



The Challenges of Work from Home and Strategies Adopted by Quantity Surveyors During Covid-19 Period

Sin Yoong Loke¹, Izyan Yahaya^{1*}

¹ School of Housing, Building and Planning, Universiti Sains Malaysia, MALAYSIA.

*Corresponding Authors (Email: izyanyahaya@usm.my).

Paper ID: 14A1G

Volume 14 Issue 1

Received 02 September 2022

Received in revised form 02 December 2022

Accepted 09 December 2022

Available online 16 December 2022

Keywords:

Work From Home (WFH); COVID-19; Quantity Surveyor; Challenges; Employers' strategies; Employees' strategies; Consultant Firms; Construction

Abstract

Covid-19 has significantly impacted the work operation of construction stakeholders in various ways. Quantity Surveyors too were not exempted from the crisis. Despite the difficulty faced, they have to carry out their work from home during the succession of movement control orders (MCO) in order to survive. This study aims to investigate the challenges and strategies adopted by the Malaysian Quantity Surveyors during the lockdown period to better understand their work-from-home practices. The data was collected through a questionnaire survey. The findings revealed that health, work-life conflict and loneliness are the main challenges faced by quantity surveyors. The finding also shows that both employers and employees have significant roles in ensuring WFH issues are effectively managed. The findings provide insights for quantity surveyor employers to better understand their employees' needs and adjust organizational policies to accommodate WFH when necessary.

Discipline: Quantity Surveying

©2023 INT TRANS J ENG MANAG SCI TECH.

Cite This Article:

Loke, S.Y. and Yahaya, I. (2023). The Challenges of Work from Home and Strategies Adopted by Quantity Surveyors During COVID-19 Period. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, 14(1), 14A1G, 1-11. <http://TUENGR.COM/V13/14A1G.pdf> DOI: 10.14456/ITJEMAST.2023.7

1 Introduction

The COVID-19 crisis rocked the world in December 2019, resulting in the loss of human life worldwide (Song et al., 2020). In order to combat the spread of the disease, most countries have to implement lockdown policies. Malaysia is not spared from this dilemma. There were a series of lockdown policies that occurred in Malaysia starting from Movement Control Order (MCO) 1.0 on 18 March 2020 and followed by different types of movement control orders in different states such as Conditional MCO (CMCO) and Recovery MCO (RMCO) (Ahad et al., 2020). The series of

lockdowns have had a significant impact on the construction industry (Dr Afizah Ayob, 2021). Hence, work from home (WFH) has become the strategy for businesses to continue operating during the period. For Quantity Surveyors, Hassan & Nuruddin (2011) highlighted that it is an important strategy for the firm to survive.

Despite the importance, research overseas reported that working from home is not as effective as working in the office. In a survey done by Darby & Associates (2020), the Chartered Quantity Surveyor in Ireland struggles with WFH challenges. Despite the difficulties, working from home has become the norm as a result of the pandemic epidemic that everyone must endure including construction stakeholders (Darby & Associates, 2020; Pamidimukkala & Kermanshachi, 2021; Pirzadeh & Lingard, 2021). This study seeks to further understand how Malaysian Quantity Surveyors survive working from home by first investigating the challenges they faced when working from home during the COVID 19-period and then study on strategies implemented.

2 Literature Review

2.1 The Pandemic of COVID-19 in Malaysia

COVID-19 appears to be more contagious than normal influenza where vaccination cannot hundred percent against it. It is hard to prevent infection from the mutation variants of COVID-19 such as Delta, Omicron, Delmicron and Deltacron (CDC, 2021; Rana, 2021; World Health Organization, 2021). Hence, the lockdown policy has been implemented during the high peak of the COVID-19 pandemic period with increasing cases and deaths across countries. Malaysia has adopted a Movement Control Order (MCO) to combat the pandemic which began on 18 March 2020 and has implemented phases of MCO. Table 1 summarises the MCO series implemented in Malaysia.

