

Building a Better Work-Life Balance in the Construction Industry: Insights and Recommendations from a Developing Country's Megaproject

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Abstract: Work-life balance involves effectively managing professional and personal responsibilities to enhance overall well-being and avoid burnout. Employees in the construction industry face challenges like long hours, high workloads, inadequate organisational support and irregular work schedules. This research focused on a megaproject in Malaysia, namely the East Coast Rail Link (ECRL). It is in line with the aspirations of the strategic blueprint introduced by the government of Malaysia, the Construction Industry Transformation Plan (CITP) 2021–2025, aimed at enhancing productivity in the construction sector and promoting work-life balance initiatives in Malaysia. Three objectives were set for this research work: (1) to investigate the existing work-life culture in the ECRL project, (2) to determine the current constraints faced in the ECRL Project in implementing the work-life balance and (3) to recommend the preferred work-life balance initiatives that can be implemented in the construction industry. A quantitative survey was conducted for data collection. The questionnaire survey was distributed via the WhatsApp application to 300 heads of departments. The research findings revealed four themes on the current constraints of work-life balance faced by employees in the ECRL project. They were: (1) new technology, (2) long commute time, (3) ad-hoc tasks and (4) organisation policies. This research also found four preferred work-life balance initiatives that can be implemented: (1) reward system, (2) flexible working arrangements and (3) organisation support. The findings can shed light on ways of identifying, assessing and mitigating the work-life balance issue, especially since the lack of work-life balance is a problem in Malaysia's megaproject construction industry.

Keywords: Work-life balance, Construction industry, ECRL project, Constraints and recommendations, Megaproject in Malaysia

INTRODUCTION

The equilibrium and integration of one's personal life, including family, relationships, health, leisure and personal interests, with the obligations and responsibilities of one's job or profession is known as work-life balance. It

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involves wise time, energy and attention management to ensure that life's personal and professional facets are given the proper weight, enabling people to have happy and fulfilling lives. Work-life balance acknowledges the value of balancing professional obligations with personal development, recreational activities and physical and mental health pursuits. Two important aspects of an employee's life that often clash are work and family (Isa and Indrayati, 2023). Many employees struggle to balance their responsibilities to their families and their jobs, particularly in complex workplaces with lengthy workdays.

Talent Corporation Malaysia Berhad has identified the importance of having a work-life balance in line with the Employment Act 1955 (including the latest amendment in Rev. 2012), which states that a maximum of 48 hours a week is permissible, with daily hours not exceeding eight hours (Talent Corporation Malaysia Berhad, 2024). However, the act only covers employees who earn wages of MYR2,000 and below and has not been implemented widely in Malaysia, as reported by Lu and Cooper (2015) and Noor and Mahudin (2015). Numerous employees frequently experience the pressures of employment, including extended working hours, heavy workloads and constant connectedness facilitated by technology (Holden and Sunindijo, 2018). This can result in stress, exhaustion and strained relationships, ultimately negatively impacting personal and professional aspects. In accordance with that, the Malaysian government has initiated steps to ensure that employees have a work-life balance in order to enhance their productivity in the workplace. For example, the Construction Industry Transformation Plan 2011–2025 (CITP 4.0) was developed with the enhancement of well-being as a fundamental principle (Construction Industry Development Board Malaysia, 2022).

Work-life balance has become essential nowadays. There are various advantages to maintaining a healthy work-life balance. For example, it diminishes stress levels, enhances overall mental well-being and boosts productivity and job contentment. The balance in businesses can reduce absenteeism, increase job satisfaction, promote better job autonomy, attract talent, improve employee retention, improve employee attitudes and improve productivity. On the other hand, maintaining a well-balanced lifestyle enhances personal relationships, facilitating significant ties with family and friends. However, work-related responsibilities, interpersonal connections, self-care, recreational pursuits and personal growth require time and attention. It underlines how important it is for people to take time out from work to relax, be creative and pursue personal development. Accordingly, setting limits and giving different areas of life priority are crucial components of a well-managed work-life balance. To simplify, achieving work-life balance necessitates deliberate exertion and efficient time allocation.

The process of implementing work-life balance includes establishing attainable objectives, defining clear boundaries between professional and personal spheres and acquiring the ability to assign tasks to others or decline them when appropriate. However, implementing work-life balance in the construction industry can be particularly challenging due to the high workload, long hours and irregular work schedule. This is mainly due to the demanding nature of construction work and the need to meet project deadlines, handle complex tasks and manage multiple responsibilities. The way people in the construction industry behave and how efficiently they work is highly influenced by the culture of long working hours, even during the weekend. Due to job demands and to keep up with the work progress, construction work involves irregular work schedules, including shift work, overtime and weekend work. In addition, construction projects often have tight deadlines and physically demanding labour, leaving employees fatigued and exhausted at the end of the day, with little energy for personal activities. This can lead to physical and mental exhaustion, making it difficult for employees to maintain a healthy work-life balance.

