

EFFECTS OF THE WORKPLACE ENVIRONMENT ON MENTAL HEALTH IN MALAYSIA

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Abstract. This study investigates the effects of the workplace environment on mental health, addressing a critical issue within high-stress engineering sectors. It examines how recognition, leadership, communication, and workload influence the mental well-being of employees at a prominent Malaysian engineering firm. Utilising a quantitative correlational design, data was analysed from 100 valid respondents. The study found that leadership significantly and positively affects mental health ($\beta=.368$, $p<0.05$). Surprisingly, recognition ($\beta=.189$, $p>0.05$), communication ($\beta=-.018$, $p>0.05$), and workload ($\beta=-.055$, $p>0.05$) did not show significant relationships with mental health. These results imply that organisations can most effectively enhance employee mental health by implementing strategic interventions that improve empathetic leadership practices. By fostering a supportive and well-led workplace environment, companies can mitigate occupational stress, enhance overall productivity, and contribute to a healthier organisational culture. This study provides valuable insights for practitioners and researchers, emphasising the importance of addressing workplace factors to promote mental health in the workforce.

Keywords: *mental health, recognition, leadership, communication, workload*

Introduction

The workplace environment significantly determines employees' mental health, influencing their productivity, job satisfaction, and overall well-being. In recent years, there has been a growing recognition of the need to address mental health issues within the workplace. According to the World Health Organisation (2024), mental health conditions are one of the leading causes of disability worldwide, affecting both personal and professional lives. The increasing prevalence of mental health disorders, such as anxiety and depression, highlights the necessity for organisations to create supportive and healthy work environments. Previous studies emphasise that a positive workplace atmosphere can enhance employee engagement, reduce absenteeism, and improve morale. The effects of workplace conditions on mental health are particularly relevant

due to the high-stress nature of the engineering industry. Employees in the construction and engineering sectors are often exposed to stressful situations due to tight deadlines, safety concerns, and the constant demand for precision. These stressors can contribute to mental health challenges, underscoring the importance of implementing effective mental health support systems. The company's initiatives to promote mental well-being can serve as a model for similar organisations, demonstrating the potential benefits of prioritising employee mental health.

Moreover, integrating mental health strategies into the corporate framework has been shown to yield significant returns on investment. A Deloitte report (2023) indicates that for every dollar spent on mental health interventions, companies can expect a return of four dollars in improved productivity and reduced healthcare costs. This economic incentive, along with a growing societal focus on mental health, motivates organisations to adopt comprehensive mental health programs. By fostering a culture of openness and support, the company enhances employee well-being and strengthens its overall performance and competitiveness in the industry. Despite the economic and social importance of addressing workplace well-being, there remains a critical need to understand how specific operational factors influence employee psychological outcomes in high-stress industries. Therefore, the primary objective of this study is to examine the effects of the workplace environment on employees' mental health in the Malaysian engineering sector. Drawing on the Job Demands-Resources (JD-R) model, this research specifically examines the relationships among four key workplace variables, namely recognition, leadership, communication, and workload, and employee mental health. In addressing these objectives, the study explores theoretical predictions that effective leadership, positive recognition, and clear communication serve as resources that positively affect mental health, while heavy workload demands act as a stressor.

Literature review

Mental health in a high-stress workplace

The impact of workplace environments on mental health has become an increasingly critical issue, particularly in high-pressure engineering sectors. While general workplace stressors are major contributors to mental health issues, the engineering environment is a complex domain where professionals face uniquely high job stress, intense workloads, and long hours (Torres et al., 2023). Recent studies indicate that engineering professionals frequently operate in high-stress environments that necessitate extreme resilience (Simmons et al., 2022), making them highly susceptible to psychological issues such as anxiety, paranoia, depression, and burnout (Li et al., 2022; Bakar-Cussó et al., 2022). Furthermore, these mental health risks in the engineering sector are often worsened by unsafe working conditions, poor work-life balance, and weak organizational care (Mishra et al., 2024). For instance, a lack of a supportive psychological safety climate characterised by management commitment and open communication has been shown to significantly deteriorate mental health in high-stress industries like construction (Nguyen et al., 2026). In Malaysia specifically, where one in three workers experiences work-related stress (World Health Organisation, 2024), there is an urgent need to address these specific occupational stressors. Consequently, the mental well-being of employees in the Malaysian engineering industry is heavily influenced by specific workplace factors, namely leadership, communication, workload, and recognition. Empowering leadership, effective communication, manageable

workloads, and career recognition are critical for fostering a positive work environment and improving employee mental health. Addressing these factors holistically can enhance both employee satisfaction and organizational performance. The following subsections detail the influence of these factors on workers' mental health, guided by the Job Demands-Resources (JD-R) Model.

