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AN EMPIRICAL STUDY ON THE CONSTRAINTS OF WOMEN WORKING IN MALAYSIA'S CONSTRUCTION PROJECTS

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ABSTRACT

The involvement of women was very important for construction projects in Malaysia. This was because with their involvement they can contribute to the success of the construction projects. However, there are constraints that women must face to get involved with construction projects such as the difficulty for women to retain in construction companies, discrimination towards women due to male dominance, and the construction company's negative image of women. Furthermore, many researchers revealed that it has become more difficult for women to get work in the construction industry because of the perception that they are not the appropriate gender for those kinds of positions. This research aims to determine the constraint that women faced in Malaysia's construction projects. A quantitative approach was employed to fulfil the research objectives. A total of 78 contractors' companies from Grade G5 to G7 was participate and returned the questionnaire survey. The data was analysed using Statistical Package for Social Science SPSS version 29 quantitative software. The results revealed that the involvement of females in construction projects remained significantly lower than those of males and was still rather limited. The participation of Malaysian women in construction projects was hampered by hurdles. This research recommends expanding the scope of similar studies in the future so that more women's contributions to the construction industry can be brought to light.

Keywords: *Constraint, Construction Projects, Women, Malaysia*

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INTRODUCTION

It was estimated that the percentage of women participating in the workforce has increased by 1.1% from 2010 (46.8%) to 2011. (47.9 %) (Saadin et al. 2016). Therefore, this will have a significant impact on Malaysia's construction industry, as well as proof that gender was not a barrier to our country's industry thriving in the field of construction. However, owing to the quick expansion and strong demand in the construction area, only a few women have been participating in the construction sector (Vijayaragunathan & Rasanthi 2019). Moreover, Anuar et al. (2017) further stated that barriers and challenges for women are caused by several factors such as lack of support system, private life demand, company recruitment practices, opportunities to develop practical skills, the attitude of co-workers, work environment, etc. Besides, According to Ananthan (2021), women workers in construction are a step forward from the place into occupations. However, it necessitates physical strength, tolerance to severe outdoor working circumstances, and the ability to communicate in repressive languages. This shows that these characteristics are more common among males. Women's ability to work in the construction business has been harmed, and they are now considered the incorrect gender for construction tasks. Other than that, it stated by Fontinelle (2013 as cited in Anuar et al. (2017), states that why women do not hold or are not qualified for advanced positions because of a lack of commitment, lack of ambition or leaving work to care for the family and Ananthan (2019) also stated, women are frequently in charge of administrative and supervising labour in building projects and industries, whilst males oversee technical and "fee-earning" work. According to new research from Galea et al. (2020), male dominance and a macho working culture persist in the construction sector despite years of official regulation and research to combat gender disparity. Additionally, jobs involving construction sites, such as site supervisors, were more likely to select males than women since they demand a lot of mental and physical energy when participating in a construction project and can negatively impact the performance of a construction project. Men were more suited for this type of building site job, while women were better suited for managerial positions there. In Malaysia, for example, there was still a mindset among Malaysians that women are only a connection to the next generation and culture. Next, Organizations in the construction industry frequently saw work and family as the two most essential areas in life. It was frequently asserted that the two roles are frequently in conflict, mainly when linked with women, which can influence their job performance (Oyewobi et al. 2019). This research also looked at the link between affective employee engagement and organizational performance, and the results suggest that affective commitment was a factor in organizational performance.

