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Influence of Job Factors, Workload, Reward and Self-Efficacy on Job Stress among Construction Workers in Malaysia

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Abstract

Stress in the construction sector is evident but often disregarded, as the perception of construction work as stressful has pushed many common stress-related problems under the rug. This study aims to uncover the leading stress causes among construction workers. This study included 150 foreign construction workers as respondents. The data were analyzed with SPSS 26. The results show a substantial relationship between job factors, workload, and rewards on job stress. However, no significant relationship was found between self-efficacy and job stress. This study included results from psychological and HR viewpoints and implications. The findings can guide the development of policies and programs that reduce employee stress.

Keywords Job stress; Job factor; Workload; Rewards; Self-Efficacy

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1.0 Introduction

Construction work, being inherently perilous, often fosters a stressful environment. Studies, like that by Premkumar & Rajkumar (2015), highlight stress as a key contributor to issues like absenteeism, low morale, accidents, turnover rates, decreased productivity, and escalated medical expenses.

According to Joshi, Paramasivan, Wahid, & Somu (2020), demand, control, and support greatly affect construction workers' work stress in Malaysia. The "Biopsychosocial Model of Stress" (Bernard & Krupat, 1994) lists workload and reward as primary stressors, however, Omar, Aluwi, Hussein, Mohd, & Rusdi (2020) find them inconsequential.

This study aims to investigate whether these stress-inducing factors apply similarly to foreign construction workers in Malaysia, an area with limited research (Sethuraman, Taskeen, & Vilasini, 2020). Job factors encompass the demands, control, and support exerted by a job, with studies confirming their significant impact on worker stress (Joshi, Paramasivan, Wahid, & Somu, 2020). Workload, another stressor, imposes mental strain on construction workers (Baka, 2015) and contributes to emotional exhaustion (Karatepe, 2013).

Furthermore, the absence of a reward system exacerbates stress among Malaysian construction workers (Allisey, Rodwell, & Noblet, 2016). Shields et al. (2015) assert that an appropriate reward scheme motivates workers and enhances job satisfaction, while inadequate rewards lead to stress-related issues like absenteeism and demotivation (Omar, et al., 2020).

In addition, self-efficacy, a belief in one's ability to control one's environment, also plays a significant role in managing job stress (Bandura, 1997). Positive self-efficacy aids in tackling demanding tasks, while a lack thereof contributes to inefficacy and increased stress (Khan, et al., 2023). Despite these findings, few studies have combined these factors comprehensively (Sethuraman et al., 2020).

This research aims to explore how job factors, workload, reward, and self-efficacy intertwine to influence stress levels among foreign construction workers in Malaysia. Understanding these dynamics could guide policies and programs to alleviate worker stress, benefiting both employees and organizations in the construction industry.

2.0 Literature Review

2.1 Job Factor (Demand, Control and Support) and Job Stress

Challenges in the construction sector often involve high physical demands, tight project deadlines, and extensive work hours (Chen et al., 2018). Another study (Chen, 2017) has stated that foreign workers may face increased stress due to these demanding work conditions. High job demands in construction, including heavy workloads, tight schedules, and physical labour, have been associated with increased job stress.

Further, limited control or autonomy over tasks and decision-making in the construction industry can contribute to elevated stress levels among foreign workers (Dai & Lu, 2019). Research by Lim and Tan (2019) highlights that limited control over tasks and decision-making processes within the construction industry significantly contributes to heightened stress levels among foreign workers in Malaysia.

Finally, inadequate social support and lack of resources, such as insufficient training or guidance, have been linked to higher job stress among foreign construction workers (Liao et al., 2018). Studies by Ali and Rahman (2020) emphasize the role of social support and the work environment. Inadequate social support systems and poor working conditions, such as a lack of safety measures, can exacerbate job stress among foreign construction workers in Malaysia. Thus, the theoretical proposition and pertinent hypothesis, which are rooted in the literature review discussed is listed as follows:

H1: There is a significant relationship between job factors (job demand, job control and job support) and job stress of foreign workers at the construction site.

2.2 Workload and Job Stress

Research has examined how workload affects occupational stress among international construction workers. Andiani and Jayanagara (2023) examined workload factors and stress among construction workers from abroad. A direct association was found between increased workload and stress in this demographic. Further, Lee et al. (2019) examined foreign construction workers' workloads in different cultures in a cross-sectional analysis. Heavy workload, typically exacerbated by project deadlines and resource constraints, consistently increased stress in international workers regardless of culture.

