

# CHALLENGES AND SOLUTIONS FOR WOMEN IN CONSTRUCTION INDUSTRY RELATED DISCIPLINES: A LITERATURE REVIEW

Navodana Rodrigo<sup>1</sup>, M.K.C.S. Wijewickrama<sup>2</sup>, Nirusika Rajenthiran<sup>3</sup>,  
Wimarshi Jayathilaka<sup>4</sup> and Ruidong Chang<sup>5</sup>

## ABSTRACT

*The construction industry has been male dominated for a long time, making it challenging for women to enter or advance in their careers. Despite significant reserves and initiatives by governments, organisations, construction, and researchers, the industry still has a significant gender gap, with women being underrepresented both in terms of numbers and seniority. Although many studies have been conducted into the education, recruitment, and retention of women in the industry, the reasons for their underrepresentation are still not fully understood. Efforts to attract and retain women in construction have been implemented unevenly on an ad hoc basis. This study aims to examine the challenges that women face while developing their careers in the construction industry-related disciplines and provide solutions to mitigate those challenges. Moreover, this study seeks to investigate the challenges and solutions through an extensive literature review. This literature review has exposed that extreme and inflexible work hours, gendered culture and informal rules, limited career development opportunities, and undesirable perceptions of women's abilities are the main factors and problems that cause women to leave the construction industry. Moreover, considering solutions to overcome challenges in the career of women in construction mainly by training, targeting women in recruitment, developing new skills, mentoring, strong industry partnerships to create female-friendly work experiences and improved policies. This study would be beneficial for the government, construction organisations, and women who are willing to work in the construction industry-related disciplines.*

**Keywords:** Career; Challenges; Construction Industry; Solutions; Women.

---

<sup>1</sup> Lecturer, School of Architecture and Civil Engineering, The University of Adelaide, Australia, [navodana.rodrigo@adelaide.edu.au](mailto:navodana.rodrigo@adelaide.edu.au)

<sup>2</sup> Lecturer, School of Architecture and Civil Engineering, The University of Adelaide, Australia, [chamitha.wijewickrama@adelaide.edu.au](mailto:chamitha.wijewickrama@adelaide.edu.au)

<sup>3</sup> Doctoral Researcher, School of Architecture and Civil Engineering, The University of Adelaide, Australia, [nirusika.rajenthiran@adelaide.edu.au](mailto:nirusika.rajenthiran@adelaide.edu.au)

<sup>4</sup> Doctoral Researcher, School of Architecture and Civil Engineering, The University of Adelaide, Australia, [wimarshi.rathugamagedona@adelaide.edu.au](mailto:wimarshi.rathugamagedona@adelaide.edu.au)

<sup>5</sup> Senior Lecturer, School of Architecture and Civil Engineering, The University of Adelaide, Australia, [ruidong.chang@adelaide.edu.au](mailto:ruidong.chang@adelaide.edu.au)

## **1. INTRODUCTION**

The construction industry is overlooking numerous capable individuals who neither engage in nor pursue careers, hence women represent an underutilised resource for fulfilling the labour needs of this industry (Oo et al., 2020), and there is strong evidence that tackling the gender disparity has been necessary since the latter half of the 20th century (Carnemolla & Galea, 2021). Over the last two decades, the construction industry has seen a persistent underrepresentation of women in craft and trade occupations, with their employment fluctuating between a mere 5% and 15% of the total workforce worldwide (Hasan et al., 2021). In 2019, women made up 9.9% of all construction workers in the United States (Bureau of Labor Statistics [BLS], 2022). Likewise, women made up just 3.1% of all technicians and trade workers employed in Australia's construction sector in 2019 (Department of Corrections of New Zealand, 2021). The demand for more women participation in the construction industry has been highlighted to address the labour shortage, promote equality, and increase productivity (Norberg & Johansson, 2021). Despite the significant progress that has been made in terms of understanding the challenges faced by women in the construction sector, there are still fundamental causes for their persistent underrepresentation (Galea et al., 2015). To gain a comprehensive understanding of the root causes and develop effective strategies that can encourage women's full participation and advancement in the construction industry, it has to be thoroughly investigated (Oo et al., 2020).