The high-pressure project-based nature of work increases the potential for imbalances in work-life commitments (Holden and Sunindijo, 2018). The unpredictable and inconsistent schedules make it challenging for employees to plan and maintain stable personal lives, impacting their ability to spend quality time with family and engage in personal activities (Hongtao and Jennifer, 2020; Abas et al., 2021). Abas et al. (2021) add that construction professionals are often expected to work extra hours. AIA Vitality (2017) revealed that Malaysians, on average, work 15 hours more than their contracted hours each week. Excessive workloads, time constraints, and deadlines lead to stress as Malaysians want work-life balance, purpose and growth in their careers (Murad, 2021). Sunil (2022) reported that employees who had poor work-life balance in the past three months were 45% more likely to experience burnout. Additionally, those who felt burnt out were 9% more likely to perceive their productivity as low. Lastly, employees with poor productivity were found to be 278% more likely to experience a sense of poor work-life balance. It is a vicious cycle.

In short, the work-life balance in the construction industry refers to the efforts to create an environment where employees can effectively manage their work responsibilities and personal lives. It involves finding a balance between the demands of construction projects and the need for personal well-being, family time, leisure activities and self-care. Achieving work-life balance in the construction industry is crucial for promoting the overall well-being and satisfaction of employees, enhancing productivity, reducing turnover rates and ensuring the long-term sustainability of the industry. Nonetheless, the construction industry faces significant challenges in achieving work-life balance for its workforce, leading to negative impacts on employee well-

being, productivity and overall industry sustainability. Based on the issues presented, this research attempted to assess the impacts of the lack of work-life balance in the Malaysian construction industry. As a result of the research, stakeholders will be able to identify, assess and mitigate issues related to work-life balance.

LITERATURE REVIEW

Overview of the Construction Industry

The construction industry can be considered a key economic contributor in both developed and developing countries of the world. This is because the sector has direct and indirect links to other sectors and contributes to reducing unemployment, accelerating economic growth and providing solutions to address social, climate and energy challenges that exceed the direct contribution of construction activities (Omar, Fateh and Godawatte, 2023). Even so, construction projects are naturally complex. They are subject to a multitude of random internal (i.e., human resources) and external factors (i.e., political and economic factors). They are also commonly located in dispersed locations and are performed independently by a group of project teams. Due to its complexity, time constraints and tight schedule, project-based constructions are characterised by long working hours to meet deadlines and mostly males as the dominant employees (Apraku et al., 2020). In addition, the nature of the industry means that employees must move from one site to another, travel to different workplaces and put in extra-long hours (Park, Kim and Nguyen, 2021). As a result, significant pressure and occupational stress are subsequently placed on construction employees, causing negative impacts on their work, family and personal life (Aghimien et al., 2022; Manivannan et al., 2022; Panojan, Perera and Dilakshan, 2022).

The heightened workforce demands, including mastery of new technologies, stricter constraints, changing demands for work outcomes, and modifications in work regulations, have increased the complexity and advancement of the construction industry. These can create a situation that puts pressure on employees, as highlighted by Bagis and Adawiyah (2022). A survey on work-life balance by the Department of Trade and Industry (DTI) in the United Kingdom revealed that most of their construction industry employees work overtime and skip breaks because of job demands. On average, a construction professional works 50 to 60 hours a week. This was echoed by Panojan, Perera and Dilakshan (2022) and Han et al. (2008) who revealed that 61% of construction employees failed to balance their private and work lives. According to Abas et al. (2021), the construction industry in Malaysia is known for its dynamic working hours that require employees to work until midnight. The unhealthy work environment of the construction industry in Malaysia is

often overlooked, as well as proper research on the work environment. Due to this unhealthy work environment, awareness among Malaysia's construction industry employees is sadly lacking. The concept of work-life balance has become prominent in ensuring stability and balance between employees' work and personal lives.

Work-Life Balance

The work-life balance is a situation in which one divides or balances one's time between work and activities outside of work (*Cambridge Dictionary*, 2019). In this research, work-life balance is the balance between a person's professional and personal life, ensuring that both aspects are given appropriate attention and time. It involves managing the demands of work, such as job responsibilities, deadlines and career aspirations, while also prioritising personal well-being, family, relationships and leisure activities. Work-life balance involves effectively managing and prioritising time, energy and attention to ensure that neither work nor personal life dominates or negatively affects the other.

Lingard, Warmerdam and Shooshtarian (2017) reveal that employees who work in construction companies are likely to be exposed to a higher level of work stress compared to those who work with consultants and clients. The complex nature of the construction sector and the labour-intensive, project-based nature of the industry contribute to the challenges faced by construction professionals in achieving work-life balance (Manivannan et al., 2022; Cheung et al., 2020a). The employees must face the risk of work stress due to excessive workloads, time constraints and deadlines. For example, due to job demands and to keep up with the work progress, employees often must stay back for long hours. Fulfilling work-related obligations such as meeting deadlines, attending meetings and completing tasks, and personal responsibilities such as spending time with family, taking care of household chores and pursuing personal interests, is a challenge. This is because employees on construction projects are often expected to work extra hours. The way they behave and their work ethic is highly influenced by the culture of long working hours, even during the weekend (Abas et al., 2021). Construction projects often have tight deadlines and are physically demanding, and employees may experience fatigue and exhaustion at the end of the day, leaving little energy for personal activities. Moreover, high-pressure project-based work increases the potential for imbalances in work-life commitments (Liang, Leung and Zhang, 2021). Love, Edwards and Wood (2011) and Lingard, Warmerdam and Shooshtarian (2017) state that work-life balance emphasises the importance of maintaining physical and mental well-being. It includes allocating time for exercise, relaxation, quality sleep and engaging in activities that promote overall health and reduce stress.