In addition, Nguyen and Kim (2020) explored how variable workload patterns affect stress in international construction workers. Their research found that uneven workload distribution, alternating between high busyness and inactivity, raised stress and negatively affected worker well-being. Further, Wang et al. (2021) study showed that resource allocation, realistic task assignment, and workload balance reduce stress in this demographic.

The literature discussed above emphasises the impact of workload on foreign construction workers' job stress. Thus, the theoretical proposition and pertinent hypothesis, which are rooted in the literature review discussed is listed as follows:

H2: There is a significant relationship between workload and job stress of foreign workers at the construction site.

2.3 Reward and Job Stress

Patel and Nguyen (2018) examined how reward systems affect stress in international construction workers. They found that fair compensation, inclusive reward structures, and proper recognition improved job satisfaction and lowered stress in this demographic. Kim et al. (2020) also examined how rewards reduce job stress in international construction workers from different cultures. They stressed that culturally responsive reward systems reduce stress in foreign workers by providing equitable rewards across cultural groupings.

Chen and Li (2021) studied how tangible and intangible rewards reduce job stress in international construction workers in a longitudinal study. Their research showed that while monetary benefits were important, recognition, career advancement, and social support reduced stress in this workforce. In addition, Wu, and Park (2019) examined how managerial practices and rewards affect stress management in international construction workers. Their study showed that supportive leadership and equitable incentive distribution greatly reduced stress in this demographic. Thus, the theoretical proposition and pertinent hypothesis, which are rooted in the literature review discussed is listed as follows:

H3: There is a significant relationship between reward and job stress of foreign workers at the construction site.

2.4 Self-Efficacy and Job Stress

Smith and Lee (2018) examined how self-efficacy affects stress in imported construction workers. Higher self-efficacy was connected with decreased stress levels in this cohort, suggesting that personal competence reduced stress. Further, Nguyen et al. (2020) compared self-efficacy among foreign construction workers from different cultures. Higher self-efficacy led to stronger stress coping methods and lower perceived stress, regardless of culture or language. Kim and Patel (2019) examined how self-efficacy and stress change over

time in international construction workers. They found that training and supportive environments improved self-efficacy, reduced stress, and improved job performance in this population.

Finally, Wang et al. (2022) examined how work environment boosts self-efficacy in foreign construction workers. Their study found that supportive work settings and skill development and training increased self-efficacy and reduced stress in this demographic. Thus, the theoretical proposition and pertinent hypothesis, which are rooted in the literature review discussed is listed as follows:

H4: There is a significant relationship between self-efficacy and job stress of foreign workers at the construction site.

2.5 Proposed Conceptual Framework

The conceptual framework below shows three primary causes of workplace stress and the mediating factor based on the literature review:

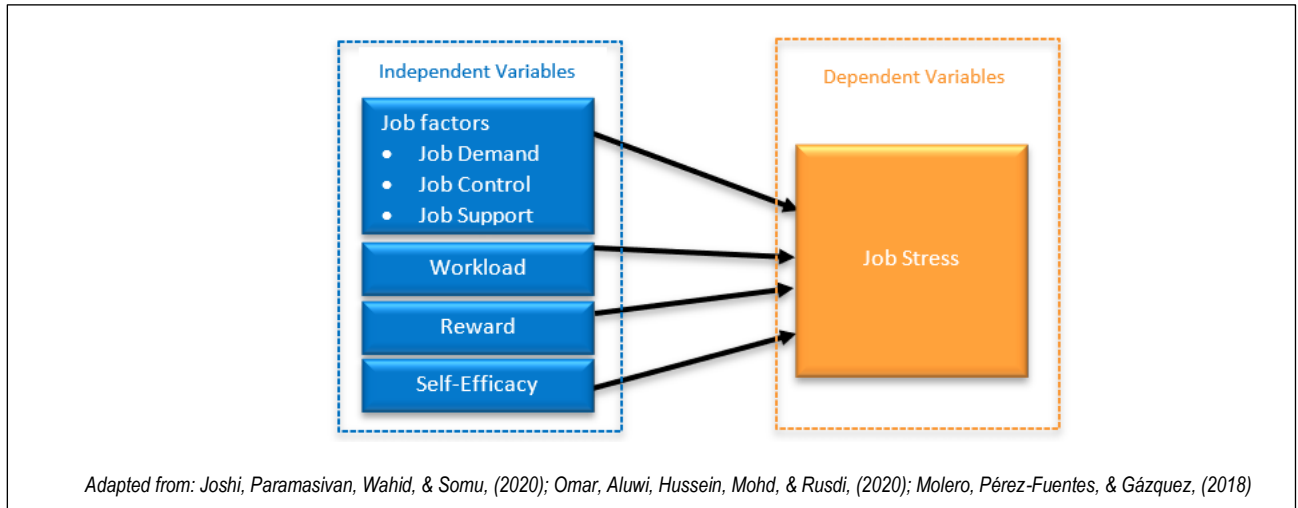


Figure 1: Proposed conceptual framework on the factors that influence job stress among foreign construction site workers in Malaysia.

