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Gender Inequality among Building Construction Workers in Mumbai Suburbs: A Secondary Data Analysis

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Abstract

The construction industry is regarded as one of the largest employment generation sectors in India, and it has a major role in infrastructure development and economic growth. Although women's participation in the construction workforce has been on the rise, gender inequality persists through the gender pay gap, occupational segregation, lack of skill development, poor social security, and poor working conditions. Women construction workers are still largely in unskilled, informal jobs. This group is thus disproportionately exposed to economic insecurity and exploitation, a phenomenon considered particularly acute in fast-urbanising areas such as the Mumbai suburb.

This study discusses the gender inequality among the building construction workers in the Mumbai suburbs based on secondary data collected from government reports, national surveys, international publications and peer-reviewed research. The research design is descriptive. The sources of this research are Periodic Labour Force Survey (PLFS), the Census of India, the Ministry of Labour and Employment, the Maharashtra Building and Other Construction Workers Welfare Board (MBOCWWB), the International Labour Organization (ILO) and World Bank publications. A thematic approach is adopted for the analysis of gender disparities in labour force participation, wages, occupational roles, working conditions, occupational safety and welfare measures.

The findings point to the fact that while women are recognised as an indispensable part of the construction labour force, they continue to be at a substantial disadvantage compared to men. Also noticeable are the gaps in the implementation of welfare programmes and the low awareness of social security benefits. The focus areas for policy include strengthening of scheme registration, assurance of equal wages, expansion of skill development and improvement of workplace facilities. The study provides evidence-based recommendations to improve the socio-economic conditions of women construction workers in Mumbai suburbs

Keywords: gender inequality, women construction workers, building construction workers, Mumbai Suburbs, secondary data, labour welfare.

1. Introduction

The construction sector is regarded as a major contributor to India's economic development, and millions of workers are employed by it across urban and rural areas. Demand for construction labour in metropolitan cities such as Mumbai has increased due to rapid urbanisation and infrastructure expansion,

where a large share of the workforce is constituted by migrant labourers in the informal sector, characterised by irregular wages, absent social security, unsafe conditions, and limited legal protection.
The construction industry has increasingly been entered by women, largely owing to economic necessity and rural-to-urban migration, but their participation has been kept confined to low-paid, unskilled tasks such as the carrying of materials, the mixing of cement, and site cleaning. “Gender inequality in the construction industry is sustained by the lack of opportunities for female employes to advance their careers, acquire new skills, or assume leadership positions.
Gender inequality is not simply about pay. Occupational segregation, poor sanitation, lack of childcare support, occupational health hazards, and low awareness of welfare schemes also confront women construction workers. Moreover, their informal status restricts their access to social security and institutional support, with consequences for their economic security, health and quality of life. The Mumbai suburbs, one of the most rapidly growing urban spaces in India, generate significant construction employment but also reflect structural inequalities typical of informal labour markets. Most of the existing studies are on construction workers at the national level or focus on migration and occupational health; comparatively less evidence is synthesised on gender inequality among women construction workers in the Mumbai suburbs. The present study seeks to fill this gap using the secondary data from government, international and academic sources.

2. Objective of the study

1. 1.To study the nature and extent of gender inequality among building construction workers in Mumbai suburbs through secondary data.
2. To identify the challenges faced by women construction workers and to review the policies for reducing gender disparities in the construction sector**.**

3. Review of Literature

Gender inequality in construction is getting more attention as women face barriers to recruitment, skills, career development, wages and social protection. Gender inequality in construction refers to the barriers women face in recruitment, skills development, career advancement, wages, and social protection. The Indian construction sector accounts for nearly 9% of the GDP and employs close to 71 million people globally, according to the International Labour Organization (ILO). However, women comprise only about 12% of the workforce and are restricted to low-skilled jobs with low wages and are under-represented in managerial positions [7].
In Indian studies, women are consistently shown to be employed mainly as helpers and material carriers, while skilled trades such as masonry, carpentry, plumbing, and electrical work are kept male-dominated, by which women's skill enhancement and earnings are restricted. Their vulnerability is amplified by informal daily-wage employment without written contracts, paid leave, maternity protection or pension benefits. The effectiveness of the schemes, meant for the benefit of construction workers, especially women, is diminished by the deficiencies in registration of workers, administrative capacity, safety enforcement and utilisation of welfare funds in the performance audit of the Building and Other Construction Workers (BOCW) Act in Maharashtra conducted by the Comptroller and Auditor General [3].
Globally, Hasan et al. (2021) [4] reviewed 128 studies from 2000 to 2019 and identified gender roles, glass ceilings, job satisfaction, and diversity initiatives as the dominant research themes, noting that