To create practical solutions for improving women's career development in the construction industry, it is crucial to have a better understanding of the challenges faced by women working in construction and the factors that contribute to their career success. The solutions designed to support women's career development in construction should address the challenges women face and reinforce the factors that lead to their success. However, limited evidence shows the effectiveness of the existing solutions and their contribution to alleviating the challenges or strengthening the factors that lead to women's success in the construction industry. Therefore, this study has been conducted to identify the challenges faced by women in the construction industry and pose solutions for overcoming those challenges. This research examines the lack of representation of women in the construction industry, emphasising its global nature. The following sections of this paper have been structured as research methodology, research findings and discussions, and conclusion and recommendations.

## **2. RESEARCH METHODOLOGY**

Conducting a literature review is imperative for strengthening the foundation of the research by gathering the most current and relevant knowledge in the field. To achieve the research aim, a comprehensive literature review was conducted on women in construction. The existing knowledge was obtained through secondary sources such as journal articles and conference papers. The study employed an exploratory research methodology with a qualitative approach. The exploratory design helped identifying the various issues faced by women in the construction industry and provided a deeper understanding of the situation with potential solutions.

As the methodology for this article, it is expected to apply a literature review approach. Various keywords were searched within the Scopus and Web of Science databases to find the relevant articles for review. Scopus and Web of Science databases are selected

because they are two of the leading sources for scientific and technical research. The publishing period was decided to be between 2014-2024 to reduce the search scope. The selection of keywords was primarily based on the themes associated with women in the construction industry. Keywords like “women” OR “female” AND “challenge\*” OR “barrier\*” OR “participation” OR “career” AND “construction” OR “building” were considered important to capture relevant literature. These terms were chosen based on their significance in the field and their relevance to the research aim. However, articles were identified relating to the targeted topic in specific. The topics were broadened, and the articles' abstracts were carefully read to check their relevance.

The literature review included studies that examined various aspects of women's participation in the construction industry, including workforce representation, career advancement, organisational culture, and challenges to entry. Studies focusing on interventions to promote women in construction and solutions for mitigating challenges were also considered. Exclusion criteria were applied to filter out irrelevant publications, such as those not directly related to the construction sector.

### 3. RESEARCH FINDINGS AND DISCUSSION

The literature on challenges impacting women's careers and experiences within the construction sector has identified the most significant obstacles. These findings indicate that women in construction face marginalisation and insist on various stereotypes and informal regulations inherent to the profession. Subsections 3.1 and 3.2 discuss challenges faced by women and solutions for encouraging women's participation in the construction industry respectively.

#### 3.1 CHALLENGES FACED BY WOMEN IN CONSTRUCTION

Women often face the challenge of having their professional competence scrutinised, questioned, or devalued (Galea et al., 2018). The authors further mentioned that this can be a frustrating experience that undermines their confidence and can make it difficult to advance in their careers. As a result of the review, this study highlighted fourteen significant challenges faced by women in the construction industry. Table 1 presents the identified challenges based on the review.

Table 1: Challenges faced by women in the construction industry.

No.	Challenges	Source
01	Difficulties in family and work life balance	[1], [2], [3], [4], [9], [10], [11], [12]
02	Stereotypes/Unfair perception of women’s capabilities	[2], [3], [4], [5], [6], [9], [10]
03	Gender segregation and discrimination	[2], [7], [8], [10], [12]
04	Sexual harassment	[2], [9], [10], [12]
05	Male-dominant industry image	[4], [9], [12]
06	Physical/mental health	[3], [4], [12]
07	Workplace culture	[4], [10], [11]
08	Leadership limitations/ Slow career progression	[2], [9]
09	Social interactions issues	[10], [11]

No.	Challenges	Source
10	Unfair recruitments	[2], [10]
11	Lack of appreciation /rewards for efforts	[4]
12	Lack of guidance/role models/mentors	[11]
13	Lack of sanitation facilities for women	[12]
14	Socio-cultural issues	[2]

