The distribution of interview participants is provided in Table 2, which is based on the responses provided by the participant in the survey questionnaire.

While twelve interviews may seem a small sample, according to Mason (2010), the size of the sample in qualitative research becomes irrelevant due to the fact that the value of the study is based on the quality of data. One of the primary reasons for recruiting these twelve respondents was their experience, and willingness to participate in the study. Implementing such a strategy, according to Simms and Rogers (2006), increases the richness of data due to the commitment of the interviewers. Additionally, it is to be noted that this is a preliminary exploratory study for a larger mixed methods study that is to be expanded in the future.

Table 2

Interview participant information

Participant	Status	Trade	Location	Sector
Participant 1	Foreperson	Drywall	Colorado	Commercial
Participant 2	Apprentice	Sheet Metal	Arizona	Industrial
Participant 3	Journeyman	Electrician	Colorado	Commercial
Participant 4	Superintendent	NA	Tennessee	Residential
Participant 5	Apprentice	Paint	Illinois	Residential
Participant 6	Apprentice	Drywall	Colorado	Commercial
Participant 7	Apprentice	Mason	Arizona	Commercial
Participant 8	Foreperson	Mason	Arizona	Commercial
Participant 9	Apprentice	Concrete	Colorado	Commercial
Participant 10	Apprentice	Concrete	Colorado	Commercial
Participant 11	Asst. Superintendent	NA	Colorado	Commercial
Participant 12	Journeyman	Concrete	Colorado	Commercial

Results and Discussion

This study utilized qualitative interviews to obtain information regarding issues that influence tradeswomen to consider leaving construction industry and recommendations to improve retention of tradeswomen. The interviews were conducted via phone calls or video calls, with each interview on average taking between 40 and 60 minutes. Based on the responses provided by participants in this research, the challenges faced by tradeswomen are organized into three themes, namely: 1) Culture in the trades, 2) Discrimination, and 3) Harassment

Culture in the Trades

It is evidently clear from the interviews that the work culture in the lines of “being a woman in man’s world” influences retention of women in the construction trades. All tradeswomen mentioned that most workers in the construction industry opine that construction trades are not meant for women. Participant 11, that started in the trades and rose to the level of assistant superintendent said,

Throughout my career, I came across several men [working in the trades] tell me that I won’t make it in the trades because, I’m a woman. I still made it, indicating the closed mindset of male workers in construction trades. Adding to this, participant 4 said, The biggest challenge I have found is that many people think that women shouldn’t be at the job site working in trades. Through the years, I have encountered workers, clients, engineers, and many other stakeholders saying, ‘I’m surprised to see a woman in the field’.

Furthermore, participant 5 said, “Once a client was at the jobsite. They, in a surprising tone asked me, ‘Are you the one who painted this? How do you do it?’ with a puzzled face.” This statement indicates that not just workers in the trades, but also other stakeholders in the construction consider that women do not belong in the trades. Other themes identified include leadership teams of the construction employers not paying attention to the biological needs of tradeswomen such as not providing changing rooms, or separate toilets. Expanding on this, talking about a specific project she worked on, participant 3 opined, here wasn't a changing room; either you change before you leave home, or you go back home dirty. When brought this to notice, the

leadership did not care much about it. Maybe because they don't care or there were no women leadership in the company that could understand this.

Other theme identified is that the men in trades think that construction is their world, and women are meant to stay out of it as they only have to take care of family. Supporting this, participant 6 said, "I constantly hear men co-workers saying, 'How'd you think you can build, you can't', 'You can't work in a man's field', 'Cook food for your kids, you belong to the kitchen'." This indicates that the cultural thinking within the construction industry that "construction is only for men" needs to be changed, and employers must work towards developing strategies to create awareness that construction industry open for everyone.

Discrimination

Tradeswomen informed that they suffer from discrimination both by their co-workers and employers due to which they have considered leaving the industry at least once. Some quotes by the participants are provided below. Discrimination related themes identified in this study are presented in Table 3.

A lot of times, I felt that 'I'm just a number. I'm just here because they needed a female on the job [for quotas].' – Participant 8

Most PPE including fall protection harnesses, safety shoes, gloves, etc. are all too large for me [typically made for men], posing safety hazard. PPE for men is readily available, however, it took them several months to get the PPE [for women] that could fit me. – Participant 10

My opinion and feedback were ignored; nevertheless, when a male co-worker expressed the same opinion on the same piece of work, he was appreciated – Participant 1

This indicates discrimination for trades women in several areas that are relevant to their workplace success ranging from valuing tradeswomen's work to providing PPE to them.