migrant women workers in developing countries received little attention. Karakhan et al. (2021) [8] emphasised that workforce inclusion is an important indicator of recruitment transparency, equal pay, leadership diversity, and merit-based promotion. Naoum et al. (2020) [15] found that the UK construction women working in consultancies experienced much higher inequality in the workplace than the men. Persistent stereotypes, unequal opportunities and limited career progression for women in the sector were also highlighted by Aboagye-Nimo et al. (2019) [1] and Manesh et al. (2020) [12]. Choi et al. (2022) [2] further accentuated that better diversity results demand continued institutional dedication and inclusive leadership. Rotimi et al. (2023) [17] documented the harassment, discrimination, and psychological stress that women experience in construction, recommending more institutional support and reform of work culture. Husam et al. (2024) [5] reported that workplace safety, anti-discrimination policy, and management commitment are important for gender inclusion in construction sites.

Women construction workers in India are largely engaged in poorly paid, informal, physically demanding jobs and have relatively limited access to skill development, health care, maternity benefits, and welfare schemes. This demonstrates that gender inequality in the sector is structural and not transient. This pattern is consistent with the broader Indian labour economics literature. Using National Sample Survey data, Kumar and Pandey (2021) [9] found a wage gap of around 20-30 per cent between formal and informal regular workers. This segmentation falls particularly heavily on women who are concentrated in informal, casual employment such as construction. Mahimkar and Shah (2024) [11] reported chronic occupational segregation, low managerial representation and a persistent “glass ceiling" in Mumbai especially and suggested organisational transformation and gender-responsive workplace policies. The majority of the naka (daily-wage) workers in Navi Mumbai, studied by Parpiani (2024) [16], were migrants who had no legal contracts and inadequate social insurance. Naka workers in Maharashtra have legal recognition, yet they suffer compounding disadvantages because of class, caste, religion and migrant status.

In general, while gender inequality in construction is addressed by considerable research, most studies are concentrated in developed countries or India at a national level. Relatively little government, statistical and scholarly evidence is synthesized specifically for Mumbai Suburbs. This gap provides the motivation for the present secondary-data analysis, which synthesizes employment, wage, occupational and welfare-related evidence within a single analytical framework.

4. Research Gap

Three gaps are identified from the literature. First, India as a whole or individual states are examined in most studies, without the distinct labour-market conditions of Mumbai Suburbs being addressed. Second, a single dimension of gender inequality (wages, health, migration, or welfare) is isolated by much research, rather than these dimensions being integrated using multiple secondary sources. Third, government datasets on labour welfare and employment are rarely synthesised with peer-reviewed literature to provide a holistic picture, and the effect of implementation gaps on the socio-economic conditions of women construction workers in Maharashtra is critically examined by few studies. These gaps are addressed in the present study through the integration of multiple authentic secondary sources with a specific focus on Mumbai Suburbs.

5. Research Methodology

Research Design

The study used a descriptive research design based on secondary data only, which was considered appro-

priate for the study of the existing status of gender inequality of building construction workers through the evidence reported by government agencies, international organisations and previous researchers. No primary data was collected and no field survey was conducted.

Sources of Secondary Data

The selection of sources was guided by three criteria: (i) direct relevance to gender, employment, wages or welfare in the construction sector; (ii) publication or release between 2019 and 2026, so as to ensure currency; and (iii) publication by a government body, an international organization or a peer-reviewed outlet, so as to exclude non-authoritative sources. Academic sources were retrieved using keyword searches ("women construction workers", "gender inequality construction", "BOCW welfare", "informal construction labour India") in Google Scholar and publisher databases. Institutional sources were obtained directly from the websites of the originating government or international organization.

Method of Data Analysis

The secondary data were analysed both thematically and descriptively under the following heads: women's labour force participation, wage inequality, occupational segregation, working conditions, occupational health and safety, welfare schemes and social security, skill development and policy interventions. Findings from a range of sources were compared to identify common trends, differences and gaps.