LITERATURE REVIEW

Women's Involvement in Construction Projects

In the context of this research, "women's engagement" refers to the current participation of women in the construction sector or specific building projects. Ikiao et al. (2019) stated that the active participation of women in project planning, decision-making, and the actual execution of projects was required for women to be considered active participants in the building and construction business. Women participate in these activities via community-based organizations and those that are funded by self-help groups, the government, non-governmental organizations, other financial institutions, and constituency development programs (Ikiao et al. 2019). According to reports based by the United States Bureau of Labor Statistics (2021), which states that the proportion of women working in the construction industry in part-time roles was higher than that of men, and the rate of female involvement in the sector of construction increases from year to year the more advanced a nation was in the modern. Concerning that, I agree with the assertion that the employment rate for women was rising each year. In connection with that, the research by Hasan et al. (2021) also claimed that women continue to be drastically underrepresented in the male-dominated construction industry since talking about the construction sector must relate to males owing to the method of work, surroundings, and so on. Based on statistics from the Department of Statistics Malaysia, (2022), the increase of women in the construction sector in

Malaysia was only 55.1% in 2020 to 55.5% and this percentage collected was also lower than that of men in the construction industry. which reached 82.3% in 2022. The percentage rate obtained for women only increased by 0.4%. The statistics shown below are based on the Department of Statistics Malaysia, (2022). Besides, men continue to dominate the construction business in Australia, with women making up only 12 workforces in 2016 (down from 17% in 2006). Galea et al. (2019) added that women only work part-time in support areas in the construction industry, such as marketing and human resources, while males hold top positions and are responsible for project execution (Galea et al. 2019).

The Constraints That Women Faced in Malaysia's Construction Projects

Table 1 shows the constraints that women faced in Malaysia's construction projects. There are 10 variables identified from the previous research discussed among the researchers on the constraint that women faced in Malaysia's construction projects.

Table 1: Previous Research on the Constraints that Women Faced in Malaysia's Construction Projects

NO	PARAMETERS	AUTHORS	FREQUENCY
1.	Balancing private life and family commitment	Anuar et al. (2017); Naismith et al. (2017); Jaafar et al. (2015)	3
2.	Work Environment	Anuar et al. (2017), Pamidimukkala & Kermanshachi, (2022); Tapia et al. (2020); Hasan et al. (2021)	4
3.	Sexual Harassment	Anuar et al. (2017); Pamidimukkala & Kermanshachi, (2022); Hasan et al. (2021); Wang et al. (2021); Rubin et al. (2018)	5
4.	Perception towards women's involvement in the construction	Rosa et al. (2017); Kumar B.P. (2019); Aboagye et al. (2019)	3
5.	Bullying culture towards women in construction	Hasan et al. (2021); Afolabi et al. (2019) Naismith et al. (2017); Jaafar et al. (2015)	4
6.	Undervalued on women	Rosa et al. (2017); Shibani et al. (2021) Saadin et al. (2016); Chandler Sarah (2022); Fielden et al. (2000)	5
7.	Non-negotiable work schedule	Hasan et al. (2021); Wang et al. (2021) Naismith et al. (2017); Galea et al. (2020)	4
8.	Deficiencies of Role Models in Organizations	Hasan et al. (2021); Wang et al. (2021) Rosa et al. (2017); Naismith et al. (2017) Worrall et al. (2010); Bilen-Green et al. (2008); Ikiao et al. (2019); Bagilhole et al. (2002); Hossain and Kusakabe. (2005)	9
9.	Recruitment of female employees	Hasan et al. (2021); Shibani et al. (2021) Fielden et al. (2000); Ikiao et al. (2019); Dainty et al. (2000)	5
10.	Domination of male	Tapia et al. (2020); Nagande et al. (2020) Afolabi et al. (2019); Galea et al. (2020)	4

Balancing private life and family commitment

The first constraint is balancing private life and family commitment. As stated by Anuar et al. (2017), women who have a family or are married have more responsibilities than single women due to the difficulty of balancing their private life and family commitment. In contrast, women are more straightforward to alter because of job stress and private life demands, as indicated in the issue statement, and this will impair the woman's performance. Besides, it is challenging to disagree about women's constraints in construction projects and this industry. In contrast to having children, managing work and life is the major issue encountered by women, according to one of the respondents for the research (Naismith et al. 2017). Consequently, the difficulty of returning to the industry or project seems to be high based on the qualification of the appointment in the company would be based on the background whether the person has a responsibility or burden behind them or if they are single, so the likelihood for the person to be selected to work was being based on their status, with these prioritizing women in particular, as intended by respondents in research by (Naismith et al. 2017). According to research by Jaafar et al. (2015), one of the difficulties or barriers for women to enter the construction industry is family commitment and responsibility as a child bearer. For many professionals in the field of construction, this issue has created a conflict between work and family obligations. Based on the previous studies mentioned above, private life demands, and family obligations are the main barriers keeping women from participating in building projects. This research intends to improve the status of women in construction companies.