The Job Demands-Resource (JD-R) model

This study is theoretically grounded in the Job Demands-Resources (JD-R) model, which posits that occupational risk factors can be categorised into job demands and job resources. Job demands, such as excessive workload, require sustained physical and psychological effort, potentially leading to exhaustion and health impairment if not properly managed (Schaufeli and Taris, 2014). Conversely, job resources, which can be psychological, social, or organisational, help achieve work goals and stimulate personal growth. Resources buffer the adverse effects of high job demands on mental health. In this context, workload acts as a primary job demand, while recognition, leadership, and communication function as critical job resources.

Workplace factors influencing mental health

Research highlights the significance of job resources in mitigating mental health challenges. Effective recognition from peers and supervisors acts as a fundamental psychological resource that boosts self-esteem and reduces anxiety, whereas a lack of recognition leads to feelings of undervaluation. Similarly, supportive leadership plays a pivotal role in shaping the organisational climate. Leaders who demonstrate emotional intelligence and provide clear guidance significantly enhance employee mental health and reduce burnout. Furthermore, transparent and open communication fosters a sense of psychological safety and belonging. Poor communication practices can lead to misunderstandings, conflict, and isolation, which negatively impact mental health outcomes. Finally, workload remains one of the most prominent job demands. High workload demands and long working hours are strongly associated with emotional exhaustion, increased stress levels, and decreased overall well-being among employees.

Materials and Methods

This study utilised a correlational research design to examine the relationships among recognition, leadership, communication, and workload, and their impact on employees' mental health at a prominent lift and escalator engineering firm in Malaysia. A probability sampling method was employed to ensure a representative sample by randomly selecting individuals, thus giving each employee an equal chance of being included in the study. To determine an adequate sample size for methodological rigor, an a priori GPower analysis was conducted, which indicated that a minimum sample size of 85 respondents was required to achieve sufficient statistical power. However, the actual data collection successfully granted a final sample of 100 valid respondents. Data was collected using a structured online questionnaire. All items were measured using a five-point Likert scale. The dependent variable, mental health, was assessed using 15 items. The independent variables representing the workplace environment included recognition (9 items), leadership (21 items), communication (16 items), and workload (29 items; Rubio-Valdehita et al., 2017). To ensure the instrument's validity, face and

content validation were conducted by two industry human resource experts prior to distribution. Furthermore, ethical considerations were strictly addressed to protect the participants' rights and privacy. An ethics application was approved prior to distributing the questionnaires to ensure compliance with ethical research standards. The collected data were analysed using the Statistical Package for the Social Sciences (SPSS, version 29.0.2.0), utilising descriptive statistics and Multiple Regression Analysis to test the developed hypotheses.

Results and Discussion

A total of 100 valid responses were analysed. The workforce displays a relatively balanced gender distribution (52% male, 48% female). The respondents are predominantly young adults aged 25 to 34 years (56%), of Malay ethnicity (72%), and married (65%). Academically, the majority hold a Bachelor's degree (58%). Professionally, a significant majority are stationed at the Selangor headquarters (76%), with the highest concentration working within the Maintenance Division (34%). In terms of tenure, the largest segment is 1-2 years of service (28%). *Table 1* shows the demographic profile of the respondents.

Table 1. Demographic profile of the respondents.

Demographic Variable	Category	Frequency (N)	Per cent (%)
Age	18-24 years old	1	1.0
	25-34 years old	56	56.0
	35-44 years old	26	26.0
	45-54 years old	16	16.0
	55+ years old	1	1.0
Gender	Male	52	52.0
	Female	48	48.0
Marital Status	Single	29	29.0
	Married	65	65.0
	Divorced	5	5.0
	Widowed	1	1.0
Highest Level of Education	High School	10	10.0
	Certificate	6	6.0
	Diploma	20	20.0
	Bachelor's Degree	58	58.0
	Master's Degree	5	5.0
	Doctorate	0	0.0
	Other	1	1.0
Division	New Sales & Modernisation	23	23.0
	Operations	10	10.0
	Maintenance	34	34.0
	Quality, Safety, Health & Environment	11	11.0
	Finance, Accounting & MIS	3	3.0
	Human Resource & Administration	19	19.0
Years of Service	Less than 1 year	13	13.0
	1-2 years	28	28.0
	3-5 years	16	16.0
	6-10 years	21	21.0
	11+ years	22	22.0
Ethnicity	Malay	72	72.0
	Chinese	8	8.0
	Indian	10	10.0
	Other	10	10.0

Normality analysis was conducted using skewness and kurtosis. The analysis indicates that the data for both the dependent and independent variables are normally distributed. The results are shown in *Table 2*. Next, Cronbach's Alpha was calculated during the final data analysis to assess the instrument's reliability and to ensure the

overall reliability of the instrument. *Table 3* presents results demonstrating excellent internal consistency for all items.