Scope and Limitations

The present study is based on gender inequality among building construction workers with special reference to Mumbai Suburbs. National, state and international evidences are taken for context. The study is based on secondary data only and is limited by the quality, availability and coverage of published information. Employment and wage statistics specifically disaggregated at the level of Mumbai Suburbs were not found in the public domain; the closest regional evidence available is state level data for Maharashtra (MBOCWWB registration figures) and two qualitative studies specific to Mumbai [11] [16]. Findings based on data at the national level are thus used in this study as an indication of the larger environment within which the construction labour market of Mumbai Suburbs operates, and are understood in this way. The use of multiple authentic sources however adds to the reliability of the analysis**.**

6. Results and Discussion

6.1 Labour Force Participation and Employment Pattern

The construction sector contributes approximately 9% of India's GDP and employs about 71 million workers, but women constitute only about 12% of this workforce, indicating a huge gender imbalance [7]. Most women do casual labour carrying bricks, sand and cement, rather than skilled trades like masonry or electrical work. Social norms and limited access to technical training also constrain their involvement, leading to irregular work and poor job security – patterns that are especially relevant in Mumbai Suburbs, which has significant construction activity and a dominant migrant, informal labour force.

There are about 1.75 million construction workers registered in the MBOCWWB register near the study area compared to 1.4 million in 2020 at the state level. During the COVID-19 pandemic, Rs. 7,413 crore was distributed in emergency cash transfers nationally by BOCW welfare boards to about 30.6 million registered workers [6]. The gap between the state's total registered worker base and its female-specific registration is a significant, and largely undocumented, dimension of exclusion [6] [10], considering that women are estimated to constitute roughly the same 12% share of the workforce in Maharashtra's

registered construction labour as at the national level, and that they are disproportionately employed as unregistered helpers and head-loaders.

Table 1: Summary of Secondary Evidence on Women's Participation in the Construction Sector

Source	Key Evidence	Level / Relevance to Mumbai Suburbs
ILO / Beyond Barriers and Biases report (2025) [7]	9% of GDP, ~71 million workers; women ~12% of workforce, ~2% in senior management; women earn 30-40% less than men, average daily wage ~₹412.	National — used as broader-environment context.
MBOCWWB registration data (2025) [10]; The India Forum (2026) [6]	~1.75 million construction workers registered in Maharashtra (up from ~1.4 million in 2020); women's registration not separately published.	State (Maharashtra) — closest available regional proxy.
PLFS, Ministry of Statistics and Programme Implementation (2024) [14]	National estimates of labour force participation, employment status, and earnings by sex show consistent gender disparities.	National — statistical context for the study.
Peer-reviewed literature	Reports occupational segregation, lower wages, and inadequate workplace facilities for women.	Mixed national/international — supports the case for gender-responsive labour policy.

6.2 Wage Inequality

Wage inequality is regarded as one of the most persistent forms of gender inequality. Women in India's informal construction sector get paid around 30-40% less than men for the same work; obtaining an average daily wage of approximately ₹412 [7]. This gap is not only the result of occupational segregation, but also of women's weak presence in skilled and supervisory positions, thus impeding the access to higher earnings that are associated with skills.

6.3 Occupational Segregation and Working Conditions

Women construction workers are mostly confined to manual material handling, site cleaning and support roles, with technical and supervisory positions being mainly held by men. This results in poor skill improvement and career growth. Other studies report additional concerns related to working conditions, such as poor sanitation, lack of drinking water, absence of separate toilets and childcare facilities and limited personal protective equipment, with implications for workers' health, dignity and long-term participation in the workforce**.**

Table 2: Major Gender Issues Identified in the Literature

Theme	Evidence from Secondary Sources
Labour force participation	Women significantly underrepresented in the construction workforce.

Theme	Evidence from Secondary Sources
Occupational segregation	Women concentrated as helpers/unskilled labour; skilled trades male-dominated.
Wage inequality	Lower wages and fewer promotion opportunities for women.
Working conditions	Inadequate sanitation, childcare, rest shelters, and amenities.
Occupational safety	Exposure to heavy manual work, dust, heat stress; inadequate protective equipment.
Welfare measures	Registration barriers, low awareness, administrative gaps.
Skill development	Fewer opportunities for technical/vocational training.
Social security	Informal employment limits insurance, pension, and maternity coverage.