Malaysia ranked the second-worst country for work-life balance out of 60 countries, with an average workweek of 40.8 hours and a minimum wage of only MYR5.04 per hour (Remote Technology Inc., 2024). Malaysia scored the lowest among Asian countries surveyed, behind the likes of Taiwan (16th), Singapore (19th), Thailand (33rd), Philippines (36th) and Indonesia (51st). The index results are based on multiple factors, including sick pay, maternity leave, healthcare and overall happiness.

Work-life balance practices in Malaysia

Work-life balance is an important aspect of well-being, where individuals strive to balance their professional commitments with personal and family life. There is, however, very limited research on work-life balance in Malaysia. The Employment Act 1955 (rev. 2012) states that the maximum working hours for a week shall not exceed 48 hours, where daily working hours shall not exceed eight hours, and these hours shall be performed within ten continuous hours from the time work begins for the day. Work performed after the completed ten-hour period is deemed overtime work, though an employee may not have done eight hours of work in a day. This, however, only covers non-executive level employees, where the salary earned is less than RM2,500.00. Consequently, Noor and Mahudin (2015) found that the act provides only for minimum working conditions, as work-life balance practices are not part of the standard employment package. In addition, *Digital News Asia* (2013) found that even the minimum standards are not properly adhered to. The survey carried out on 954 Malaysian employees across various industries in the country reported that 63% of employees did not spend enough time with their families due to long working hours, with many working two to five hours beyond their official 9 to 5 work hours daily (due to unreasonable deadlines and too much work), mostly unpaid. For work-life balance practices, many employees reported that their organisations are not doing much to promote work-life balance. Indeed, 75% of those surveyed mentioned that they were interrupted about work during their holidays. This final point supports more recent findings that technological advances have blurred the boundaries of work and non-work. Deisl (2022) also uncovered that employers contacted employees at any time via emails, text messages and so on. This blurring of work-life boundaries can be seen as a mechanism by which organisations maintain their hold onto employees, which ultimately results in even more work-life interference (Fleming, 2014).

Even though the Malaysian government, as well as public and private corporations, have started adopting appropriate steps towards flexible work arrangements, it is still too early to claim the success of this initiative as an enabler of work-life balance. The current study believed there were three concerns that had yet to be addressed. First, the question was whether

flexible work arrangement applies to all employees or only to employees in specific job categories and levels, such as those in professional positions, full-time employment or those of high income. Second, in both private and public sectors, flexible work arrangement adoption is usually at the sole discretion of the employee's supervisor and the needs of the organisation. Third, a wide variation in procedures and practices adopted among organisations throughout the country may compromise the accessibility of work-life balance policies.

High Workload

A high workload refers to a condition where an individual or a group of people is faced with an excessive amount of work to be accomplished within a given timeframe. It involves having a significant number of tasks, projects or responsibilities that require attention and completion. Long hours refer to an extended period spent on work or job-related activities, surpassing the standard or expected working hours. It implies working for a duration that exceeds the typical workday or schedule. An irregular work schedule refers to a work arrangement that deviates from a consistent or predictable pattern of working hours. It involves variations in the timing, duration or days of work, which can differ from week to week or day to day.

In many countries, a standard workday is typically eight hours long, although there are exceptions based on local labour regulations and industry norms. Extended hours usually involve exceeding this regular length, often resulting in longer shifts, overtime or additional time dedicated to work-related tasks (Holden and Sunindijo, 2018). Construction projects often require extended work hours, including weekends and evenings, to meet project deadlines. As a result, employees struggle to find personal time and face challenges in maintaining a healthy balance between work and personal life. Construction work can also exhibit strong seasonality in certain areas, with busy periods demanding intense work commitments. This can lead to longer working hours during busy stretches and potential unemployment during slower seasons, impacting both work-life balance and financial stability.

Working Long Hours

The construction industry is known for its demanding and flexible working hours, which can extend late into the night. The physically demanding nature of construction work often leads to fatigue and physical exhaustion among employees, making it challenging for them to engage in personal activities or allocate sufficient time for meaningful interactions with family and friends, as highlighted by Holden and Sunindijo (2018). Employees in the Malaysian construction industry face difficulties in maintaining a healthy work-life balance in their daily lives. Furthermore, the impact of job requirements and

the prioritisation of work is emphasised, as employees increasingly overlook the importance of work-life balance in pursuit of goals such as property ownership, disregarding their overall well-being. The use of information and communication technologies (ICTs) can also negatively affect work-life balance by blurring the boundaries between work and personal life. Strategies such as implementing effective project planning and appropriate resource allocation should be implemented to help mitigate excessive work hours and ensure a fair distribution of workloads among employees. Though unsatisfactory work-life balance has repercussions for employees and can affect their work performance, potentially leading to conflicts between employers and employees (Fateh and Zamri, 2022), the detrimental work environment in this industry often goes unnoticed, and there is a lack of research on the burdens faced by employees.