Table 1: Summary of Movement Control Order in Malaysia

Type of Movement Control Order (MCO)	Date
MCO 1.0	18 March 2020 - 3 May 2020
Conditional MCO	4 May 2020 - 9 June 2020
Recovery MCO (Phase 1 and 2)	10 June 2020 - 31 December 2020
Conditional MCO (at places with high COVID-19 cases)	14 December 2020 - 31 December 2020
Recovery MCO (Phase 3)	1 January 2021 - 31 March 2021
MCO according to states (MCO 2.0)	11 January 2021 - 31 May 2021
Full MCO (FMCO / MCO 3.0)	1 June 2021 to 28 June 2021

2.2 The Impact of COVID-19 on the Construction Industry

COVID-19 has had a huge impact on the construction industry worldwide. In Malaysia, many business sectors have been affected. Some of the projects were called on hold, thus causing a delay in construction works (Zakaria & Singh, 2021). Due to the outbreak, the industry has suffered a loss of billion Ringgit (Ong, 2021). Construction works are only allowed to be operated upon request by the Ministry of International Trade and Industry (MITI). To optimize the construction output, like other construction stakeholders, quantity surveying firms need to follow the new working arrangement.

2.3 Quantity Surveyor Profession

A quantity surveyor is known as one of the construction experts who is competent and well-trained to provide advice on all elements of construction costs, construction project management, construction technology and contract administration (RISM, 2020). This research covers quantity surveyors who worked in consultant firms. Their roles cover the services highlighted by Royal Institution Surveyors Malaysia (RISM, 2020) as shown in Table 2.

Table 2: Basic Services and Supplementary Services offered by Quantity Surveyors

Basic Services	Preparation of preliminary cost estimates and cost plans for the development project.
	Advice on cost estimates in relation to the design development of a project.
	Advice on procurement, tendering and contractual procedures and arrangement.
	Preparation of the Bill of Quantities or Specification document for tendering purposes.
	Organize the calling of tenders.
	Evaluation of tenders received in the form of tender reports.
	Preparation and execution of the formal contract.
	Interim valuation of works in progress on-site for purposes of interim payments.
	Preparation of financial statements at regular intervals during the construction period.
	Settlement of the final accounts of the project.
Supplementary Services	Preparation of feasibility studies of a project.
	Projection of estimated project or development expenditure and anticipated income cash flows.
	Evaluation of contractors registered for prequalification.
	Comparative cost studies on the economics of the project during the design stage.
	Project management of construction project.
	Life-cycle costing and studies on the economics of alternative design.
	Pricing of Bills of Quantities or negotiating and agreeing on Schedule of Rates.
	Valuation or auditing of contractual claims for arbitrations litigation cases.
	Valuation or auditing of insurance claims for fire-damaged buildings.
	Auditing of contracts and their related budgets and expenditure.
Application of the full scope of quantity surveying services in Turnkey or Privatisation Contracts.	

Source: Royal Institution Surveyors Malaysia (RISM, 2020)

2.4 Work From Home (WFH)

Work from home (WFH) is defined as a working arrangement in which an employee performs his or her job responsibilities away from their workplace (Ambikapathy & Ali, 2020). Kowalski & Swanson (2005) and Hassan & Nuruddin, (2011) reported that the term work from home may also be defined as “teleworking”, “telecommuting”, “homeworking”, “hybrid working” and “remote working”. These terms are used interchangeably (Kimberly Mlitz, 2021). In this research, WFH refers to a work arrangement in which an employee may carry out his or her duties without attending to the firm or organization with the technical support to connect with the office administration.

There are lots of research conducted related to working from home from employers' and employees' perspectives (Wu & Chen, 2020; Ipsen et al., 2021). This reflected the necessity of working from home in today's community. Previous research highlighted that WFH can maximise the benefits to the organization through the improvement of health, job satisfaction, job performance and productivity. Beauregard et al. (2013) and Saludin et al.(2013) highlighted WFH as a strategy to recruit top talents and create job opportunities for disabled people. According to Buffer (2021), the three main reasons why people choose WFH are the flexible work schedule, the

ability to work in any location, and the less need to commute. Courtney (2020) agreed that WFH is one of the strategies to reduce the impact on the natural environment by less commuting and saving paper. Indeed, working from home will be one of the options for some employers considering the employee health, economic and environmental benefits.

3 Methodology

To further investigate the WFH in Quantity Surveyors in Malaysia, a quantitative research approach was adopted for this study. A total of 160 online questionnaires survey were sent to the Quantity surveying firm in Selangor, W.P Kuala Lumpur, and Penang. About 49 valid responses were received and analysed using SPSS software (Version 27).