3.0 Methodology

3.1 Research Design

Stress in the workplace is a well-studied and widely discussed topic among working adults. However, the scope of this research is limited to site works in Malaysia focusing on foreign construction workers. Since different issues and variables impact foreign workers—who are the primary subject of this study—it is necessary to do additional research to examine the same impact on them. Finding an appropriate approach to investigate or, in this instance, perform a study is the first step in conducting such research. After reviewing the relevant literature, we were able to identify independent variables: job factors, workload, rewards, and self-efficacy.

3.2 Sample Size

The sample includes foreign construction workers who work on-site, from operators to site supervisors. Due to the nature of the construction site, the survey could only be done via the 'Snowball Sampling Data' method. This study calculated 150 samples for 700 populations using Krejci and Morgan (1970). These survey questions are for foreign construction workers in selected sites located in Klang Valley.

3.3 Survey Instruments

The questionnaires used have been developed based on research ideas from previous literature. Table 1 below shows the in-depth breakdown of the study instrument items.

Table 1 Study Instrument Items

Variables	Source
Workload	Mansour & Tremblay, (2016)
Reward	Siegrist, Li, & Montano, (2019)
Self-Efficacy	Baessler and Schwarzer, (1996)
Job Stress	Tate et al. (1997)

3.4 Data analysis strategy

Descriptive statistics provide descriptive information about a set of data such as frequencies, the mean, and the standard deviation (Sekaran and Bougie, 2013). The data for this analysis was evaluated following multiple regression standards and procedures. The SPSS 26 software was used, as this software's function is to provide a statistical analysis of the data that has been tabulated. In this research, multiple regression analysis was used.

4.0 Findings

4.1 Demographics

All the survey participants are foreign construction workers doing site work in various construction projects under the umbrella of one selected construction company in Klang Valley. The detailed results are presented in Table 2.

Table 2 Frequency of the Respondent's Demographic

Demographic Profile	Frequency	Percentage (%)
Gender		
Male	150	100.0
Female	0	0.0
Age		
20 years old and below	37	24.7
21 to 30 years old	72	48.0
31 to 40 years old	29	19.3
41 to 50 years old	10	6.7
Above 50 years old	2	1.3
Race		
Indonesia	144	96.0
Bangladesh/Pakistan	0	0.0
Nepal/India	0	0.0
Myanmar/Vietnam/Thailand	6	4.0
Others	0	0.0
Experience		
Below 2 years	37	24.7
2 to below 5 years	51	34.0
5 to below 7 years	55	36.7
7 to below 10 years	5	3.3
Above 10 years	2	1.3
Income		
RM1200 to below RM2000	82	54.7
RM2000 to below RM2500	61	40.7
RM2500 to below RM3000	5	3.3

RM3000 to below RM3500	2	1.3
RM3500 and above	0	0

4.2 Correlation Analysis

Table 3 Correlations table
Pearson's Correlation Analysis (N=150)

	Job Factors	Workload	Reward	Self-Efficacy	Job Stress
Job Factors	1				
Workload	.746**	1			
Reward	-.109	.004	1		
Self-Efficacy	.094	-.047	-.537**	1	
Job stress	.676**	.583**	-.123	.151	1

** . Correlation is significant at the 0.01 level (2-tailed).

Pearson's Correlation analysis in Table 3 shows the covariance level between two continuous variables, including both independent and dependent variables. Based on the research done by Hair (2003), the correlation, therefore, the closer the value is to '1', the stronger the correlation of the said relationship as for the significant value (p), and a number that is less than 0.01 is acceptable. (Hair et al., 2003).

Results show that the correlation between job factors on self-efficacy with a correlation value of 0.094 with $p > 0.01$, is considered as positively 'very weak'. Further, the correlation between workload on the self-efficacy value of -0.047 with $p > 0.01$, is considered as negatively 'very weak'. Finally, the correlation between reward on the self-efficacy of foreign workers at the construction site was -0.537 with $p < 0.01$, this correlation is considered as positively 'moderate'. Finally, the correlation between job factors (job demand, job control, and job support) on the job stress of foreign workers at the construction site is 0.676 with $p < 0.01$, this correlation is positively 'moderate.' However, the correlation between workload and job stress of foreign workers at the construction site is 0.583 with $p < 0.01$, this correlation is positively 'moderate.' Then, the correlation between reward on job stress of foreign workers at the construction site is -0.123 with $p > 0.01$, this correlation is negatively 'very weak.'