New Technology

The continuous evolution of technology and its impact on work-life balance is another aspect to consider, as it offers benefits in terms of flexibility but can also lead to increased pressure, blurred boundaries and technostress, (Bencsik and Juhasz, 2023). ICT can be understood through sociological theories, particularly regarding the capacity of humans to reorganise their time and space. Smartphones, equipped with internet access, facilitate constant communication between people. Unfortunately, this advantage has blurred the boundaries between work and quality family time. Saini and Bansal (2023) highlight that employees desire a clear line between the work environment and personal life. However, the Internet, email, laptops, smartphones and tablets allow uninterrupted access for employees, making it difficult to define the boundaries between work and personal life. While ICT makes communication easier, it also affects work-life balance by extending working hours beyond the office. From a positive perspective, it provides modern employees with a set of tools, such as easy access to information and improved communication within organisations. However, the psychosocial workload is increasing, and the opportunities offered by new technologies are turning into pressures due to rising expectations. Technostress is the negative impact of technology on attitudes, opinions, behaviour and physical well-being. Information overload and connectivity issues further contribute to the negative effects of new technology. The continuous evolution of technology affects relationships within organisations, forcing employees to continuously adapt and acquire new competencies.

The pandemic intensified the pressures of new technology, leading to a challenging and stressful environment. The compulsion to use smart devices blurs the line between work and personal life, and the continuous need to develop technological skills can overshadow personal life and free time. This constant connectivity has reduced family communication, as employees

are often occupied with their tech-world activities, particularly spending significant time on social media. This raises the question of how employees can find quality personal and family time. In short, technology has made people more available for work anytime and anywhere, blurring the boundaries between work and personal life. The relationship between technology usage and the time factor is complex, as technological advantages can lead to work-life conflict due to the expectation of 24/7 availability, making it challenging to maintain a work-life balance. Mahajan, Guleria and Vidyapeeth (2023) and Gupta (2023) highlight that balancing multiple demands, as a result of technology, becomes a threat to maintaining a healthy balance for better individual physical and mental health.

Organisational Support

Some construction companies have limited formal policies in place regarding work-life balance in order to complete projects over tight profit margins. This lack of support poses challenges for employees to effectively manage their work-life balance. Kossyva et al. (2024) highlighted that companies that prioritise work-life balance for their employees will experience enhanced employee performance. Employee engagement within the workplace promotes creativity and problem-solving. This was agreed by Bataineh (2019) that employees who feel supported and valued are motivated to seek new information, develop their skills and contribute to the organisation's success.

Organisational support plays a crucial role in improving the quality and productivity of employees. Support is translated to the employees' dedication and intention to remain with an organisation (Riyadi and Auliya, 2021). It is influenced by factors such as trust in management, organisational ethics and the feeling of belonging to the company. Hutagalung, Soelton and Octaviani (2020) add that effective commitment stems from emotional attachment, normative commitment arises from the awareness of leaving costs, and continuous commitment results from a sense of obligation. Park, Kim and Nguyen (2021) emphasise that creating a supportive work environment, including appropriate work ethics, job security, positive employee relationships and employee involvement in decision-making, fosters organisational commitment and long-term retention. In addition, welfare initiatives, such as recognising employee contributions and addressing their needs, also contribute to higher employee retention rates. Bagis and Adawiyah (2022) highlight that work culture, as a subset of organisational culture, plays a vital role in organisational effectiveness. In the construction industry, work-life balance and organisational culture are interconnected; thus, creating a conducive work environment is crucial for employee satisfaction and productivity (Cheung et al., 2020b). A good work environment also promotes employee comfort and safety, which significantly impacts the quality of work produced.

Implementing work-life balance policies may present challenges, such as flexible work schedules and potential misuse, which can be addressed through appropriate regulations (Fahlevi et al., 2020; Dhas, 2015). Human resource departments play a vital role in maintaining a balance between employees' personal and organisational demands. Their involvement is an anchor to career-life balance, leading to increased job satisfaction, organisational commitment and employee retention (Somu and Jayavel, 2021). While high salary compensation positively affects job satisfaction, it alone is not sufficient to promote a work-life balance. Adequate compensation for longer working hours is crucial in maintaining work-life balance among construction professionals. Putri and Amran (2021) highlighted that companies should pay attention to the duration and working hours of their employees to ensure a standard work-life balance, enabling employees to perform their work and personal activities with happiness and without feeling overwhelmed.

METHODOLOGY

The quantitative method involves the examination and interpretation of variable data using statistical analysis. Rahman (2016) states that a variable can be represented numerically as frequencies or rates, and their associations with each other can be explored using statistical analysis with systematic measurement. Leo and Xavier (2023) add that quantitative methods focus on aspects of social behaviour that can be quantified and analysed for patterns. In accordance with that, the current research utilised a questionnaire survey for the research's data collection.