Work environment

The construction sector was seen as a masculine environment since it relates to hard labour. In research from Anuar et al. (2017), the work environment had the second highest response in the data obtained by this research since this construction project was frequently associated with the 4D syndrome (dull, dirty, dangerous, and demanding). Other than that, Tapia et al. (2020) stated that the construction industry is unfriendly and controlled by men. Persistent sanitary problems and a shortage of protective gear that is large enough for women are among the problems that women must deal with. According to Hasan et al. (2021), the area of development has a reputation for having dangerous and disorganized work practices, unappealing terms and conditions of employment, and an unwelcoming atmosphere in the workplace. This is also the reason why some people believe that women should not be involved in this industry at all, much alone if it is related to building projects that are more difficult for women.

Sexual harassment

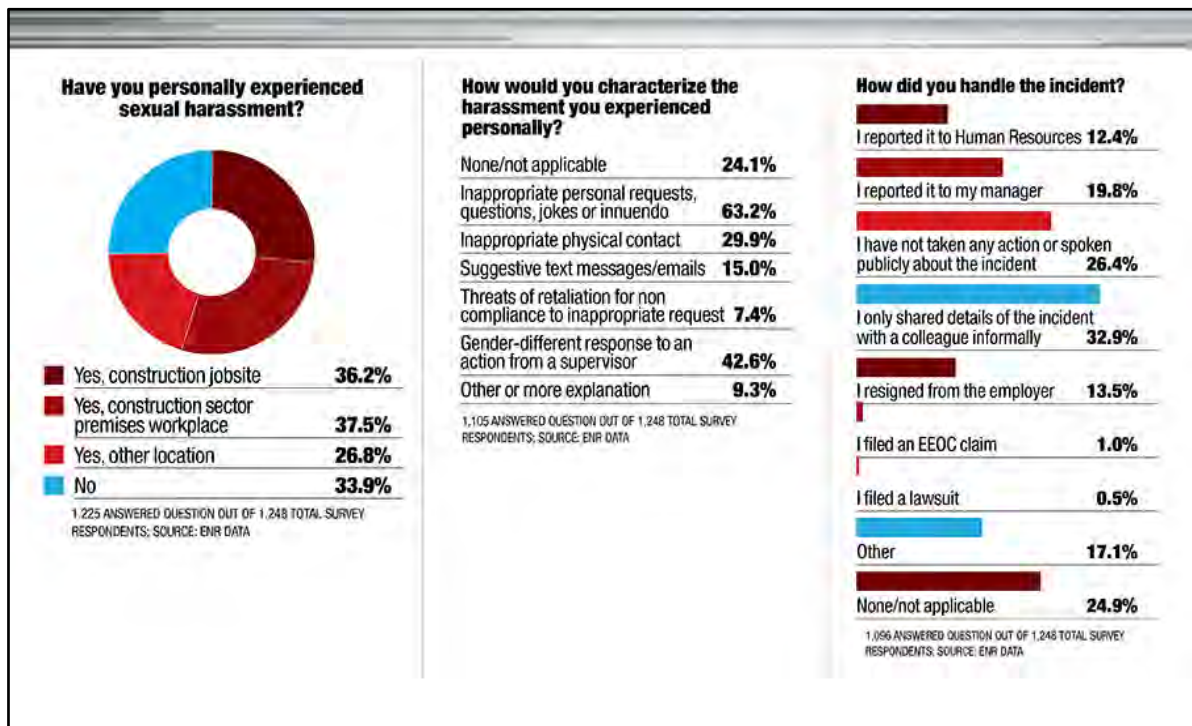


Figure 1: Sexual Harassment Cases Statistics by (Rubin et al. 2018)