**Sources:** [1] Bowen et al. (2017); [2] Navarro-Astor et al. (2017); [3] Rosa et al. (2017); [4] Sunindijo & Kamardeen (2017); [5] Galea et al. (2018); [6] Jenkins et al. (2018); [7] Bridges et al. (2019); [8] Nwaogu et al. (2019); [9] Emond (2020); [10] Tapia et al. (2020); [11] Oo et al. (2021); [12] Pamidimukkala & Kermanshachi (2023)

The construction sector’s culture is seen as one of the most significant hurdles to women’s participation in the sector (Oo et al., 2020). In addition to that, the authors determined that in a masculine culture, women find it challenging to integrate subordinates because it seems they are reluctant to receive orders from a female sometimes. Throughout their career paths, women confront obstacles and gender bias (Zhang et al., 2021). According to Table 1, previous studies pointed out that the difficulties in balancing family and work life are significant obstacles for women in the construction sector. Given the societal expectation for women to assume the primary responsibility for caring at home, achieving a harmonious equilibrium between their work and personal lives has been difficult, particularly for those pursuing professions in the construction industry (Rosa et al., 2017). Conversely, males are not burdened with the same domestic tasks and may consequently allocate more time to their professional pursuits (Sunindijo & Kamardeen, 2017). Moreover, stereotypes or unfair perceptions of women’s capabilities are also major challenges faced by the women workforce in the construction industry (Emond, 2020). For example, the prevailing perception associated with the construction sector depicts it as a domain exclusively for individuals who embody traditional notions of masculinity, characterised by engaging in strenuous physical labour (Azhar & Amos, 2014). However, this caricature fails to acknowledge the presence of women in such roles. Consequently, this provides an obstacle for women as their entry into the sector would be seen as diverging from the established norms (Emond, 2020).

Gender segregation and discrimination, as well as sexual harassment, are also significant challenges for female workers in the construction industry (Tapia et al., 2020). As highlighted by Navarro-Astor et al. (2017), harassment involves intimidating verbal or physical conduct and exclusionary actions based on a person’s distinctions. Discrimination, on the other hand, involves unequal treatment and a lack of advantageous opportunities. When a woman makes a mistake, it’s often seen as a reflection of her gender rather than a simple individual error (Bridges et al., 2019). This double standard not only undermines her abilities but also perpetuates the notion that women are not as capable as men. Also, it’s high time to break free from this flawed perception and start evaluating women based on their merit, not just their gender (Nwaogu et al., 2019). Gender disparity within the construction sector poses challenges for women employed in the industry and those excluded from secure, high-paying employment (Afolabi et al., 2019).

In the construction industry, which is primarily male-dominated, many biases persist against women, both on the job site and in leadership roles (Azhar & Amos, 2014). Some people have low expectations of women’s talents, especially regarding physically demanding tasks on construction sites (Emond, 2020). Women experience a lack of

support after returning from maternity leave (Baker & French, 2018). The limited part-time job availability poses a significant challenge to women's retention in the construction industry, where full-time job availability is necessary (Baker & French, 2018). Maintaining good physical and mental health is another challenge for women in the construction industry (Rosa et al., 2017). There are a number of reasons for physical or mental health issues, such as being overworked, the stressful nature of the workplace, and the responsibilities of family life (Oo et al., 2021). In addition, there is a need for a better understanding of how gender-related discrimination affects mental health in the construction industry (Nwaogu et al., 2019).

It is a well-known fact that the construction industry culture of gender discrimination perpetuates unfairness towards female professionals (Emond, 2020). Lack of social interaction is another challenge for female employees in the construction sector (Oo et al., 2021). From the recruitment process to career progression and retention, women face different rules and implications than their male counterparts, indicating a biased and discriminatory system (Navarro-Astor et al., 2017). It is high time we recognise and take action to rectify this systemic issue. In addition, Perrenoud et al. (2020) revealed that male executives normally receive more vocational training than female counterparts.

The lack of constructive guidance, such as a lack of role models or mentors, can have a significant impact on an individual's growth and development (Yates, 2001). High-stress levels linked to careers include a lack of recognition and encouragement from supervisors, being asked to do repetitive minor tasks, being undervalued, and having a low potential for career advancement (Loosemore & Waters, 2004). According to Pamidimukkala and Kermanshachi (2023), unfortunately, many construction sites do not provide enough sanitation for female personnel, leading to a range of health issues and difficulties in construction sites. As stated by Jenkins et al. (2018), women often face discrepancies between their perceived societal roles and the construction industry's image. They are subjected to unfair judgment of their training needs, misjudged performance compared with male counterparts, and are often restricted to clerical/administration roles (Dainty et al., 2000). As per this study, it is clear that interventions and strategies are needed to overcome challenges that restrict women's professional advancement in the construction sector.