4 Result and Discussion

4.1 Work From Home (WFH) Challenges faced by Quantity Surveyors

The WFH challenges faced by quantity surveyors are shown in Table 3. The data shows that health issues, work-life conflict, and loneliness are the top three challenges faced by quantity surveyors. While, improper workstation set-up challenges, difficulty in remote management and technology issues are the least issues as agreed by them. The findings also reported, from health issues and challenges, the respondents with many family responsibilities frequently experienced stress when working from home. Spinelli et al. (2020) highlighted working with family can be stressful for those without assistance to cope with the situation.

Table 3: Summary for finding on Challenges of Work From Home faced by the Quantity Surveyors

Rank	Challenges	Mean	S.D	Rating Range
1	Health Issue	3.122	0.846	Occasionally
2	Work-Life Conflict	3.065	0.698	Occasionally
3	Loneliness	2.914	1.112	Occasionally
4	Expenses	2.857	0.918	Occasionally
5	Improper Workstation Set-Up	2.837	1.114	Occasionally
6	Difficult in Remote Management	2.668	1.068	Occasionally
7	Technological Issue	2.429	1.054	Rarely

4.2 Work From Home (WFH) Strategies adopted by Quantity Surveyors

The findings on strategies to cope with WFH challenges are shown in the tables below.

4.2.1 Employers' Strategies

The findings in Table 4 reported that one of the important aspects is that employers must have faith in the ability of their employees. Miles (2018) highlighted supervisors shall modify supervising mode to embrace trust-based collaboration rather than control-based paternalism in the workplace. Trust is an important element for employers to nurture as it can enhance the relationship between employers and employees. Workplace trust influences the relationship and directly affects work collaboration and work progress. Meanwhile, other strategies suggested in this finding are relevant for employers to adopt based on employees' needs.

Table 4: Summary of WFH strategies by Quantity Surveyor: employers perspectives

Rank	Employers' Strategies	Mean	S.D	Rating Range
1	Companies should have faith in the ability of their employees to do their job at home.	4.082	0.954	Agree
2	Employees with working space, technical, or technological difficulties are permitted to work in the office based on the company arrangement	3.918	0.672	Agree
3	Company provide company laptop or desktop for the employees to WFH.	3.918	1.205	Agree
4	Company provides additional financial assistance to the employee to purchase better office furniture and equipment when WFH	3.837	1.161	Agree
5	Company organize virtual team building activities to improve employees' relationship.	3.776	1.123	Agree
6	Company provide security software for the sake of network security to the employees who WFH.	3.592	1.189	Agree
7	Company provides reimbursement for domestic utility bills for the employee during the WFH period.	3.592	1.240	Agree
8	Company provide training or workshop to facilitate employees WFH.	3.571	1.021	Agree
9	Company install multiple firewalls to increase cyber security on the remote access necessities.	3.571	1.208	Agree
10	Company provides subsidize internet broadband to employees to WFH.	3.490	1.244	Agree

4.2.2 Employees' Strategies

From the employees' perspectives, findings in Table 5 reported that self-learn technology skills are important in order for them to adapt to WFH. The self-learn attitude should be cultivated among the workers who practice working from home to maintain a work-life balance. Surprisingly, most of the quantity surveyors disagree with the statement to dress formally when working at home.

Table 5: Summary of WFH strategies by Quantity Surveyor: employees perspectives

Rank	Employees' Strategies	Mean	S.D	Rating Range
1	Employees need to self-learn technology skills to adapt to working from home (eg: use remote work software to WFH)	4.306	0.619	Agree
2	Employees shall let the family members know their working and meeting schedule to prevent distractions.	4.245	0.630	Agree
3	Employees undertake work as their first priority during working hours when working at home.	4.020	0.721	Agree
4	Employees need to consistently update their work progress with a supervisor.	4.000	0.736	Agree
5	Employees manage time wisely by setting a timetable for work and family when working from home.	4.000	0.791	Agree
6	Employees adhere to company data security policies.	3.857	0.764	Agree
7	Employees avoid mixing personal and work-related browsing and activity to reduce cyber risk.	3.796	0.866	Agree
8	Employees arrange a time to engage with other colleagues for a better relationship.	3.551	0.709	Agree
9	Employees upgrade internet broadband to WFH.	3.551	0.867	Agree
10	Employees dress formally when working at home.	2.429	1.173	Neutral

However, Burry (2022) highlighted attire is important even out of the office although this research shows several respondents rejected wearing a formal outfit. The outfit can be not too formal but must be polite because Burry (2022) believed some people find it difficult to work efficiently with outfits that are close to pajamas.