In research from Anuar et al. (2017), gender inequality in the construction project has harmed women, primarily because they are frequently used as a target for immoral activities such as sexual harassment as evidenced by the findings of this research, which found that sexual harassment of women occurs on the ladder, and the second is like the work environment based on the schedule. The findings on sexual harassment above are supported by research by Pamidimukkala and Kermanshachi, (2022), who claimed that harassment typically takes the form of humour with a hint of sexual ambiguity, posters, and qualitative research methods.

Other than that, Hasan et al. (2021) stated that sexual harassment is a pervasive issue in the development sector and that this is reflected in sexist attitudes and informal recruiting methods that discourage women from entering the profession. In the construction industry, one of the biggest challenges is making connections. Organizations are more reluctant to hire women because of the risks associated with sexual harassment, which are seen as financial and logistical costs (Hasan et al. 2021). Although some women have only had positive experiences at work, many participants still report issues ranging from discrimination to sexual assault. This assertion is confirmed by research conducted by Nagande et al. (2020), which offers evidence that 40% of respondents felt sexual harassment was also an impediment to women's involvement in the building or site construction sector. While some women have had nothing but pleasant experiences in the workplace, many others have faced discrimination or even sexual assault. Wang et al.'s (2021) research confirms that not all construction firms give this problem the attention it deserves.

Perceptions towards women's involvement in constructions

The perception of women is also different if it was linked to the construction field. People who have basic construction knowledge will see that construction is not suitable for women because of the workload, working methods, work atmosphere, and the perception of parents that this field of construction is only for men because it appears from the outside that only men are suitable for construction projects. These factors are supported by the research of Rosa et al. (2017), the factor that

restricts women from being involved in construction is men and their opinions have prevented women from progressing as they (Men) have the assumption that women know nothing, even when women were trying to get assistance. Perceptions cannot be changed in a short period or within a day, therefore the perception of women is still at a low level in Nellore Town, research by Kumar B.P., (2019) stated that the skills for women will always be at the same level and there is no improvement if women only help or were only second to the male workforce at work, indirectly the existence of gender discrimination in paying of wages and in the employment of women. In addition, misunderstanding and incorrect perceptions from family, friends, professors, career counsellors, and the media regarding the viability of women working in the construction sector and the appropriateness of women for such jobs (Rosa et al. 2017). Men's construction industry stigma against women has implied that men and women are treated differently throughout time. As a result, some males find gender equality difficult and uninteresting, which decreases the number of women in the sector (Aboagye et al. 2019).

Bullying culture towards Women in constructions

Men are known to employ physical tactics, such as sexual harassment, to prevent women from entering and staying in the construction sector (Afolabi et al. 2019). According to Afolabi et al. (2019), women are therefore more likely to experience workplace bullying from a psychological perspective. One example of this is when a firm gives its female employees excessive work, which results in high-stress levels. Yet, Hasan et al. (2021) also claimed that bullying is one of the things that is often linked with the construction sector as well as any employment related to construction such as building projects. These jobs include positions in the construction industry. Up to 25% of the respondents in the research by Naismith et al. (2017) who included female engineers reported having encountered bullying at work. Managerial bullying and harassment contribute to the underrepresentation of women in construction, according to Jaafar et al. (2015).

Undervalued Women

The underrepresentation of women is what causes women to be paid less than men for doing the same work (Shibani et al. 2021). In addition to that, women working on the construction site expressed concerns about being devalued and having limited opportunities for job growth (Rosa et al. 2017). Besides, Saadin et al. (2016), the participation of women indicated that there may be gender bias in the appraisal because there are not enough women in top positions in businesses. Strong limits, such as gender stereotypes, might influence the appraisal of female workers working for the firm (Saadin et al. 2016). As seen by Fielden et al. (2000), women face additional challenges as their careers advance. In this article, it is reiterated that this primarily applies to non-traditional jobs, such as the construction industry, which has the lowest percentage of women working in its workforce compared to all other industries in the United Kingdom. Chandler Sarah (2022) cites a lack of focus, determination, or a desire to take time from work to care for the family as reasons women don't occupy high jobs. Besides, due to lengthy, rigid work hours, women in construction and architecture feel more occupational stress (Hasan et al. 2021).