Table 2. Normality analysis.

Variables	Skewness	Kurtosis
Dependent Variable		
Mental Health	-.139	.250
Independent Variables		
Recognition	.089	-.856
Leadership	-.426	-.316
Communication	-.342	.102
Workload	-.585	.666

Table 3. Reliability analysis.

Variables	No. of Items	Cronbach's Alpha	Internal Consistency
Dependent Variable			
Mental Health	15	.947	Excellent
Independent Variables			
Recognition	9	.929	Excellent
Leadership	21	.938	Excellent
Communication	16	.979	Excellent
Workload	29	.939	Excellent

Multiple regression analysis was conducted to test the hypotheses of this study. A preliminary analysis was performed to assess the general assumptions of multiple regression, including multicollinearity, normality, and homoscedasticity, all of which were met satisfactorily. *Table 4* presents the results of the regression analysis conducted in this study. The R^2 value of 0.252 indicates that 25.2% of the variance in the dependent variable (mental health) is explained by the independent variables (recognition, leadership, communication, and workload). This reflects the highly complex nature of psychological well-being. The remaining 74.8% of the variance in mental health is influenced by factors not included in this study. Among the four factors evaluated, only leadership emerged as a significant predictor, whereas recognition, communication, and workload did not.

Table 4. Multiple regression analysis.

Independent Variables	Standard Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Independent Variables VIF
Recognition	.189	1.654	.102	.601	1.665
Leadership	.368	2.371	.020	.327	3.055
Communication	-.018	-.124	.902	.378	2.643
Workload	-.055	-.614	.541	.973	1.028
R Square	.252				
Adjusted R-Square	.221				
F	8.015				
Sig. of F Value	<.001 ^b				

In summary, the findings supported the hypothesis that leadership significantly and positively affects mental health. Conversely, the hypotheses predicting that recognition, communication, and workload would significantly affect mental health were not supported. The findings supported the hypothesis that leadership positively affects mental health. This aligns with Inceoglu et al. (2018) and Harms et al. (2017), who noted that effective leadership characterised by support and clear guidance significantly enhances mental health outcomes. Furthermore, recent studies specific to engineering environments emphasize that transformational leadership and effective communication strategies are essential for fostering a secure and supportive work culture (Roache,

2026). When leaders demonstrate strong management commitment, they help create a critical psychological safety climate that significantly reduces mental health issues in high-stress industries like construction and engineering (Al Riyami, 2024; Nguyen et al., 2026). Additionally, empowering leadership that is health-centric provides employees with a sense of meaningful work and protects against the stress typically caused by autocratic leadership styles (Jalil et al., 2023; Mirza et al., 2023). Leaders exhibiting emotional intelligence and empathy positively influence employee well-being, underscoring the critical role of leadership in fostering a healthy workplace culture. Ultimately, these results suggest that improving supportive and transformational leadership practices is the most vital strategy for enhancing employee mental health in high-demand engineering environments

The finding revealed that there is no significant relationship between recognition and mental health. Within Malaysia's collectivistic and high-power-distance workplace framework, the psychological mechanism of individualized recognition operates under distinct constraints. In a collectivist society, corporate structures place a high premium on group consensus, relational harmony, and teamwork over individual distinction (Jobstreet Malaysia, 2024). Consequently, overt, public, or highly individualized corporate praise can inadvertently disrupt team equilibrium or induce severe peer-directed anxiety among Malaysian white-collar employees, as it risks alienating the recipient from their peer group. This cultural barrier is structurally reinforced by the distinct occupational dynamics of the engineering industry. The generation of core engineering artifacts whether architectural blueprints, infrastructural handovers, or complex system designs is inherently a multi-disciplinary, collaborative team effort rather than an isolated individual achievement. Furthermore, technical professionals such as engineers exhibit robust intrinsic motivation, deriving deep psychological satisfaction from task mastery, technical autonomy, and tangible project milestones rather than extrinsic corporate accolades (BiteSize Learning, 2023). Traditional HR recognition programs, which are frequently event-driven, tenure-focused, or transactionally standardized, fail to connect with these intrinsic professional drivers (Tanner, 2025).