5 Conclusion

Even though the restriction of movement in Malaysia has been over but this research found that some quantity surveyors are still currently working from home (WFH) or working hybrid. Thus, the findings provide important insight for the practitioners to further understand the challenges that may occur during work from home and strategies that can be implemented to overcome the arising issues, which make them more accommodative with the new working norm.

6 Availability of Data and Material

Data can be made available by contacting the corresponding author.

7 References

- Ahad, N. A., Okwonu, F. Z., & Siong, P. Y. (2020). COVID-19 Outbreak in Malaysia: Investigation on Fatality Cases. *Journal of Advanced Research in Applied Sciences and Engineering Technology*, 20(1), 1–10. DOI: 10.37934/araset.20.1.110
- Aibinu, A., & Venkatesh, S. (2014). Status of BIM Adoption and the BIM Experience of Cost Consultants in Australia. *Journal of Professional Issues in Engineering Education and Practice*, 140(3). DOI: 10.1061/(ASCE)EI.1943-5541.0000193
- Ambikapathy, M., & Ali, A. (2020). Impact and Challenges Towards Employees Work From Home during COVID-19 (MCO Period). *International Journal of Social Science Research*, 2(4), 97–107. <http://myjms.mohe.gov.my/index.php/ijssr>
- Ang, J. (2021). *Malaysia's movement control orders extended to first week of March: KL, Selangor, and more impacted*. Human Resources Online. <https://www.humanresourcesonline.net/malaysia-s-movement-control-orders-extended-to-first-week-of-march-kl-selangor-and-more-impacted>
- Aprameya, A. (2016). *Cross Tabulation: How It Works and Why You Should Use It*. Humans of Data. <https://humansofdata.atlan.com/2016/01/cross-tabulation-how-why/>
- Ashworth, A. (2012). Contractual Procedures in the Construction Industry. In *Marketing Strategies for Design-Build Contracting* (6th ed.). Pearson.
- Baker, T. (2021). *Gaming chair vs office chair: which seat type is best?* Gamesradar+. <https://www.gamesradar.com/gaming-chair-vs-office-chair/>
- Beauregard, A., Basile, K., & Canonico, E. (2013). *A new study of homeworking in Acas – and beyond* (Issue 10(13)). Acas.
- Bonnar, I. D. (2007). An exploration of identity and learning for full-time Quantity Surveying students. *University of Stirling*, 1(1), 40–65.
- Brunelli, L. M. (2022). *Pros and Cons of Being a Work-at-Home Parent*. Verywellfamily. <https://www.verywellfamily.com/pros-and-cons-work-at-home-parents-4153574>
- Buffer. (2021). *The 2021 State of Remote Work*. <https://buffer.com/2021-state-of-remote-work>
- CDC. (2021). *Possibility of COVID-19 Illness after Vaccination*. Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/effectiveness/why-measure->