### **3.2 SOLUTIONS FOR THE CHALLENGES FACED BY WOMEN IN THE CONSTRUCTION INDUSTRY**

Several factors influenced women's career choices, with the most significant ones being the chance to develop new abilities and tackle challenging tasks, the capacity to self-motivate, and interest in the industry (Oo et al., 2020).

It is imperative to provide adequate training programs such as team building, workshops and seminars working with project team members, and communication proficiencies improvement programs for employees in construction industry workplaces to be familiar with workplace culture and develop good communication (Fernando et al., 2014). There is a pressing need for strong collaborations with industries to provide apprenticeship programs that include work experiences that are desirable to women (Simon & Clarke, 2016). Research indicates that mentors and role models play a crucial role in the career and professional growth of women, and female employees benefit from the motivation and emotional support provided by mentors, resulting in beneficial outcomes

(Pamidimukkala & Kermanshachi, 2023). When female mentors are available, students have the opportunity to observe women working in these industries and learn strategies for navigating the male-dominated culture. This is crucial in increasing girls' participation in apprenticeships (Simon & Clarke, 2016). As stated by Azhar and Amos (2014), increased access to training opportunities that facilitate leadership roles and career advancement will likely result in improved levels of job satisfaction among women.

According to Tapia et al. (2020), outreach to female high school students is one effective way to encourage female involvement in the construction industry. The growth of an inclusive culture made the acceptance of a wide range of perspectives and views more accessible, which in turn increased the motivation for women to pursue careers in the industry (Emond, 2020). Moreover, self-adaptation to the working environment through developing new skills to complete challenging tasks, self-derived motivation, and interest in trades is a proper way for women to overcome many challenges within the industry. It is vital to ignore negative gender-based behaviours and to make an effort to "fit in" with the environment to overcome numerous gender-related challenges that are present in the workplace (Agapiou, 2002). Furthermore, positive supervisor support and responsiveness to complaints are needed (Azhar & Amos, 2014). Encouraging women to pursue careers in the construction industry can also be accomplished by granting them equal responsibilities and opportunities for advancement (Gupta, 2023).

As identified by Pamidimukkala and Kermanshachi (2023), numerous construction sites lack adequate sanitation facilities for female workers, resulting in various health problems for these workers. It was discovered that providing adequate sanitary facilities at construction sites would be advantageous in encouraging women to engage in the construction industry and mitigate significant health and safety concerns. Some other solutions for challenges faced by female practitioners in the construction industry are to promote organisational cultures that are flexible, promote effective time management, and establish policies for parental leave (Gupta, 2023).

Women certainly must be resilient and develop their technical, interpersonal, and coping skills to have a successful career in the construction industry (Ghanbaripour et al., 2023). Encouraging more women to join the construction industry requires a comprehensive approach that supports their development of technical, interpersonal, and coping skills (Turner et al., 2021). The findings of a study conducted by Oo et al. (2020) present that recruitment strategies, remuneration, workplace structure, working conditions, incentive systems, and the mentoring and training of entry-level female personnel can enhance the percentage of female employees in the construction industry while simultaneously ensuring that their professional aspirations and job contentment are adequately addressed. Moreover, improved policies and legislation, and support from professional bodies, can lead to a substantial impact on increasing the number of women joining or remaining in the construction industry (Emond, 2020).

Figure 1 illustrates a summary of solutions extracted from reviewed literature within this study.