6.4 Welfare Schemes and Social Security

In India, the BOCW Act has provided for welfare measures for construction workers at the national level through the Ministry of Labor and Employment [13] and in Maharashtra through the MBOCWWB [10]. These welfare measures include financial assistance, health benefits, maternity assistance, pensions and insurance. However, the CAG's performance audit found implementation in Maharashtra to have major shortcomings – deficiencies in worker registration, inspections, safety enforcement, fund utilization and benefit delivery – by which women are particularly disadvantaged, as they are often less aware of the scheme and face greater administrative barriers [3]. The MBOCWWB is expanding its digital registration and benefit schemes. The registered worker base reportedly grew from about 1.4 million to 1.75 million workers between 2020 and 2026 [6] [10],but the assurance of women's registration and access specifically remains an ongoing policy challenge that current published statistics do not allow to be quantified.

Table 3: Summary of Institutional Evidence on Welfare Implementation

Organisation	Major Observation	Policy Implication
CAG, Maharashtra [3]	Weaknesses in registration, inspections, safety compliance, and BOCW scheme implementation.	Strengthen implementation, monitoring, and registration mechanisms.
MBOCWWB [10]; The India Forum [6]	Administers registration and welfare schemes; ~1.75 million workers registered in Maharashtra, up from ~1.4 million in 2020; sex-disaggregated registration data not separately published.	Improve awareness, utilisation, and sex-disaggregated reporting, particularly for women workers.
ILO [7]	Recommends gender-responsive practices, equal opportunity, and safer workplaces.	Provides a policy framework for gender equality in construction.

6.5 Occupational Health and Safety

Heavy manual lifting, dust, heat, repetitive strain, and inadequate safety equipment are faced by women

construction workers, by which musculoskeletal disorders, respiratory illness, fatigue, and pregnancy-related health concerns are contributed to. Weak compliance with safety regulations and inadequate inspection were further observed in the CAG audit, by which the need for stronger protective-equipment provision and monitoring is underscored [3].

6.6 Conceptual Framework

In Figure 1, it is illustrated how access to welfare schemes is jointly restricted by wage inequality, occupational segregation, and poor working conditions, by which adverse socio-economic outcomes for women building construction workers are produced. These outcomes are addressed through targeted policy interventions, by which improved gender equality and social inclusion can be achieved.