Non-negotiable work schedule

According to the findings of the research conducted by Naismith et al. (2017), Dainty et al. (2000) found that one of the most evident constraints for women is prolonged working hours. Naismith et al. (2017) have obtained feedback from the interviews that have been conducted, and the information that has been obtained from the interviewee states that there are obstacles that exist to the career progression of women. For instance, women need to work harder or work overtime to prove themselves especially on-site. As referred to Wang et al. (2021), long working hours are a significant problem in the work practices of the construction industry and this problem affects women differently than it does men, with the former experiencing a greater compromise of work-life-balance and career and family choice than the latter. As per Wang et al. (2021), a fundamental problem in the sector is the prevalence of work practices, such as long hours, presenteeism, and commitment to the job. Other than that, Working more than at home increases inefficiency, fatigue, and stress. The workload does not match the current working day for both men and women (Galea et al. 2020).

Deficiencies of role models in organizations

As stated by Worrall et al. (2010), women need support with access to mentors or mentoring in terms of physical and virtual based. This stems from the lack of available role models to aid in the retention and career growth of those who have already "made it," which means women who have had a comfortable position and have been successful in construction (Worrall et al. 2010). In other words, women who have "made it " in construction mean women who have had a successful career in the industry. As stated by Worrall et al. (2010), women need support with access to mentors or mentoring in terms of physical and virtual based. This stems from the lack of available role models to aid in the retention and career growth of those who have already "made it," which means women who have had a comfortable position and have been successful in construction (Worrall et al. 2010). In other words, women who have "made it " in construction mean women who have had a successful career in the industry. The research conducted by Rosa et al. (2017) also claimed that the absence of a role model is a beneficial component in balancing personal objectives and professional goals, namely quality of work-life and family/work-life balance. This is indicated as a positive aspect of the process. According to Bilen-Green et al. (2008), young women and girls don't have any female political role models since there aren't any. Ikiao et al. (2019) also used this comment to support their findings. According to research (Hasan et al. 2021) there is disagreement on how much female role models and on-the-job mentorship affect women's work happiness and progress in construction. Women do not see successful women in construction as role models, hence they don't see construction or building projects positively (Wang et al. 2021). Surprisingly, previous research tends to deny that solidarity amongst women cannot be expected and that there are instances in which women do not support one another (Bagilhole et al. 2002).

Recruitment of female employees

The recruitment process for successful apprenticeships and retention was one of the most significant challenges and this matter was because fewer people who are female join most of the industry as apprentices than leave their positions within a very short amount of time (Shibani et al. 2021). Besides that, the recruiting process was believed to be difficult for women because, according to Ikiao et al. (2019), the recruitment process is more favourable towards male employees than it was towards female workers, and this makes the recruitment process a struggle for women. Women were discriminated against during the hiring process due to the prejudice of employers (Dainty et al. 2000). This prejudice, which stems from the assumption that the construction industry was not a good fit for women, manifests itself in the recruitment process, which was characterized by employment that is frequently informal and obtained through personal contacts (Dainty et al. 2000). Following that, company recruitment practises have been identified as one of the barriers or challenges for women to stay in the construction industry or participate in construction projects, and several studies have found 19 barriers and 7 additional

challenges (Hasan et al. 2021). The research's sixth place is recruitment methods (Hasan et al. 2021). Women face early recruiting challenges, according to Fielden et al. (2000). Women in Bangladesh and Thailand must overcome recruitment procedures to work in construction, according to Hossain and Kusakabe (2005).