Table 3

Discrimination related issues experienced by construction tradeswomen

Lower pay than men	Male dominated attitude	Unfair performance evaluation
Perceived as incapable	Limited training opportunities	Limited growth/leadership opportunities
Not being respected	Unequal recognition when compared to men	Jobsite facilities not inclusive for women (toilets, etc.)
Poor working conditions for women	Feels excluded in social conversations at workplace	Lack of women role models
Recruitment bias		

Harassment

All participants in this study informed that they experienced touching, comments and gestures from their male co-workers and supervisors, which is one the most pressing reasons for them to leave or considering leaving the construction industry. An apprentice who is working in the trades for 3 years, participant 7 mentioned,

A male coworker whom I trust very much groped me one day. Another day, a group of male workers started making comments such as 'What can two ti** do great at the job that a group of horse can't do'. I started writing down all harassment I went through at work in the last two years, and I think I can publish a 300-page book now, indicating the severity of workplace sexual harassment, the tradeswomen go

through every day. Furthermore, other tradeswomen said,
 They [men at jobsites] call me ‘babe’, despite telling not to do so – Participant 7
 They [men at job sites] keep staring, and eventually hit on me – Participant 9
 I have men co-workers that told me I need to work out to be in shape, asked me
 wear more make up. Some wanted to know my sexual life – Participant 6

A forewoman working in the trades for several years further mentioned that the harassment scenario in the trades has never changed, participant 1, “I have been working in the trades for more than 15 years, and we are still dealing with the problems like harassment we had back then.” When asked the reasons for not taking this to the notice of employers, most women participants mentioned they fear losing their jobs, making them reluctant to report harassment issues. This indicates that harassment is widely prevalent across construction trades, and it is not being reported enough. Employers must pay enough attention to this and create stringent workplace policies that curtail future harassment incidents.

Recommendations

The following are some recommendations for construction employers, policy makers, and unions to improve retention of tradeswomen.

- 1) Create an inclusive workplace and organizational culture that supports growth and success of tradeswomen. Create construction industry specific toolkits, company specific workplace toolkits, resources (e.g., women mentors), and advise to ensure tradeswomen have welcoming environment that supports their careers.
- 2) Create awareness and training for men working across all roles within the construction industry about inclusivity and best practices for ensuing a safe workplace for tradeswomen. It is important to provide continuous training (not just one training) to bring in the cultural shift required within the construction industry. This results in creating a team relationship where workers will support each other if a client or co-worker says something offensive to tradeswomen. Develop no tolerance policy against workplace and sexual harassment.
- 3) Encourage and provide opportunities for women to take up leadership roles within the construction industry. This helps the leadership understand issues of tradeswomen and develop unique ways to support them. Additionally, women in leadership roles act as role models that could inspire tradeswomen.
- 4) Discrimination in all forms must be eradicated. The construction companies should work towards tackling pay imbalances between men and women in trades. Employers have a responsibility to ensure trades women’s fundamental requirements are met, which includes everything from providing appropriate toilet facilities to providing personal protection equipment that fits properly.
- 5) Community-building efforts and supportive policies from unions and industry organizations is also key to tradeswomen success in the construction industry. Creating women focused committees at the unions, women-focused pre-apprenticeship programs, tradeswomen support groups, etc. provides confidence to tradeswomen that could increase their retention.

Conclusion

The purpose of this research was to identify the factors that influence construction tradeswomen to either leave or consider leaving construction industry. A total of 12 interviews were conducted with tradeswomen who have considered leaving construction industry at some point in their careers. The study identified important factors such as male dominant culture, inadequate attention from employers regarding tradeswomen issues, workplace and sexual harassment, discrimination such as pay imbalances, improper facilities, and misfit PPE. The study also suggested recommendations that

include creating inclusive workplace and organizational culture, creating awareness to men co-workers, developing policies to eliminate discrimination in all forms, provide better workplace facilities for women, community building efforts, and promoting women to leadership roles. The limitations of this study include limited sample size, participants belonging to just four states, participants from only five trades, and exclusion of perspectives from other trades. It is important to note that this is an ongoing study that is a part of larger mixed methods study, and more interviews with tradeswomen from other trades and region are scheduled along with a questionnaire survey to capture perspectives from a larger group of respondents. Future research will explore impacts of tradeswomen issues on the workforce shortages and develops organizational framework to promote inclusive workplace for tradeswomen.

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