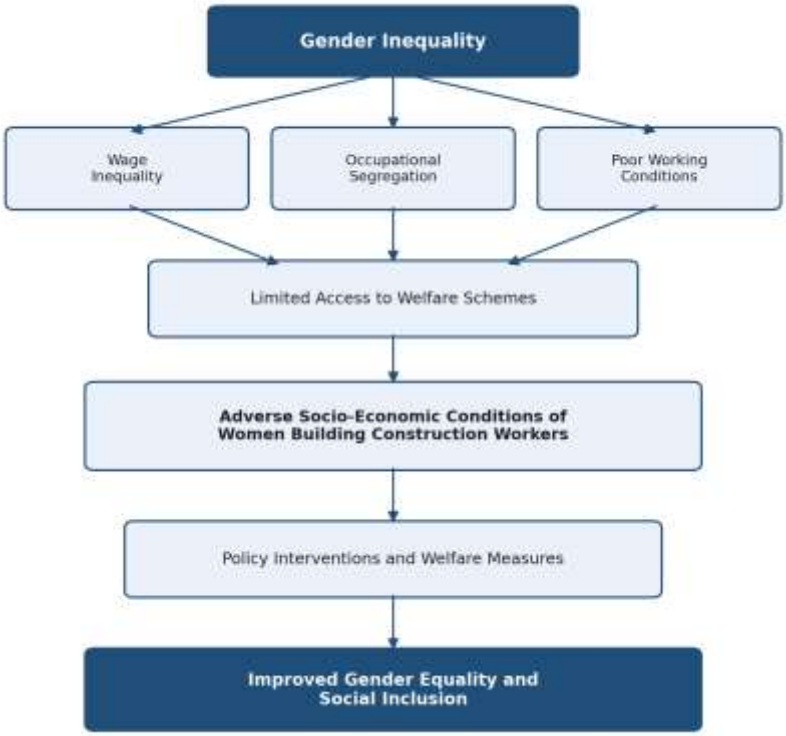

Figure 1: Conceptual Framework of the Study

6.7 Discussion

International organisations, national labour statistics, government audits and peer-reviewed literature are consistent in showing that women construction workers are subject to multiple disadvantages in participation, wages, occupational roles, workplace facilities, health and social security. The ILO acknowledges structural barriers to women's advancement while the CAG's Maharashtra audit finds welfare legislation alone is insufficient without effective registration, awareness and implementation [3] [7]. It must be noted that the wage and workforce-composition figures quoted above are national estimates. The state-level MBOCWWB registration data confirm the dramatic growth of Maharashtra's construction workforce, but sex-disaggregated registration numbers specific to Mumbai Suburbs are not published. The discussion below should be read as inference from the national and state picture, rather than direct measurement of the suburb-level labour market [6] [10]. With that caveat, these issues are seen as especially pertinent to Mumbai Suburbs, where demand for informal construction labour is driven by rapid

urbanisation; outcomes for women construction workers would collectively be bettered through strengthening of welfare implementation, expansion of skill development, assurance of equal employment practices and improvement of workplace infrastructure.

7. Major Findings

1. Women are less involved in construction than men although it is one of the largest employers in India.
2. Women construction workers are confined to unskilled, casual jobs (material handling, site cleaning, helper work), and the skilled and supervisory jobs are male dominated.
3. Gender based wage gaps are maintained due to occupational segregation, limited skill development and informal employment arrangements.
4. Working conditions are found to be inadequate limited sanitation, drinking water, childcare, rest shelters and protective equipment.
5. Women's physical and mental health is influenced by occupational health and safety hazards (heavy labour, dust, heat, repetitive strain).
6. In all cases, eligible workers do not receive benefits of BOCW welfare-schemes due to low awareness, registration barriers and administrative delays.
7. Migrant women construction workers are doubly disadvantaged due to their insecure employment, temporary residence and poor housing.
8. Gender inequality in the construction sector is viewed as multidimensional and calls for coordinated intervention by government, employers, labour organisations and civil society.

Policy Recommendations

1. The registration process of MBOCWWB needs to be streamlined and continuous awareness programs should be implemented for the female construction labourers.
2. It is recommended that the implementation of equal pay rules be improved through regular labour inspections.
3. Gender-sensitive site amenities should be provided, including separate sanitation, safe drinking water, rest areas and functioning childcare facilities.
4. Skill enhancement initiatives should be expanded to encourage women's participation in skilled trades (masonry, plumbing, electrical work, bar bending).
5. We recommend that occupational health and safety be improved through compulsory training, health assessments and the provision of adequate protective gear.Enhance digital registration through mobile camps, multilingual resources and direct support to migrant labourers.
6. It is recommended to strengthen the cooperation among the Ministry of Labour and Employment, MBOCWWB, employers and labour unions.
7. It is recommended that construction projects regularly assess gender to monitor participation, wage parity and access to welfare.
8. It recommends that the collection of BOCW-cess at construction sites in the Mumbai Suburbs should be directly linked to the Municipal Corporation of Greater Mumbai (MCGM) approvals for building permits and occupation certificates, so that worker registration is verified before the project starts. Engage Mumbai-based construction and development associations (such as MCHI-CREDAI) to co-finance on-site childcare and sanitation amenities.

9. Given the high density and development of the area, it is advisable to involve Mumbai-based construction and development associations (like MCHI-CREDAI) in co-financing of on-site childcare and sanitation amenities at construction clusters in the Mumbai Suburbs.
10. We suggest that MBOCWWB publish sex-disaggregated data on registration and benefit distribution at the ward level for Mumbai Suburbs specifically, so that future research and policy evaluation can move beyond state and national proxies.

9. Conclusion

The construction sector is vital to India's economic development and urbanisation, but women in this sector still face gender gaps in employment, wages, types of employment, workplace facilities, health and safety standards and access to social security. Legal structures and social welfare programs are in place, but their effectiveness is hampered by shortcomings in their implementation, in particular in the informal economy.