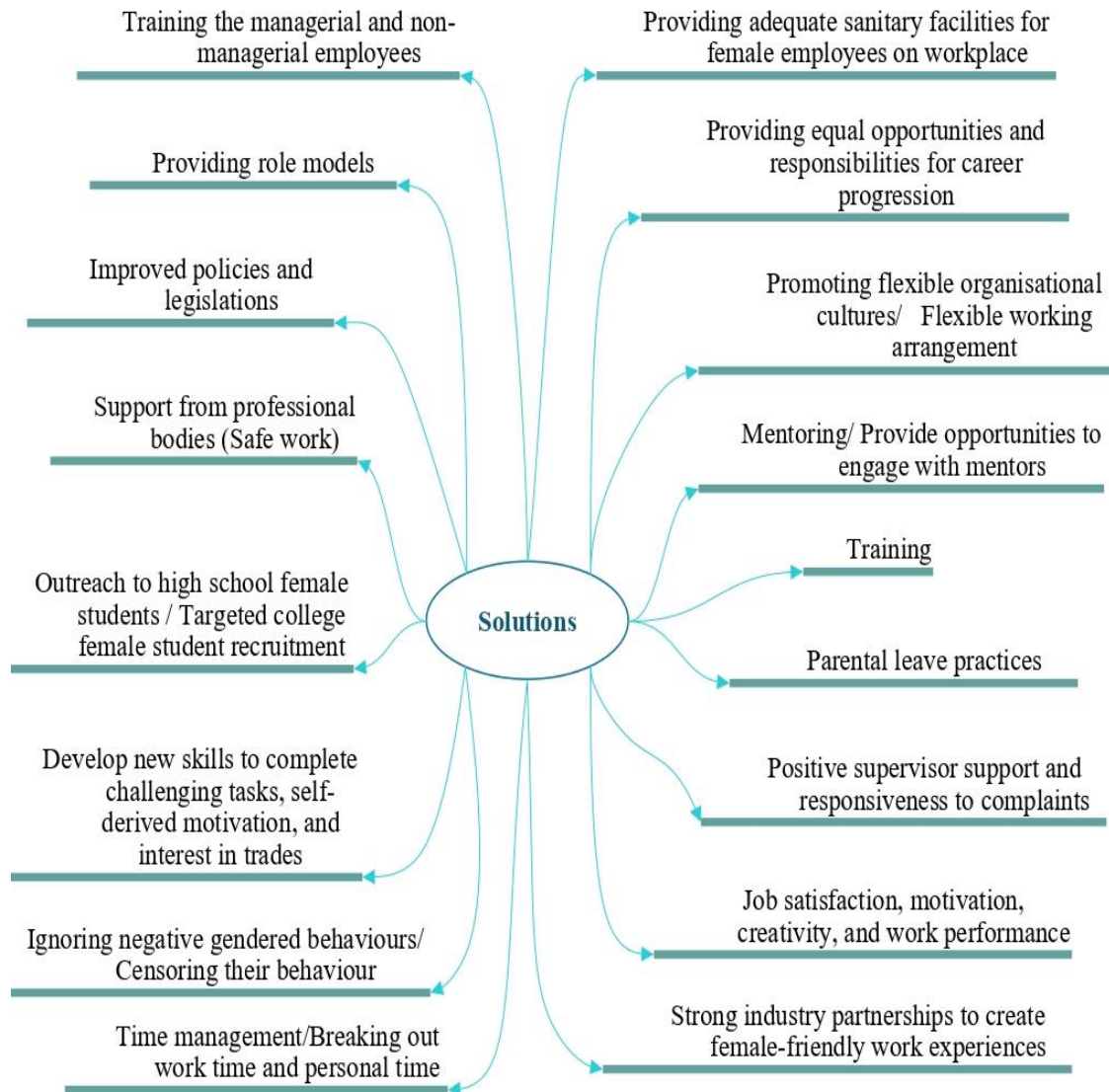


Figure 1: Solutions for the challenges faced by women in the construction industry.

#### 4. CONCLUSIONS AND RECOMMENDATIONS

This study identified challenges faced by women in construction and explores potential solutions to mitigate those challenges through a literature review. Moreover, this study has emphasised research findings demonstrating that women's experiences in various construction roles are significantly impacted not only by the nature of the work but also by gender discrimination and inappropriate conduct in the workplace. As a result, researchers are urging for further research to actively promote wellbeing and address organisational injustices associated with gender inequality and harassment. It also contributes to new insights into gender in construction by exploring how women in the industry are discursively represented.