effectiveness/breakthrough-cases.html

- Channel New Asia. (2021). *Malaysia COVID-19 restrictions to be extended in 6 states, 3 federal territories until Feb 4*. <https://www.channelnewsasia.com/asia/malaysia-covid-19-mco-until-feb-4-422326>
- Clarkson, S. (2021). *Work-life Balance When Working From Home in 2021*. William Russell. <https://www.william-russell.com/blog/finding-the-right-work-life-balance-when-working-from-home/>
- Colamarco, A. (2021). *Your remote team is lonely – what can you do about it?* KraftyLab. <https://www.kraftylab.com/blog/reduce-remote-work-loneliness>
- Courtney, E. (2020). *The Benefits of Working From Home: Why The Pandemic Isn't the Only Reason to Work Remotely*. Airmeet. <https://www.airmeet.com/hub/environmental-benefits-of-remote-work/>
- Cumberlands, U. of the. (2021). *ZOOM FATIGUE AND WHY IT MATTERS: KNOW THE FACTS*. University of the Cumberlands. <https://www.ucumberlands.edu/blog/zoom-fatigue>
- Darby & Associates. (2020). *Survey: Working from home isn't working. Productivity, Costs, kids and back pain*. Darby & Associates Chartered Quantity Surveyors. <https://www.darbyqs.ie/blog/2020/5/18/q2ui4y9loyy64wytkk8hnmw8hdf7a6>
- Dr Afizah Ayob. (2021). *COVID-19: Impact and Responses in the Malaysian Construction Sector*. BERNAMA. <https://www.bernama.com/en/thoughts/news.php?id=1992948>
- Eatough, E. (2021). *Working from home? 12 challenges and how to overcome them*. Better Up. <https://www.betterup.com/blog/challenges-of-working-from-home>
- Ekpanyaskul, C., & Padungtod, C. (2021). Occupational Health Problems and Lifestyle Changes Among Novice Working-From-Home Workers Amid the COVID-19 Pandemic. *Safety and Health at Work*, 12(3), 384–389. DOI: 10.1016/j.shaw.2021.01.010
- Esfandiari, M., Zaid, S. M., Ismail, M. A., & Aflaki, A. (2017). Influence of indoor environmental quality on work productivity in green office buildings: A review. *Chemical Engineering Transactions*, 56, 385–390. DOI: 10.3303/CET1756065
- Focus M. (2020). *Cultivating discipline to work from home*. <https://focusmalaysia.my/cultivating-discipline-to-work-from-home/>
- Gallagher, K. M., Cameron, L., De Carvalho, D., & Boulé, M. (2021). Does Using Multiple Computer Monitors for Office Tasks Affect User Experience?: A Systematic Review. *Human Factors*, 63(3), 433–449. DOI: 10.1177/0018720819889533
- Ghandour, A. (2020). the Impact of Covid-19 on Project Delivery: a Perspective From the Construction Sector in the United Arab Emirates. *Humanities & Social Sciences Reviews*, 8(5), 169–177. DOI: 10.18510/hssr.2020.8516
- Hall, B. (2020). *Reducing remote work isolation and loneliness*. Interact Software. <https://www.interactsoftware.com/blog/reducing-remote-work-isolation-and-loneliness/>
- Hassan, Hakem. (2020). *Work-from-home balance needed*. The Sun Daily. <https://www.thesundaily.my/local/work-from-home-balance-needed-CY5076136>
- Hassan, Hasnanywati, & Nuruddin, A. R. (2011a). *The Quantity Surveying International Convention 2011 Penang , Malaysia , 11 th -12th October WORKING FROM HOME CONCEPT FOR QUANTITY SURVEYING. 2005*, 127–135.
- Hassan, Hasnanywati, & Nuruddin, A. R. (2011b). WORKING FROM HOME CONCEPT FOR QUANTITY SURVEYING EMPLOYMENT. *The Quantity Surveying International Convention 2011 Penang , Malaysia , 11 Th -12th October*, 127–135.
- Havenridge, J. (2020). *Do I Need a Firewall When Employees Work Remotely?* Core Tech. <https://www.coretech.us/blog/do-i-need-a-firewall-when-employees-work-remotely>