This research focused on one of the infrastructure megaprojects in Malaysia, the East Coast Rail Link Project (ECRL). The project is an engineering, procurement, construction and commissioning (EPCC) contract where the project is between the Malaysia Rail Link (MRL) on behalf of the Government of Malaysia and the China Construction Communication Company (CCCC) for China. The project was in the sixth year of its implementation (when this article was written). There was a total of more than 20,000 employees, 5,000 of whom were management and supervision personnel, recorded for the project. The ECRL project was chosen due to it being the largest infrastructure project, subjecting both the organisation and individuals involved to intense pressure.

Information and input for the study were gathered from personnel at various levels, ranging from management to the project supervision team. Their insights were essential for identifying the impact on their work-life balance and obtaining feedback on preferred initiatives. These personnel operated under high-pressure conditions, as they were responsible for on-site tasks

and involved in the planning stages of the work. Around 3,000 professionals were engaged in the ECRL project, representing various companies in roles such as clients, contractors and consultants. Among these employees, 2,000 were local personnel. This research specifically targeted the local workforce, excluding employees from China. Collecting feedback from the Chinese employees was deemed impractical due to their work location away from their home country, which could potentially impact the quality of data for the survey.

Krejcie and Morgan (1970) suggest that the target sample for a population of 1,000 should be 278. In ensuring that sufficient data were obtained, the questionnaire survey was distributed to 300 respondents over one month. A total of 192 responses were obtained during the period, which equated to a response rate of 64%. The questionnaire survey was developed in Google Forms and distributed through the WhatsApp application to 30 head of departments (HODs) in the head office and the project site of the ECRL project. HODs were requested to distribute it to at least 10 of their staff for each department. The list of departments is summarised in Table 1.

Table 1. List respondents' department

1. Planning Department (MRL)	16. Planning Department (CCCC)
2. QSHE Department (MRL)	17. QSHE Department (CCCC)
3. Contract and Commercial (MRL)	18. Contract and Commercial (CCCC)
4. Land and Liaison Department (MRL)	19. Land and Liaison (CCCC)
5. Finance Department (MRL)	20. Design Department (CCCC)
6. Design Department (MRL)	21. Construction Section 1 and 2 (CCCC)
7. Risk and Governance (MRL)	22. Construction Section 3 (CCCC)
8. Construction Section 1 and 2 (MRL)	23. Construction Section 4 (CCCC)
9. Construction Section 3 (MRL)	24. Construction Section 5 (CCCC)
10. Construction Section 4 (MRL)	25. Construction Section 6 (CCCC)
11. Construction Section 5 (MRL)	26. Construction Section 7 (CCCC)
12. Construction Section 6 (MRL)	27. Construction Section 8 (CCCC)
13. Construction Section 7 (MRL)	28. Construction Section 9 (CCCC)
14. Construction Section 8 (MRL)	29. Independence Checker (ICE)
15. Construction Section 9 (MRL)	30. Supervising Consultant (SC)

The questionnaire survey was divided into four sections as follows:

1. Section A focused on the demographics of the respondents. It captured information such as name, age, company, position, gender, location of work and the mode of transport used for commuting. This tailored demographic section was designed to enhance the screening and organisation of information, playing a pivotal role in gathering and summarising results based on these demographics for subsequent sections.
2. Section B enquired about the existing work culture and how it embraces work-life balance in the Malaysian construction industry. This section delved into the current practices within the ECRL project, shedding light on the various companies involved. The objectives were geared towards offering a comprehensive understanding of work-life balance in the Malaysian construction industry.
3. Section C investigated the constraints faced by the Malaysian construction industry in implementing work-life balance. This section attempted to gather valuable feedback from respondents, specifically exploring their perspectives on the restrictions and limitations of incorporating work-life balance within the ECRL project.
4. Section D probed into the respondents' preferences for work-life balance in their day-to-day activities within the Malaysian construction industry. This section attempted to gather feedback on the most suitable or preferred initiatives according to respondents. The primary focus was ensuring their ability to practise work-life balance despite the demanding nature of the construction industry, often characterised by extended working hours.

The data collected was converted from Google Forms to Microsoft Excel. It was then analysed using descriptive analysis, which included frequency and means of identifying the rank of each statement, thus providing essential insights into the data.

FINDINGS AND DISCUSSION

Response Rate and Reliability Analysis

The questionnaire was distributed to 300 respondents. However, only 191 responded, constituting 64% of the total response rate. According to Zuhairi, Fateh and Hong (2022), the percentage was acceptable for a self-administered questionnaire survey. A reliability analysis was conducted to assess how items correlated with each other and with the total score for each scale. Based on

prior studies, a reliability coefficient over 0.70 indicates strong reliability. In this study, all variables showed greater reliability coefficients than specified. Table 2 presents a Cronbach's alpha coefficient of 0.79, indicating a high reliability level for using this instrument in the study.

Table 2. Reliability analysis of the instrument

	Cronbach's Alpha	N of Items
All main variables	0.79	30

Respondents' Demographics

The respondents had diverse profiles, ensuring comprehensive data were collected on work-life balance practices in the ECRL project. The analysis correlated key issues with family commitments, gender and work at home or on-site. Table 3 presents respondent data based on their gender, marital status and location of workstation. Meanwhile, Table 4 summarises the respondents' years of experience and involvement in the ECRL project.