It is identified that women who pursue careers in construction face several challenges such as struggling to balance work and family life, being unfairly perceived as less

capable, experiencing gender discrimination and sexual harassment, working in a male-dominated industry, dealing with mental health issues, and navigating workplace culture. In addition, the construction industry presents numerous challenges to women's career advancement by slow progression, social interaction issues, unfair recruitment practices, lack of appreciation, and socio-cultural issues all contribute to an unfair and unequal workplace. It is essential to address these challenges to create a fair and equitable working environment for women in construction. Unlocking the full potential of talented and capable women is essential for the construction industry to thrive.

To increase the number of women who join and stay in the construction industry, it is necessary to introduce legal and social interventions that address the underlying socioeconomic factors in their favour. It is crucial for all stakeholders, including governments, construction firms, and labour unions, to collaborate and intervene to find a solution. This study suggests solutions for identified challenges as offering individual development programs, training, and flexible work arrangements for female employees can benefit construction employers. The importance of this study lies in enhancing the comprehension of women's career progression and recruitment within the construction sector. The insights gained could aid government bodies and professional organisations in formulating policies and approaches to strengthen women's career advancement in construction.

Women's career development in construction can be achieved through measures such as advocating for flexible work arrangements, ensuring equal opportunities and responsibilities for career advancement, improving access to adequate sanitary facilities, and implementing fair parental leave policies. These initiatives collectively contribute to strengthening women's careers within the construction industry. Encouraging female students to pursue studies in construction is only part of the equation; retaining them throughout their studies and careers is equally crucial to ensure the future vitality of the construction industry.

Furthermore, this paper serves as the initial conceptualisation of an inquiry into the challenges women encounter in the construction industry. The outcomes will aid in formulating a roadmap for implementing policies addressing gender equality and promoting women's participation in the construction sector. This summary outlines a path forward for advancing women's inclusion and empowerment within the construction industry. As a result, there is a call for more extensive research to offer governments and policymakers the necessary insights for designing more effective initiatives. Rather than solely focusing on attraction efforts, the consensus is that women are more likely to stay in the industry if the workplace environment is enhanced by addressing gendered informal norms, thereby creating a more favourable atmosphere for current female employees. This improvement would not only enhance the sector's reputation but also elevate its image, ultimately encouraging more female graduates to pursue occupations in construction. Achieving this goal necessitates academics and policymakers adopting a systemic thinking approach to recognise the characteristics of the system, its causal connections, and points of leverage. This approach would enable the establishment of a framework to aid in developing more efficient strategies and initiatives.

Construction industry practitioners should increase the involvement of women to enhance construction practices. Further research is recommended to explore the feasibility of employing women in construction at different levels of work. To encourage women's



participation in construction, they must be supported and encouraged to make unconventional decisions from an early age. Encouraging women's participation in the construction industry is crucial for equal opportunities and diversity. To achieve this, families, communities, educational institutions, and government must support and empower young girls to make unconventional decisions from an early age. Doing so can break down gender stereotypes and create a more inclusive and innovative industry.

## 5. ACKNOWLEDGEMENTS

The paper acknowledges the funding provided by University of New South Wales (UNSW) as per the collaboration agreement between UNSW and University of Adelaide for the project, 'Women in Construction'.