Next, the finding that communication does not significantly influence mental health among workers in this Malaysian engineering company contrasts with previous literature emphasising its role in reducing misunderstandings. This unexpected outcome can be attributed to several factors unique to the engineering sector. The engineering work culture typically emphasizes technical skills and project deliverables over interpersonal communication, which can lead to a perception that communication is secondary to task completion. Furthermore, the high-stress nature of the field characterized by heavy workloads, tight deadlines, and complex technical problem-solving requires deep concentration; consequently, employees might perceive constant communication as a distraction rather than a support mechanism for their mental well-being. Additionally, the nature of the communication itself may play a critical role. If the organization relies heavily on formal communication channels, such as official emails or structured meetings, it may lack the informal, personal interactions that are essential for genuinely fostering mental well-being. It is also possible that within strong, cohesive engineering teams, employees rely more heavily on implicit peer support and individual coping mechanisms rather than formal communication channels to manage their stress. Therefore, while effective communication remains generally vital for organizational management and reducing isolation (Jamaludin et al., 2025), its direct

impact on mental health may be overshadowed by other dominant stressors in this specific high-pressure environment. To bridge this gap, the organization must reassess its strategies by promoting adaptive, informal dialogues that actively integrate mental health support.

Finally, the finding that workload did not significantly affect mental health contrasts with broad stress frameworks indicating that heavy demands are a major stressor leading to occupational burnout. However, this finding aligns closely with industry-specific realities. In the engineering sector, heavy workloads, tight project timelines, and high pressure are often highly normalized and anticipated components of the professional identity a phenomenon deeply rooted in professional engineering socialization (Kamanda et al., 2022). Engineering culture frequently emphasizes perseverance under pressure, causing individuals to internalize these norms and view intense stressors as integral to their success and identity as engineers rather than abnormal burdens (Mirabelli et al., 2020; Sprung et al., 2025). Because engineering professionals operate in an environment that normalizes these conditions, this intense workload may simply be perceived as a standard operational expectation.

Conclusion

This study set out to examine the effects of the workplace environment, specifically recognition, leadership, communication, and workload, on employee mental health within the high-stress Malaysian engineering sector. The findings underscore that supportive leadership is the primary and most critical determinant of employee mental well-being. While recognition, communication, and workload are traditionally viewed as significant factors, their non-significant impact in this context suggests that their effects may be heavily moderated by individual coping mechanisms, varying generational preferences, and existing organisational buffers. Ultimately, this research highlights the paramount importance of leadership in mitigating workplace stress and preventing employee burnout in demanding operational environments. To practically apply these findings, organisations operating in high-demand industries are strongly encouraged to prioritise leadership development programs that emphasise emotional intelligence, empathy, and supportive communication. Furthermore, while maintaining effective workload management and adaptable communication strategies remain important, tailoring recognition programs to diverse generational needs can further enhance organisational culture. Future research should expand this scope across various industries and geographical regions to determine the generalizability of these findings. Additionally, exploring how individual personality traits, coping strategies, and specific interventions such as mindfulness training or flexible work arrangements interact with workplace stressors will provide deeper insights into optimising employee mental health.

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Conflict of interest

The authors confirm that there is no conflict of interest among any parties involved in this research study.