Gender inequality in construction is not regarded merely as an employment issue but it is considered as a broader socio-economic issue, by which quality of life and long-term well-being are affected. Its resolution requires effective policy implementation, improved welfare delivery, greater investment in skill development, equal employment opportunity, and enhanced occupational safety. For Mumbai Suburbs specifically, where construction activity continues to be driven by rapid growth of urbanisation, inclusive and gender-responsive labour practice is regarded as essential for equitable and sustainable development. Through the integration of government reports, national labour surveys, international publications, and peer-reviewed literature within a single framework, evidence is offered in this study to assist policymakers, labour administrators, and welfare agencies in designing more effective gender-responsive interventions for the construction sector.

References

1. Aboagye-Nimo, E., Wood, H., & Collison, J. (2019). Complexity of women's modern-day challenges in construction. Engineering, Construction and Architectural Management, 26(11), 2550-2565. https://doi.org/10.1108/ECAM-09-2018-0421
2. Choi, J. O., Shane, J. S., & Chih, Y.-Y. (2022). Diversity and inclusion in the engineering-construction industry. Journal of Management in Engineering, 38(2). https://doi.org/10.1061/(ASCE)ME.1943-5479.0001005
3. Comptroller and Auditor General of India. (2025). Report No. 4 of 2025: Welfare of Building and Other Construction Workers, Government of Maharashtra. https://cag.gov.in/en/audit-report/details/123523
4. Hasan, A., Ghosh, A., Mahmood, M. N., & Thaheem, M. J. (2021). Scientometric review of the twenty-first century research on women in construction. Journal of Management in Engineering, 37(3). https://doi.org/10.1061/(ASCE)ME.1943-5479.0000887
5. Husam, S., Laishram, B., & Johari, S. (2024). Framework to enhance gender inclusion of workers in construction sites. Journal of Construction Engineering and Management, 150(4), Article 04024018. https://doi.org/10.1061/JCEMD4.COENG-14124
6. The India Forum. (2026). A law only on paper: Welfare for construction workers. https://www.theindiaforum.in/forum/law-only-paper-welfare-construction-workers

7. International Labour Organization, Employers' Federation of India, & Confederation of Indian Industry. (2025). Beyond barriers and biases: Engendering the Indian construction industry. https://www.ilo.org/resource/news/creating-opportunities-women-construction-india-call-action
8. Karakhan, A. A., Gambatese, J. A., Simmons, D. R., & Al-Bayati, A. J. (2021). Identifying pertinent indicators for assessing and fostering diversity, equity, and inclusion of the construction workforce. Journal of Management in Engineering, 37(2). https://doi.org/10.1061/(ASCE)ME.1943-5479.0000885
9. Kumar, M., & Pandey, S. (2021). Wage gap between formal and informal regular workers in India: Evidence from the National Sample Survey. Global Journal of Emerging Market Economies, 13(1), 104-121. https://doi.org/10.1177/0974910121989458
10. Maharashtra Building and Other Construction Workers Welfare Board. (2025). Registration statistics and welfare schemes. Government of Maharashtra. https://mahabocw.in/en/
11. Mahimkar, S., & Shah, S. (2024). Gender issues in Mumbai's construction industry: Challenges and opportunities. Tekton, 7(1).
12. Manesh, S. N., Choi, J. O., & Shrestha, P. (2020). Critical literature review on the diversity and inclusion of women and ethnic minorities in construction and civil engineering industry and education. In Construction Research Congress 2020: Safety, Workforce, and Education (pp. 175-184). American Society of Civil Engineers. https://doi.org/10.1061/9780784482872.020
13. Ministry of Labour and Employment. (2025). e-Shram: National Database of Unorganised Workers (NDUW). Government of India.
14. Ministry of Statistics and Programme Implementation. (2024). Periodic Labour Force Survey (PLFS): Annual report 2023-24. Government of India.
15. Naoum, S. G., Harris, J., Rizzuto, J., & Egbu, C. (2020). Gender in the construction industry: Literature review and comparative survey of men's and women's perceptions in UK construction consultancies. Journal of Management in Engineering, 36(2). https://doi.org/10.1061/(ASCE)ME.1943-5479.0000731
16. Parpiani, R. (2024). Everyday labour and naka workers in Navi Mumbai. International Journal of Urban and Regional Research.
17. Rotimi, F., Burfoot, M., Naismith, N., Mohaghegh, M., & Brauner, M. (2023). A systematic review of the mental health of women in construction: Future research directions. Building Research & Information, 51(4), 459-480. https://doi.org/10.1080/09613218.2022.2132905