- Herman, S. S., & Sharom, N. Q. (2017). *THE MOTIVATION FACTORS OF QUANTITY SURVEYORS IN MALAYSIA* Siti Sarah Herman Faculty of Design and Architecture Universiti Putra Malaysia Nur Qamarina Faculty of Economics and Muamalat Universiti Sains Islam Malaysia Sharom. 7(12), 2–5. DOI: ISSN - 2249-555X
- Holt-lunstad, J., Smith, T. B., Baker, M., Harris, T., & Stephenson, D. (2015). *Loneliness and Social Isolation as Risk Factors for Mortality : A Meta-Analytic Review*. DOI: 10.1177/1745691614568352
- International Labour Organization. (2020). An employers' Guide on Working from Home in Response to the Outbreak of COVID-19. In *International Labour Organization*. https://www.ilo.org/actemp/publications/WCMS_745024/lang--en/index.htm
- Ipsen, C., Veldhoven, M. Van, Kirchner, K., & Hansen, J. P. (2021). Six Key Advantages and Disadvantages of Working from Home in Europe during COVID-19. *International Journal of Environmental Research and Public Health*, 18. DOI: 10.3390/ijerph18041826
- Jacowski, T. (2010). *Work From Home - Qualities For Success*. Ezine Articles. <https://ezinearticles.com/?Work-From-Home---Qualities-For-Success&id=3692079>
- Jallow, H., Renukappa, S., & Suresh, S. (2021). The impact of COVID-19 outbreak on United Kingdom infrastructure sector. *Smart and Sustainable Built Environment*, 10(4), 581–593. DOI: 10.1108/SASBE-05-2020-0068
- Kalbana, N. (2020). *19,077 contractors applied but only 1,856 approved to operate*. New Straits Time. <https://www.nst.com.my/news/nation/2020/04/586626/19077-contractors-applied-only-1856-approved-operate>
- Kang, S., Ou, D., & Mak, C. M. (2017). The impact of indoor environmental quality on work productivity in university open-plan research offices. *Building and Environment*, 124, 78–89. DOI: 10.1016/j.buildenv.2017.07.003
- Kimberly Mlitz. (2021). *Work from home & remote work - Statistics & Facts*. Statista. <https://www.statista.com/topics/6565/work-from-home-and-remote-work/#dossierKeyfigures>
- Kitagawa, R., Kuroda, S., Okudaira, H., & Owan, H. (2021). Working from home and productivity under the COVID-19 pandemic: Using survey data of four manufacturing firms. *PLOS ONE*, 16(12). DOI: 10.1371/journal.pone.0261761
- Kossek, E. E., Allen, T. D., & Dumas, T. L. (2020). *Boundaryless Work : The Impact of COVID-19 on Work-Life Boundary Management , Integration , and Gendered Divisions of Labor for Academic Women in STEMM* AUTHORS. 1.
- Kotera, Y., & Vione, K. C. (2020). Psychological impacts of the new ways of working (NWW): A systematic review. *International Journal of Environmental Research and Public Health*, 17(14), 1–13. DOI: 10.3390/ijerph17145080
- Kowalski, K. B., & Swanson, J. A. (2005). Critical success factors in developing teleworking programs. *Benchmarking: An International Journal*, 12(3), 236–249. DOI: 10.1108/14635770510600357
- Lal, B., Dwivedi, Y. K., & Haag, M. (2021). Working from Home During Covid-19: Doing and Managing Technology-enabled Social Interaction With Colleagues at a Distance. *Information Systems Frontiers*. DOI: 10.1007/s10796-021-10182-0
- Maurer, R. (2020). *Managers Should Not Expect Full Productivity Right Now*. SHRM. <https://www.shrm.org/hr-today/news/hr-news/pages/managers-should-not-expect-full-productivity-right-now.aspx>
- Mendoza, N. F. (2021a). *Distractions and the downsides to working from home*. TechRepublic. <https://www.techrepublic.com/article/distractions-and-the-downsides-to-working-from-home/#:~:text=Working at home features distractions,did laundry during the workday.>