Domination of Male

Men have dominated senior roles and project delivery, whereas women have gathered in junior, part-time, and support roles such as marketing and human resources (Galea et al. 2020). This is problematic if there is also an issue with men dominating senior roles (Galea et al. 2020). Tapia et al. (2020), was also stated that the construction industry remains to be dominated by men and remains male-oriented. Besides that, the construction industry does not have enough female employees, even though the percentage of women entering the field has increased over the course of the last few decades (Tapia et al. 2020). Furthermore, this was problematic if there is also an issue with men dominating senior roles (Galea et al. 2020). Afolabi et al. (2019) found that the construction industry is the most male-dominated, with 2% of women employed in Canada in 2007, 9% in the US in 2013, 7% in Turkey in 2004 and 0.2% in Nigeria in 2016. Developed and emerging nations provided these figures and percentages. According to Nagande et al. (2020), 40% of respondents stated that male dominance hindered women's participation in building and site construction.

RESEARCH METHODOLOGY

This research paper summarises the results of the primary survey, which utilised a quantitative methodology by means of a questionnaire-based survey. The researchers employed a questionnaire survey to gather pertinent information from the participants that aligned with the study goals and objectives. In the past, there haven't been enough women in the building business, especially in technical and higher-level jobs. This limitation can affect how many people are in the study as a whole and how different they are. Apart from that, a total of 108 questionnaires were distributed to the Contractors companies Grade G5 to G7 in Klang Valley area and only 78 were returned. The questionnaire was made available to respondents using a variety of digital and social media channels, including e-mail, Facebook, WhatsApp, and Telegram. The data gathered was then analysed using descriptive analysis and frequency using Statistical Package for Social Science SPSS version 29 quantitative software.

FINDINGS AND DISCUSSION

Table 2 presented the mean and rank for the questionnaire survey. Most of the variables indicated that the respondents agreed with all the variables. Ten (10) variables had been determined to identify the determine the constraint that women faced in Malaysia's construction projects in Malaysia. The average mean of the data collected was 4.20. This showed that most of the respondents agreed with all the statements about the constraints that women faced in Malaysia's construction projects.

Table 2: The constraints that women faced in Malaysia's construction projects

<i>ITEM</i>	<i>STATEMENT OF CONSTRAINTS</i>	<i>MEAN</i>	<i>RANK</i>
1	Construction projects and the construction industry are dominated by men.	4.41	1
2	Construction companies are more likely to recruit men than women for the survival of their companies.	4.33	2
3	Women are often used as objects of sexual harassment among the constraints faced by women in construction projects.	4.31	3
4	Women's physical and psychology are often challenged by bullying culture by men such as excessive workload.	4.27	4
5	Men undervalue women in construction projects.	4.21	5
6	Inflexible work schedules are limitations for women's engagement in construction projects.	4.18	6
7	Balancing personal life and family commitments is difficult for women to manage.	4.15	7
8	Construction projects are often associated with work environment problems.	4.14	8
9	The absence of role models in the construction industry makes it less appealing to women.	4.06	9
10	The perception of inappropriateness for women to be involved in construction is true.	4.01	10
Average Mean		4.20	

Most respondents agreed with all of the arguments that were made regarding the limitations of women's participation in construction. The results gained from the literature review, on the other hand, are distinct from the data received from the questionnaire survey that was recently carried out. This was discovered through research on the previous authors' work that was carried out. The findings put more weight on the average of the top five.

This data shows males dominate construction projects and the sector. The mean score of 4.41 suggests that a shortage of construction work was the biggest constraint for women. Most contractors' companies agreed that male-controlled construction projects and the sector hindered women's involvement. Galea et al. (2020) observed that males have dominated senior jobs and project delivery, while women have concentrated in junior, part-time, and support areas including marketing and Resources. According to the written assessment, most writers said that the lack of role models in organisations is one of the hurdles women must overcome to participate in construction projects. However, the scattered survey data disagrees. Women leave construction projects due to a lack of role models and compensation transparency, according to Naismith et al. (2017). According to Worrall et al. (2010), women lack role models, which hinders professional progress. (2010), women need actual and virtual mentors.