4.3 Multiple Regression

Based on Multiple regression analysis, which is denoted as R^2 , is a type of statistical analysis that determines the strength and influence of the dependent variable over several independent variables. The known values of the independent variables are used to predict the dependent variable (Gliner et al., 2009).

Results in Table 4 indicate a value of 0.483, or 48.3%, indicating that job factors, workload, reward, and self-efficacy all affect job stress by 48.3%. This relationship is statistically significant because $p < 0.05$. Results of the analysis of variance (ANOVA) F value of 33.9% with a significance value of 0.01, below the 0.05 error margin. Hence, it suggests that at least one independent variable affects the dependent variable.

Table 4 Model Summary - Multiple Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change
1	.695 ^a	.483	.469	.42496	.483

a. Predictors: (Constant), Job Factors, Workload, Reward

Next, results in Table 5 show that job factors have the highest beta value at $\beta=0.510$, $p < .000$ followed by workload $\beta=0.207$, $p < .025$. However, no significant relationship was found between self-efficacy $\beta=0.107$, $p=.136$ and reward $\beta= 0.111$, $p=.878$. Thus, job demand, control, and support significantly impact job stress. However, reward and self-efficacy do not affect job stress.

Table 5 Coefficients - Multiple Regression Coefficients - Multiple Regression

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	

1	(Constant)	.763	.437		1.748	.083
	Job Factors	.555	.100	.510	5.564	.000
	Workload	.157	.069	.207	2.268	.025
	Reward	-.015	.095	.011	-.153	.878
	Self-Efficacy	.095	.063	.107	1.500	.136

a. Dependent Variable: Job Stress

5.0 Discussion

Overall, results from the regression analysis also indicate a significant influence of job factors on job stress ($\beta=.510$, $p<.000$). Thus, H1 is supported. Workplace factors significantly affect job stress, and employers must address this because "job stress" can affect job performance and workplace safety. Thus, if a person has low morale and an unfavourable environment, work will be less tolerable and more demanding (Wu et al., 2018).

Based on the second research objective, this study requires determining the significance of the relationship between workload and job stress. Overall, results from the regression analysis also show a significant influence of workload on job stress ($\beta=.027$, $p<.025$). Thus, H2 is supported. This supported the study by Chan, Nwaogu, and Naslund (2020) who suggested that the harsh working conditions can be further improved by the organization but cannot be eradicated, hence, a certain amount of resilience is needed to accept such a job.

Based on the third research objective, this study requires determining the significance of the relationship between reward and job stress. According to the findings, since the significant p-value is not below 0.05. Therefore, this proves that the reward does not significantly influence job stress. H3 is not supported. Overall, results from the regression analysis indicate a non-significant influence of workload on job stress ($\beta=-.011$, $p=.878$). However, this is contradicted by the findings by Azeez, Gambatese, & Hernandez, (2019) and Jahan, (2021). Therefore, further study needs to be conducted to understand the results better. As for rewards, many workers would want to focus more on work-life balance and a better work environment. In addition, it also reduces stress (Azeez, Gambatese, & Hernandez, 2019; Jahan, 2021).

According to the results, self-efficacy does not affect job functions, workload, or stress. Self-efficacy barely affects job stress which is supported a study by Zin, and Nazri, (2021). In other words, a good balance of job demand, control, and support, an appropriate workload, can greatly reduce job stress. By addressing these factors, organizations can mitigate the negative effects of job stress and contribute to the overall satisfaction and productivity of their workforce. However, understanding why this study's outcomes differ requires more research.

6.0 Conclusion& Recommendations

This study found that only the first and second hypotheses met the research objectives. To conclude, job stress is strongly predicted by increasing job factors and workload arrangements. It is expected to improve the methodical and theoretical bases for job stress and other investigations and develop socially relevant knowledge that the government and other stakeholders can use.

However, there are some limitations whereby this research's objectives are to serve the construction industry, so it may not be ideal for manufacturing, food, or healthcare. This is because different industries demand different workers, skills, colour, religions, and problems that may not be common elsewhere.

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Paper Contribution to Related Field of Study

Several new insights into management are provided by this study. We contribute to the literature on work-life balance by taking a holistic approach and looking at the effects of the employee on four job factors (workload, rewards, stress, and job control) for the expat worker in Malaysia.

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