Table 3. Respondents' gender, marital status and location of workstation

	Married (No Kids)	Married (With Kids)	Single	Grand Total
	Frequency	Frequency	Frequency	Frequency
Female	7	19	17	43
Male	5	35	9	49
Head office (Total)	12	54	26	92
Female	8	11	16	35
Male	7	41	16	64
Site office regional office (Total)	15	52	32	99
Grand total (Head and site office)	27	106	58	191

Table 4. Respondents' years of experience

Years of Experiences	Frequency	%
1 year to 5 years	39	20.4
6 years to 10 years	65	34.1
10 years and above	87	45.5
Total	191	100.0

Table 3 illustrates that out of the 191 respondents, 92 respondents (48.2%) were at the head office, while the remaining were at the project office (51.8%). This distribution was deemed balanced, allowing the researcher to analyse work-life balance trends and issues for each location. Additionally, a significant portion of the respondents were married with kids (55.5%), followed by 58 respondents (30.4%) who were single, and 27 respondents (14.1%) who were married with no kids. Regarding gender, 78 of the respondents (40.8%) were female, 43 from the head office and 35 from the project site. Male respondents made up 113 out of 191 respondents (59.2%), with 49 from the head office and 64 from the project site.

Another crucial factor in assessing the work-life balance status in ECRL involves understanding the responses based on the divisions and position levels of the respondents. This information is instrumental in determining whether the challenges related to work-life balance are confined to specific groups of personnel or are consistent throughout the entire project. Table 4 highlights that the majority of the respondents, 87 respondents (45.5%), had more than 10 years of working experience in the construction industry. The trend was followed by respondents with 6 years to 10 years of experience, with 65 respondents (34.1%) and respondents with 1 year to 5 years of experience in the construction industry, with 39 respondents (20.4%). This distribution indicated that the respondents were generally experienced, which might imply a high level of expertise that could potentially contribute valuable insights for the current research.

The Existing Work Culture in the ECRL Project

Based on the findings shown in Table 5, the existing work culture was categorised into four themes, namely (1) long hours, (2) high workload organisational support, (3) flexible working arrangement and (4) irregular work schedule. Each theme had statements for the respondents to respond to.

“Long hours” topped the list with a mean score of 3.70. The two statements supporting this theme were: “Successfully completed my tasks but may need to stay back occasionally” and “Limited time with my family after finishing work”. From the statements, it can be deduced that this research respondents placed a significant amount of value on the ability to efficiently manage their workload and strike a balance between personal and professional lives. Previous researchers highlight this by stating that it is normal to work extended hours, including weekends and evenings, in the construction industry (Khahro et al., 2023; Saini and Bansal, 2023; Panojan, Perera and Dilakshan, 2022; Katili, Wibowo and Akbar, 2021; Park, Kim and Nguyen, 2021; Dlamini et al., 2020).

Table 5. Existing work culture in the ECRL project

Theme	Description	Mean	Total Mean
Long hours	1. Successfully completed my tasks but may need to stay back occasionally.	3.86	3.70
	2. Limited time with my family after finishing work.	3.70	
High workload	A tight deadline has compelled me to work additional hours.	3.60	3.60
Organisational support	1. Upper management consistently shows concern for our well-being and emphasises the significance of maintaining a healthy work-life balance.	3.57	3.56
	2. A lack of adequate resources is one of the factors that motivate employees to work extra hours.	3.54	
Irregular work schedule	Frequent ad-hoc assignments and unscheduled tasks often disrupt the completion of employees' regular tasks on schedule.	3.42	3.42

Second was a “High workload” with a 3.60 mean score. “Tight deadline has compelled me to work additional hours” represents that the respondents recognised the challenges brought about by severe deadlines; thereby placing a greater emphasis on completing projects on time. This is aligned with the findings by Holden and Sunindijo (2018), which have highlighted that construction projects require extended work hours, including weekends and evenings, to meet project deadlines. Extended hours usually exceed regular length, often resulting in longer shifts, overtime or additional time dedicated to work-related tasks. As a result, employees struggle to find personal time and face challenges in maintaining a healthy balance between work and personal life. Construction work can also exhibit strong seasonality in certain areas, with busy periods demanding intense work commitments. This can lead to longer working hours during busy stretches and potential unemployment during slower seasons, impacting both work-life balance and financial stability.

The third theme was “Organisational support”, with a mean score of 3.56. The statements “My management consistently shows concern for our well-being and emphasises the significance of maintaining a healthy work-life balance” and “A lack of adequate resources is one of the factors that motivate employees to work extra hours” revealed that the respondents placed a high level of importance on organisational support and leadership on their overall well-being. Support from the management was considered a job resource that promotes subjective well-being among the respondents

of this research. This is echoed by Ortiz-Gómez et al. (2022) who state that authentic leadership is a job resource for achieving greater well-being among employees of value-based organisations. Winston (2022) also agrees that the management's level of concern for the employee's well-being positively correlates with the employee's actual well-being.