- Mendoza, N. F. (2021b). *The financial downside of remote: 75% of workers spent their own money to work from home*. TechRepublic. <https://www.techrepublic.com/article/the-financial-d downside-of-remote-75-of-workers-spent-their-own-money-to-work-from-home/>
- Miles, B. (2018). *Leap of Faith: Trusting Your Employees Enough to Go Virtual*. HR MANAGEMENT & COMPLIANCE, TALENT. <https://hrdailyadvisor.blr.com/2018/02/21/leap-faith-trusting-employees-enough-go-virtual/>
- Mortensen, M., & K.Gardner, H. (2021). *WFH Is Corroding Our Trust in Each Other*. Harvard Business Review. <https://hbr.org/2021/02/wfh-is-corroding-our-trust-in-each-other>
- NatCen. (2021). *Research reveals toll of working from home during pandemic on UK's mental health*. National Centre for Social Research (NatCen). <https://natcen.ac.uk/news-media/press-releases/2021/july/research-reveals-toll-of-working-from-home-during-pandemic-on-uk's-mental-health/>
- Nawi, F. A. M., Tambi, A. M. A., Samat, M. F., & Mustapha, W. M. W. (2020). A review on the internal consistency of a scale: the empirical example of the influence of human capital investment on Malcom Baldrige quality principles in TVET institutions. *Asian People Journal*, 3(1), 19-29. DOI: 10.37231/apj.2020.3.1.121
- Oakman, J., Kinsman, N., Stuckey, R., Graham, M., & Weale, V. (2020). A rapid review of mental and physical health effects of working at home: how do we optimise health? *BMC Health*, 20(1825). DOI: 10.1186/s12889-020-09875-z
- Ong, S. (2021). *Local construction industry estimated to have suffered RM18b in losses during MCO 3.0 from June 1 to September 2021*. The Edge Market. <https://www.theedgemarkets.com/article/local-construction-industry-estimated-have-suffered-rm18b-losses-during-mco-30-june-1>
- Pamidimukkala, A., & Kermanshachi, S. (2021). Impact of Covid-19 on field and office workforce in construction industry. *Project Leadership and Society*, 2, 100018. DOI: 10.1016/j.plas.2021.100018
- Parker, S. K., Knight, C., & Keller, A. (2020). *Remote Managers Are Having Trust Issues*. Harvard Business Review. <https://hbr.org/2020/07/remote-managers-are-having-trust-issues>
- Pirzadeh, P., & Lingard, H. (2021). Working from Home during the COVID-19 Pandemic: Health and Well-Being of Project-Based Construction Workers. *Journal of Construction Engineering and Management*, 147(6). DOI: 10.1061/(asce)co.1943-7862.0002102
- Prasad, A. (2021). *One year of lockdown: Do WFH and isolation continue to affect mental health?* Times of India. <https://timesofindia.indiatimes.com/life-style/health-fitness/de-stress/one-year-of-lockdown-do-wfh-and-isolation-continue-to-affect-mental-health/articleshow/81774196.cms>
- Price, R., & Colley, L. (2020). *Working from home: what are your employer's responsibilities, and what are yours?* The Conversation. <https://theconversation.com/working-from-home-what-are-your-employers-responsibilities-and-what-are-yours-133922>
- Puccinelli, P. J., da Costa, T. S., Seffrin, A., de Lira, C. A. B., Vancini, R. L., Nikolaidis, P. T., Knechtle, B., Rosemann, T., Hill, L., & Andrade, M. S. (2021). Reduced level of physical activity during COVID-19 pandemic is associated with depression and anxiety levels: an internet-based survey. *BMC Public Health*, 21(1), 1–11. DOI: 10.1186/s12889-021-10684-1
- Rana, R. (2021). *No End To Pandemic? Experts Suspect Emergence Of Delmicron Variant*. The Logical Indian. <https://thelogicalindian.com/health/experts-suspect-emergence-of-delmicron-variant-32838>
- Ridings, J. (2020). *The role of technology in working through a pandemic*. Royal Institution of Chartered Surveyors. <https://www.rics.org/uk/news-insight/future-of-surveying/data-technology/the-role-of-technology-in-working-through-a-pandemic/>
- RISM. (2020). *No Title*. Royal Insitution Surveyors Malaysia. <https://rism.org.my/quantity-surveying-division-qs/>