Additionally, construction enterprises were 4.33 times more likely to hire males than women for survival. Women were less likely to work on construction projects since construction businesses needed men to

survive. Ikiao et al. (2019) found that construction companies recruited more men than women. According to Dainty et al. (2000), potential employers may discriminate against women throughout the hiring process due to gender prejudice. Construction jobs were often obtained through personal connections (Dainty et al. 2000). The recruiting process shows this prejudice, which stems from the belief that women are unsuited to construction.

The third constraint to women in construction was sexual harassment, with an average mean of 4.31. The third most critical topic was the sexual harassment of women on construction sites, which was not limited to the construction industry. Since sexual harassment has become common, women working on construction sites were discouraged. Due to disrespect for women and early exposure to opposite-gender sexuality. This also hinders an organization's understanding of gender equality, particularly women. According to Hasan et al. 2021, firms were wary of hiring women due to the financial and logistical risks of sexual harassment. In addition, tightening the legislation to penalise sexual harassers and holding seminars on respect between the sexes are two strategies to help women overcome their obstacles. Thus, this issue may affect the future and enhance women's construction sector involvement.

However, men's bullying culture was the fourth constraint to women's involvement in construction projects, which sometimes resulted in unreasonable workloads. The culture of male bullying inhibits women's involvement in building projects and harms their physical and emotional well-being. Managerial bullying and harassment contributed to the underrepresentation of women in construction. Jaafar et al. (2015) agree that bullying and harassment contribute to the underrepresentation of women in construction. Bullying makes women hesitant to work in construction and negatively impacts the industry's image.

Finally, contractors agreed that males overestimate women's construction contributions by 4.21. Due to negative attitudes and physical constraints, male builders often undervalue women. Women on construction sites are worried about being devalued and professional advancement. Saadin et al. (2016) suggest that gender preconceptions may affect business evaluations of female workers. This statement supports the findings that construction workers devalue women.

CONCLUSION

In conclusion, one of the goals of this research was to determine the constraints that women have faced when working on construction projects. Many factors show the constraint that women have faced when working on construction projects. Based on the research findings, construction projects and the construction industry are dominated by men become the most factors agreed by the respondents, most construction companies are more likely to recruit men than women for the survival of their companies. It is followed by another constraint that women are often used as objects of sexual harassment, women's physical and psychological are often challenged by bullying culture by men such as excessive workload, and men always undervalue women in construction projects. this obstacle makes most women not be hired to work in the construction sector. The impression that these women cause difficulties for the company and invite many possibilities of risk should be seen and the company should provide a convenient and safe workplace to women who want to join and work in the construction sector.

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Surat kami : 700-KPK (PRP.UP.1/20/1)

Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim
Rektor
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Cawangan Perak



Tuan,

**PERMOHONAN KELULUSAN MEMUAT NAIK PENERBITAN UiTM CAWANGAN PERAK
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Perkara di atas adalah dirujuk.

2. Adalah dimaklumkan bahawa pihak kami ingin memohon kelulusan tuan untuk mengimbas (*digitize*) dan memuat naik semua jenis penerbitan di bawah UiTM Cawangan Perak melalui Repositori Institusi UiTM, PTAR.

3. Tujuan permohonan ini adalah bagi membolehkan akses yang lebih meluas oleh pengguna perpustakaan terhadap semua maklumat yang terkandung di dalam penerbitan melalui laman Web PTAR UiTM Cawangan Perak.

Kelulusan daripada pihak tuan dalam perkara ini amat dihargai.

Sekian, terima kasih.

“BERKHIDMAT UNTUK NEGARA”

Saya yang menjalankan amanah,

SITI BASRIYAH SHAIK BAHARUDIN
Timbalan Ketua Pustakawan

nar

Setuju.

27.1.2023

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