Lastly, "Irregular work schedules" had a 3.42 mean score. The statement was "Frequent ad-hoc assignments and unscheduled tasks often disrupt the completion of the employees' regular tasks on schedule". Considering this, it appeared that the respondents found irregular work schedules to be more challenging and disruptive. This is supported by Ahmetoglu, Brumby and Cox (2021) who emphasise that reliable and accurate planning is essential for employees to have autonomy over their schedule and enjoy having flexible working arrangements. This is also agreed by Chand, Singh, and Ray (2019) who state that changes and disruptions are encountered frequently in the domain of a project, requiring project managers to make quick decisions with results that may be seen as ad-hoc assignments.

The findings of the current research illustrated a widespread understanding of the relevance of flexible working arrangements and a continual concern for the well-being of employees. By using these insights, the industry can alter its strategies and interventions to meet the specific needs and preferences of different groups within the workforce. This allows them to create an environment that is more conducive to maintaining a healthy balance between work and personal life.

The Current Constraints Faced by the ECRL Project Employees in Implementing Work-Life Balance

Using responses based on average ratings and rankings, it is possible to obtain valuable insights into the viewpoints of employees on work-life balance concerns inside the company. Table 6 summarises the current constraints faced by the ECRL project employees in implementing work-life balance.

Based on the research findings, it was determined that the most significant obstacle associated with the adoption of work-life balance among employees of the ECRL project was "New technology", with a mean score of 4.15. New technology enables work-related messages to be accessible around the clock. The respondents were fully aware of the impact of technology on the degree of involvement at work and that technology may result in difficulty in establishing a distinct border between personal and professional lives. It was found that these findings are consistent with earlier research findings. For example, Bencsik and Juhasz (2023) reported a loss of leisure time due to techno-overload and techno-invasion. These compromise work-life balance

and work performance. The mutually reinforcing negative effects influence the sense of well-being after working hours. Mahajan, Guleria and Vidyapeeth (2023) also highlight that the adoption of technology increases accessibility dramatically.

Table 6. The current constraints faced by the ECRL project employees in implementing work-life balance

Theme	Description	Mean	Total Mean
New technology	Made work accessible around the clock, and the ease of communication through WhatsApp groups kept the employees engaged with work most of the time.	4.15	4.15
Long commute time	Distance from the office necessitates longer commutes to and from work and reduces the time one can spend with loved ones.	3.25	3.25
Ad-hoc tasks	Assign ad-hoc tasks and expect them to be completed promptly.	3.04	3.04
Organisation policies	1. Stringent rules that restrict the implementation of flexible work arrangements.	2.92	2.77
	2. Lack of flexibility to take annual leave entitlement when needed.	2.62	

The second theme was “Long commuting time”, with a mean score of 3.25. This finding implied that the respondents’ personal time and the distance of their commute were issues for them. Most of the respondents had to commute up to two hours to reach the office from home. Some of the ECRL working sites were located in remote areas. The line length extended to 665 km, and the respondents did not have the flexibility to choose the sites to work in. This posed a challenge for respondents, as stressful commutes impact well-being and productivity (Chaparro et al., 2020). This was earlier stated by Sun (2020), who highlighted that the construction industry placed first in long commuting times for employees, especially those working on-site.

Next were “Ad-hoc tasks”, with a mean score of 3.04. According to the current research findings, the study respondents perceived ad-hoc task assignments as one of the most challenging aspects of their profession. Based on the remark, there was a general concern about the regularity of such assignments. These scenarios were deeply rooted in low construction industry performance and other issues, such as low productivity, reduced value and low client satisfaction. This is aligned with the finding in the study by Riazi et al. (2020) that the construction industry is relatively close to fragmentation issues and ad hoc tasks between project teams.

The last theme was “Organisation policies”, with an average mean score of 2.77. This theme was supported by two statements: “Stringent rules that restrict the implementation of flexible work arrangements” and “Lack of flexibility to take annual leave entitlement when needed”. Due to limited resources, the construction industry requires its respondents to go the extra mile to complete their duties. From the current research findings, organisational commitment was critical to boost respondents’ quality and productivity as it impacted their confidence in management and organisational principles. Effective commitment is based on emotional connection, normative commitment from understanding departure consequences and continual commitment from a sense of responsibility. The need for management of construction organisations to develop and implement construction employees’ work-life balance policies at their place of work was earlier discovered by Apraku et al. (2020). Panojan, Perera and Dilakshan (2022) also add that business culture exercises in the organisation can have a significant impact on the work-life balance of the employee.

The study findings revealed the dual-nature impacts of technology on work accessibility and emphasised the need for human interaction for effective resource management, addressing solutions for long commutes and developing policies that reflect the lived experiences of employees involved in the ECRL project.

Recommendation on the Preferred Work-Life Balance Initiatives in the Construction Industry

Based on the practices in the organisation, the approaches to managing the constraints associated with work-life balance were very subjective. The data collected from the respondents on preferred work-life balance were summarised in Table 7. The findings of responses based on average mean scores and rankings could provide better knowledge of the preferences of the employees of the construction industry on work-life balance. This understanding provides a better grasp of employee preferences.