- Ro, C. (2020). *Coronavirus: How to avoid overeating when working from home*. BBC. <https://www.bbc.com/worklife/article/20200331-how-to-eat-a-healthy-diet-when-work-from-home-coronavirus>
- Roesler, M. (2020). *Working From Home? Here's What You Need for a Secure Setup*. Trend Micro Research. <https://www.trendmicro.com/vinfo/us/security/news/cybercrime-and-digital-threats/working-from-home-here-s-what-you-need-for-a-secure-setup>
- Saludin, N. A., Karia, N., & Hassan, H. (2013). Working from Home (WFH): Is Malaysia ready for digital society? *Entrepreneurship Vision 2020: Innovation, Development Sustainability, and Economic Growth - Proceedings of the 20th International Business Information Management Association Conference, IBIMA 2013, 1*(January 2013), 981–989.
- Song, F., Shi, N., Shan, F., Zhang, Z., Shen, J., Lu, H., Ling, Y., Jiang, Y., & Shi, Y. (2020). Emerging 2019 novel coronavirus (2019-NCov) pneumonia. *Radiology*, 295(1), 210–217. DOI: 10.1148/radiol.2020200274
- Spinelli, M., Lionetti, F., Pastore, M., & Fasolo, M. (2020). Parents' Stress and Children's Psychological Problems in Families Facing the COVID-19 Outbreak in Italy. *Frontiers in Psychology*, 11(January), 1–7. DOI: 10.3389/fpsyg.2020.01713
- Sr4. (2021). *Remote work is up. Employee motivation is down. Now what?* Sr4partners. <https://www.sr4partners.com/new-blog/remote-work-is-up-employee-motivation-is-down-now-what>
- Sunil, P. (2021). *Malaysia's tightened MCO 3.0 rules: Compulsory WFH for 40% of private and 80% of government staff*. Human Resources Online. <https://www.humanresourcesonline.net/malaysia-s-tightened-mco-3-0-rules-compulsory-wfh-for-40-of-private-and-80-of-government-staff>
- Suresh, S., Renukappa, S., & Stride, M. (2020). *The impact of Covid-19 on the UK construction industry*. <https://committees.parliament.uk/writtenevidence/5656/pdf/>
- Tan, S. Y., & Zainon, N. (2022). *Impact of COVID-19 pandemic on the quantity surveying practices in Malaysia*. DOI: 10.1108/ECAM-11-2021-0988
- Tavares, A. I. (2017). Telework and health effects review. *International Journal of Healthcare*, 3(2), 30. DOI: 10.5430/ijh.v3n2p30
- The Star. (2020). *Quantity Surveying as a Career*. The Star. <https://www.thestar.com.my/news/education/2020/08/23/quantity-surveying-as-a-career>
- Thompson, B., & Waller, A. (2017). The Impact of Emerging Technologies on the Surveying Profession. *RICS Insight Paper* ©, July. <https://www.rics.org/globalassets/rics-website/media/knowledge/research/insights/impact-of-emerging-technologies-on-the-surveying-profession-rics.pdf>
- Toniolo-Barrios, M., & Pitt, L. (2021). Mindfulness and the challenges of working from home in times of crisis. *Business Horizons*, 64(2), 189–197. DOI: 10.1016/j.bushor.2020.09.004
- Torres, M. (2020). *There Are Hidden Costs To Working From Home During The Pandemic*. Huffpost. https://www.huffpost.com/entry/remote-work-costs-expenses-wfh_1_5f452535c5b6c00d03b462dc
- Toscano, F., & Zappalà, S. (2020). Social isolation and stress as predictors of productivity perception and remote work satisfaction during the COVID-19 pandemic: The role of concern about the virus in a moderated double mediation. *Sustainability (Switzerland)*, 12(23), 1–14. DOI: 10.3390/su12239804
- World Health Organization. (2021a). *Long working hours increasing deaths from heart disease and stroke: WHO, ILO*. World Health Organization. <https://www.who.int/news/item/17-05-2021-long-working-hours-increasing-deaths-from-heart-disease-and-stroke-who-ilo>
- World Health Organization. (2021b). *Update on Omicron*. <https://www.who.int/news/item/28-11-2021-update-on-omicron>

- Wu, H., & Chen, Y. (2020). The Impact of Work from Home (WFH) on Workload and Productivity in Terms of Different Tasks and Occupations. *HCI International 2020 – Late Breaking Papers: Interaction, Knowledge and Social Media*, 12427, 693–706. DOI: 10.1007/978-3-030-60152-2_52
- Xiao, Y., Becerik-Gerber, B., Lucas, G., & Roll, S. C. (2021). Impacts of Working from Home during COVID-19 Pandemic on Physical and Mental Well-Being of Office Workstation Users. *Journal of Occupational and Environmental Medicine*, 63(3), 181–190. DOI: 10.1097/JOM.0000000000002097
- Zakaria, S. A. S., & Singh, A. K. M. (2021). Impacts of Covid-19 Outbreak on Civil Engineering Activities in The Malaysian Construction Industry: A Review. *Jurnal Kejuruteraan*, 33(3), 477–485.
-



Loke Sin Yoong is a student at the Department of Quantity Surveying of the School of Housing, Building and Planning, Universiti Sains Malaysia (USM). She has experience working with Quantity Surveying Consultant firms.



Izyan Yahaya is a senior lecturer in the Department of Quantity Surveying, Universiti Sains Malaysia (USM). Her research focus is on issues related to sustainable construction, construction management, and quantity surveying. She is also a member of the Board of Quantity Surveyors Malaysia (BQSM)

Note: Original version of this article was accepted and presented at the 6th International Conference-Workshop on Sustainable Architecture and Urban Design (ICWSAUD) organized by Department of Architectural Engineering, Dhofar University, Salalah, Sultanate of Oman, during 23-24 November 2022.