REFERENCES

- [1] Al Riyami, S. (2024): Understanding psychological safety to enhance a better working environment. – Proceedings of the SPE International Health, Safety, Environment and Sustainability Conference and Exhibition, Abu Dhabi, United Arab Emirates 13p.
- [2] Allande-Cussó, R., García-Iglesias, J.J., Fagundo-Rivera, J., Navarro-Abal, Y., Climent-Rodríguez, J.A., Gómez-Salgado, J. (2022): Salud mental y trastornos mentales en los lugares de trabajo. – Revista Española de Salud Pública 96: 11p.
- [3] BiteSize Learning (2023): Intrinsic vs extrinsic motivation at work. – BiteSize Learning Resources 1p.
- [4] Deloitte (2023): Deloitte Global 2023 Gen Z and Millennial Survey: Waves of change—acknowledging progress, confronting setbacks. – Deloitte Global 38p.
- [5] Harms, P.D., Credé, M., Tynan, M., Leon, M., Jeung, W. (2017): Leadership and stress: A meta-analytic review. – The Leadership Quarterly 28(1): 178-194.
- [6] Inceoglu, I., Thomas, G., Chu, C., Plans, D., Gerbasi, A. (2018): Leadership behavior and employee well-being: An integrated review and a future research agenda. – The Leadership Quarterly 29(1): 179-202.
- [7] Jalil, M.F., Tariq, B., Ali, A. (2023): Does meaningful work mediate the relationship between empowering leadership and mental health? Evidence from Malaysian SME employees. – Frontiers in Sociology 8: 12p.
- [8] Jamaludin, M.A., Salleh, K.M., Sulaiman, N.L., Parasuram, B., Al-Asfour, A. (2025): Workplace transformation: Strategies for employee voice and communication in organizational management. – Journal of Technical Education and Training 17(1): 170-179.
- [9] Jobstreet Content Team (2024): Resolving common management issues: Effective solutions for a productive workplace. – Jobstreet Malaysia Career Advice 1p.
- [10] Kamanda, H., Walther, J., Wilson, D., Sochacka, N., Huff, J. (2022): Professional engineering socialization at the intersection of collective constructions of expectations and individual shame experiences. – Studies in Engineering Education 3(1): 1-27.
- [11] Li, H., Zhang, S., Xu, Q., Zhou, H. (2022): Study on the influence of the working environment of engineering consultants on their mental health and countermeasures. – In: Guo, H., Fang, D., Lu, W., Peng, Y. (eds.) Proceedings of the 26th International Symposium on Advancement of Construction Management and Real Estate, Lecture Notes in Operations Research, Springer, Singapore 15p.
- [12] Mirabelli, J.F., Kunze, A.J., Ge, J., Cross, K.J., Jensen, K. (2020): Work in progress: Identifying factors that impact student experience of engineering stress culture. – Proceedings of the 2020 ASEE Virtual Annual Conference Content Access 8p.
- [13] Mirza, M.Z., Memon, M.A., Dollard, M.F. (2023): A time-lagged study on health-centric leadership styles and psychological health: The mediating role of psychosocial safety climate. – Current Psychology 42(10): 8164-8175.
- [14] Mishra, R., Alsabatin, H., Upamanyu, S., Masih, J., Hannon, A., Badawi, S., Reyad, S., Jamjoom, Y. (2024): Exploring the impact of marital status and workplace environment on mental health among employees in service-based industries. – AgBioForum 26(3): 83-94.
- [15] Nguyen, M.V., Khanh, H.D., Phan, C.T., Thuc, L.D. (2026): Investigating the impacts of psychological safety climate on mental ill health in the Vietnamese construction industry. – Engineering, Construction and Architectural Management 33(4): 3240-3263.

- [16] O.C. Tanner (2025): Employee recognition trends in Asia: Transforming traditional corporate culture. – O.C. Tanner Institute 1p.
- [17] Roache, D.A.M. (2026): Employees' safety and security in organizations, is it leadership or communication? – In: Roache, D. (ed.) Enhancing Safety, Security, and Service in Organizations: Communication, Leadership, and Performance, IGI Global Scientific Publishing, Hershey 30p.
- [18] Rubio-Valdehita, S., López-Núñez, M.I., López-Higes, R., Díaz-Ramiro, E.M. (2017): Development of the CarMen-Q questionnaire for mental workload assessment. – *Psicothema* 29(4): 561-566.
- [19] Schaufeli, W.B., Taris, T.W. (2014): A critical review of the Job Demands-Resources Model: Implications for improving work and health. – In: Bauer, G.F., Hämmig, O. (eds.) Bridging Occupational, Organizational and Public Health, Springer, Dordrecht 25p.
- [20] Simmons, D.R., Chau, A.D., Turner, M. (2022): Validating resilience at university scale with future civil engineering and construction professionals. – *Journal of Management in Engineering* 38(5): 12p.
- [21] Sprung, A., Beruvides, M.G., Cross, J. (2025): Linking culture and engineering identity development: A conceptual model. – Proceedings of the IISE Annual Conference and Expo 5p.
- [22] Torres, G.M.S., Backstrom, J., Duffy, V.G. (2023): A systematic review of workplace stress and its impact on mental health and safety. – In: Gao, Q., Zhou, J., Duffy, V.G., Antona, M., Stephanidis, C. (eds.) HCI International 2023-Late Breaking Papers, Lecture Notes in Computer Science 14055, Springer Nature Switzerland, Cham 17p.
- [23] World Health Organization (2024): World Mental Health Day 2024: Mental health at work. – World Health Organization 1p.