## 6. REFERENCES

- Afolabi, A., Oyeyipo, O., Ojelabi, R., & Patience, T. (2019). Balancing the female identity in the construction industry. *Journal of Construction in Developing Countries*, 24(2), 83–104. <https://doi.org/10.21315/jcdc2019.24.2.4>
- Agapiou, A. (2002). Perceptions of gender roles and attitudes toward work among male and female operatives in the Scottish construction industry. *Construction Management and Economics*, 20(8), 697–705. <https://doi.org/10.1080/0144619021000024989>
- Azhar, S., & Amos, M. K. (2014). *Women in construction: Successes, challenges and opportunities - A USACE case study*. 50th ASC Annual International Conference, 22–25. <http://ascpro0.ascweb.org/archives/cd/2014/paper/CPRT249002014.pdf>
- Baker, M., & French, E. (2018). Female underrepresentation in project-based organizations exposes organizational isomorphism. *Equality, Diversity and Inclusion*, 37(8), 799–812. <https://doi.org/10.1108/EDI-03-2017-0061>
- Bowen, P., Govender, R., Edwards, P., & Cattell, K. (2017). Work-related contact, work–family conflict, psychological distress and sleep problems experienced by construction professionals: An integrated explanatory model. *Construction Management and Economics*, 36(3), 153–174. <https://doi.org/10.1080/01446193.2017.1341638>
- Bridges, D., Krivokapic-Skoko, B., Bamberly, L., Jenkins, S., & Wulff, E. (2019). A trade of one's own regional NSW stakeholder findings - The barriers and proposed solutions for women in non-traditional male dominated trades. Charles Sturt University. <https://doi.org/10.13140/RG.2.2.14072.39686>
- Bureau of Labor Statistics. (2022). *Women in the labor force: A databook*. (1097). United States Department of Labor. <https://www.bls.gov/opub/reports/womens-databook/2021/home.htm>
- Carnemolla, P., & Galea, N. (2021). Why Australian female high school students do not choose construction as a career: A qualitative investigation into value beliefs about the construction industry. *Journal of Engineering Education*, 110(4), 819–839. <https://doi.org/10.1002/jee.20428>
- Dainty, J., Neale, H., & Bagilhole, M. (2000). Comparison of men's and women's careers in U.K. construction industry. *Journal of Professional Issues in Engineering Education and Practice*, 126(3), 110–115. [https://doi.org/10.1061/\(ASCE\)1052-3928\(2000\)126:3\(110\)](https://doi.org/10.1061/(ASCE)1052-3928(2000)126:3(110))
- Department of Corrections of New Zealand. (2021). *Annual Report 2020/2021*. (61). Minister of Corrections. <https://www.pvh.com/-/media/Files/pvh/investor-relations/PVH-Annual-Report-2020.pdf>
- Emond, O. (2020). *Women in the construction industry*. (Issue April). <https://www.randstad.co.uk/women-construction-2020/>
- Fernando, N. G., Amaratunga, D., & Haigh, R. (2014). The career advancement of the professional women in the UK construction industry: The career success factors. *Journal of Engineering, Design and Technology*, 12(1), 53–70. <https://doi.org/10.1108/JEDT-04-2012-0018>