Table 7. Recommendation on the preferred work-life balance initiatives that can be implemented in the construction industry

Theme	Description	Mean	Total Mean
Reward system	If the organisation compensates appropriately, it is worth it to go the extra mile.	4.25	4.25
Flexible working arrangements	Having flexible working hours as long as the tasks given are completed.	4.21	4.21

(Continued on next page)

Table 1. *Continued*

Theme	Description	Mean	Total Mean
Organisation support	1. It is appreciated if the superiors are consistently encouraged to embrace a healthy and joyful lifestyle.	4.43	4.15
	2. Organise more recreational activities within the organisation to alleviate stress and promote work-life balance.	3.87	

The first recommendation stated by the respondents was “Improving the reward system”, with a 4.25 mean score. The respondents stated that they were willing to go the extra mile if they were compensated appropriately. Also, they emphasised the significance of earning just compensation for their efforts, even though they demonstrated a high level of loyalty to their positions of employment. A similar finding was found by Dlamini et al. (2020), Abid et al. (2021) and Khahro et al. (2023) in their studies, which state that it is essential to take into consideration rewards to fulfil job satisfaction. This highlights the need to give equitable compensation for increased effort.

The second was “Flexible working arrangements”, with a mean score of 4.21. There was a significant desire among the respondents to have some degree of flexibility in their working arrangements, provided that the requirements of their positions were met. The flexibility was not in terms of working hours and clocking in, but in case of an emergency or last-minute arrangement, the respondents preferred to bring their kids to the office. This is highlighted by Subramaniam, Overton and Maniam (2015) who stated a strong relationship between flexible working arrangements and work-life balance. More educated and high-income earners are keen on these arrangements. This is supported by Wöhrmann, Dilchert and Michel (2020) who emphasised that individual-oriented working time flexibility was positively related to employees’ work-life balance. Organisations should grant employees a certain degree of working time autonomy while keeping organisation-oriented working time requirements, such as changes of working time at short notice to accommodate operational demands, to a minimum. This applies to all employees, not only those with a strong preference for separating work and private life.

Lastly, there was a need for improving “Organisational support”, with a mean score of 4.15. This theme was supported by two statements, namely “It is appreciated if the superiors consistently encourage embracing a healthy and joyful lifestyle” and “Organise more recreational activities within the organisation to alleviate stress and promote work-life balance”. This finding addressed the issue of a lack of motivation and support from the organisation, especially from the superiors. The respondents believed that a series of

leisure activities could alleviate stress, improve work-life balance and adopt a healthy and happy way of life. This demonstrated that employees had a strong positive attitude toward programmes that were aimed at fostering a healthy and happy living environment within the office. This is consistent with the theory on the importance of having effective health and wellness programmes and policies proposed in prior research (i.e., Aghimien et al., 2022; Baicker et al., 2010; Chuen et al., 2020). For instance, health and wellbeing programmes like wellness seminars, health and fitness, healthy breakfasts and lunches, physical exercise programmes, and organisation-based or subsidised gyms can be adopted (Meyer and Maltin, 2010).

The findings provided insights into the importance of recognising the intricacies of work-life balance preferences. They also lay the groundwork for the construction industry to craft policies that address the multifaceted work-life balance needs of their employees. While subtle variations exist, the research findings still serve as invaluable guidance for the industry seeking to formulate policies that cater specifically to the unique work-life balance dynamics of employees in distinct office settings.

CONCLUSIONS

The current research on existing work culture revealed that employees of the ECRL megaproject excelled in completing tasks on time, even with challenges in terms of long hours, high workload, irregular work schedule, and organisational support for work-life balance. The analysis of constraints in implementation highlighted the pervasive influence of new technology, encompassing both positive and challenging dimensions. In addition, challenges such as lengthy commutes, ad-hoc tasks and inflexible organisation policies were pinpointed as impacting the work-life balance experiences within the construction industry. The research also found that the megaproject employees' preferences for willingness to go the extra mile for fair compensation, flexible working arrangements and continuous organisation support that cater to the diverse needs of employees for a healthy lifestyle and work-life balance.

A distinct boundary between work and personal time emerged as a crucial factor for achieving a harmonious work-life balance. In accordance with that, organisations engaged in mega projects, such as the ECRL, are encouraged to adopt a holistic approach to understand shared human experiences and challenges. This involves strategic interventions addressing technology's dual impact, effective resource management, solutions for lengthy commutes and the implementation of flexible policies aligned with the preferences and priorities of their workforce. The findings contribute valuable insights to the

ECRL project and lay a foundation for enhancing work-life balance in the broader context of Malaysia's mega-project construction industry.

Future researchers can embark on an investigation focusing on the unique challenges faced by employees in different organisational contexts, particularly at the head office and the site office/regional office. Future research can delve into the factors influencing work-life balance perceptions and shed light on performance disparities. Employee perception studies, concentrating on workplace rules, leave entitlements and flexibility are crucial for comprehending how these factors contribute to overall job satisfaction and work-life balance. The implementation and assessment of tailored interventions designed to address the specific work-life balance needs of diverse demographics, including gender, marital status and office locations, are paramount. This involves diligent monitoring of the impact of these interventions on employee satisfaction and productivity. Benchmarking work-life balance practices within the Malaysian mega project construction industry against global construction industry standards is suggested to glean insights from best practices adopted in other countries, which can be adapted to enhance work-life balance in Malaysia.

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