- Galea, N. P., Rogan, A., Powell, A. Loosemore., A. M., & Chappell, L. (2018). *Demolishing gender structures*. <https://assets.csi.edu.au/assets/research/Demolishing-Gender-Structures-Summary-Report.pdf>
- Galea, N., Powell, A., Loosemore, M., & Chappell, L. (2015). Designing robust and revisable policies for gender equality: Lessons from the Australian construction industry. *Construction Management and Economics*, 33(5–6), 375–389. <https://doi.org/10.1080/01446193.2015.1042887>
- Ghanbaripour, A. N., Tumpa, R. J., Sunindijo, R. Y., Zhang, W., Yousefian, P., Camozzi, R. N., Hon, C., Talebian, N., Liu, T., & Hemmati, M. (2023). Retention over attraction: A Review of women's experiences in the Australian construction industry; Challenges and solutions. *Buildings*, 13(2), 1–19. <https://doi.org/10.3390/buildings13020490>
- Gupta, N. (2023). Women in STEM in India: Understanding challenges through social constructionist perspective. *American Behavioral Scientist*, 67(9), 1084–1103. <https://doi.org/10.1177/00027642221078518>
- Hasan, A., Ghosh, A., N.M., M., & Thaheem, M. J. (2021). Scientometric review of the twenty-first century research on women in construction. *Journal of Management in Engineering*, 37(3), 1–16. [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000887](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000887)
- Jenkins, S., Bambrery, L., Bridges, D., & Krivokapic-Skoko, B. (2018). Skills for women tradies in regional Australia: a global future. *International Journal of Training Research*, 16(3), 278–285. <https://doi.org/10.1080/14480220.2018.1576329>
- Loosemore, M., & Waters, T. (2004). Gender differences in occupational stress among professionals in the construction industry. *Journal of Management in Engineering*, 20(3), 126–132. [https://doi.org/10.1061/\(asce\)0742-597x\(2004\)20:3\(126\)](https://doi.org/10.1061/(asce)0742-597x(2004)20:3(126))
- Navarro-Astor, E., Román-Onsalo, M., & Infante-Perea, M. (2017). Women's career development in the construction industry across 15 years: Main barriers. *Journal of Engineering, Design and Technology*, 15(2), 199–221. <https://doi.org/10.1108/JEDT-07-2016-0046>
- Norberg, C., & Johansson, M. (2021). 'Women and "ideal" women': The representation of women in the construction industry. *Gender Issues*, 38(1), 1–24. <https://doi.org/10.1007/s12147-020-09257-0>
- Nwaogu, J., Chan, A., Hon, C., & Darko, A. (2019). Review of global mental health research in the construction industry: A science mapping approach. *Engineering Construction & Architectural Management*, 27(2), 385–410. <https://doi.org/10.1108/ECAM-02-2019-0114>
- Oo, B. L., Lim, B., & Feng, S. (2020). Early career women in construction: Are their career expectations being met? *Construction Economics and Building*, 20(3), 1–19. <https://doi.org/10.5130/AJCEB.v20i3.6867>
- Oo, B. L., Lim, T. H. B., & Zhang, Y. (2021). Women workforce in construction during the COVID-19 pandemic: Challenges and strategies. *Construction Economics and Building*, 21(4), 38–59. <https://doi.org/10.5130/AJCEB.V21i4.7643>
- Pamidimukkala, A., & Kermanshachi, S. (2023). Occupational challenges of women in construction industry: Development of overcoming strategies using delphi technique. *Journal of Legal Affairs and Dispute Resolution in Engineering and Construction*, 15(1), 1–8. [https://doi.org/10.1061/\(asce\)la.1943-4170.0000571](https://doi.org/10.1061/(asce)la.1943-4170.0000571)
- Perrenoud, A. J., Bigelow, B. F., & Perkins, E. M. (2020). Advancing women in construction: Gender differences in attraction and retention factors with managers in the electrical construction industry. *Journal of Management in Engineering*, 36(5), 1–9. [https://doi.org/10.1061/\(asce\)me.1943-5479.0000808](https://doi.org/10.1061/(asce)me.1943-5479.0000808)
- Rosa, J. E., Hon, C. K. H., Xia, B., & Lamari, F. (2017). Challenges, success factors and strategies for women's career development in the Australian construction industry. *Construction Economics and Building*, 17(3), 27–46. <http://epress.lib.uts.edu.au/journals/index.php/AJCEB/article/view/5520/6138>
- Simon, L., & Clarke, K. (2016). Apprenticeships should work for women too! *Education and Training*, 58(6), 578–596. <https://doi.org/10.1108/ET-02-2016-0022>
- Sunindijo, R. Y., & Kamardeen, I. (2017). Work stress is a threat to gender diversity in the construction industry. *Journal of Construction Engineering and Management*, 143(10), 1–36. [https://doi.org/10.1061/\(asce\)co.1943-7862.0001387](https://doi.org/10.1061/(asce)co.1943-7862.0001387)

- Tapia, M., Safapour, E., Kermanshachi, S., & Akhavian, R. (2020). Investigation of the barriers and their overcoming solutions to women's involvement in the U.S. construction industry. *Construction Research Congress*, 1–10. <https://doi.org/10.1061/9780784482872.088>
- Turner, M., Zhang, R. P., Holdsworth, S., & Andamon, M. M. (2021). Taking a broader approach to women's retention in construction: Incorporating the university domain. *Proceedings of the 37th annual ARCOM conference, ARCOM 2021, September*, 188–197.
- Yates, J. K. (2001). Retention of non-traditional engineering and construction professionals. *Journal of Management in Engineering*, 17(1), 41–48. [https://doi.org/10.1061/\(ASCE\)0742-597X\(2001\)17:1\(41\)](https://doi.org/10.1061/(ASCE)0742-597X(2001)17:1(41))
- Zhang, R. P., Holdsworth, S., Turner, M., & Andamon, M. M. (2021). Does gender really matter? A closer look at early career women in construction. *Construction Management and Economics*, 39(8), 669–686. <https://doi.org/10.1080/01446193.2021.1948087>