A Systematic Review on Factors Affecting Remote Working Employees During the COVID-19 Pandemic

Narmada Siyambalapitiya and Ruwan Wickramarachchi
Department of Industrial Management
University of Kelaniya
Sri Lanka
siyambal_im16084@stu.kln.ac.lk, ruwan@kln.ac.lk

Abstract

The pandemic has changed the lives of everyone. To adapt to this unexpected situation employees in most sectors have shifted to remote working and it has become the "new normal" almost overnight. Therefore "telecommuting" has suddenly become a quite popular concept. This current paper systematically reviews the available literature under remote working practices and its impact on employees. It was identified that previous research has focused on different categories of factors. Therefore, the identified factors were categorized accordingly. Also, the impact on employees were closely studied. The current study was conducted through a systematic review of literature using the PRISMA framework. 36 studies which were carried out before and during the pandemic from different countries and sectors related to remote working has been reviewed. Based on the findings of the current review proper guidelines have been provided for the decision makers of organizations and directions for future research has been provided.

Keywords
Remote working, COVID-19, Impact on employees, PRISMA framework, Systematic Review

1. Introduction
The World Health Organization (WHO) announced the outbreak of a global disease called COVID-19 on the 11th of March 2020 (Mostafa 2021) which was first identified in Wuhan, China, in December 2019 (Peeri et al. 2020). The pandemic has changed the which is known to us in the past. Many countries around the world imposed nationwide lockdowns to mitigate the spread of the virus and 'flatten the curve.' People were required to wear masks, wash their hands, and keep at least a meter distance between each other in public places (El-Elimat et al. 2021). As of now globally there have been 230,418,451 confirmed cases of COVID-19, including 4,724,876 deaths. The battle against COVID began to develop a vaccine and in December 2020, the Pfizer-BioNTech's (BNT162b2) and Moderna (mRNA-1273) mRNA vaccines have been approved for emergency use in the US (El-Elimat et al. 2021). As of 22 September 2021, a total of 5,874,934,542 vaccine doses have been administered. Because of the lockdown most of the offices were closed and employees had to adapt to the practice of working from home (Anderson and Kelliher 2020) to resume economic activities in the most convenient manner. As of now people around the world have been restricted in their homes for almost two years. Many employees are used to the practice of working in an office with their fellow colleagues. Therefore, many people around the world would have a significant psychological impact which would last for a long period of time. The psychological impact on employees should be focused more than other factors. There is currently a need to develop proper policies and guidelines to protect the most important resource, the employees of an organization. To fulfill this need, the factors that are most affected in remote working, should be properly identified. A systematic review of literature has been conducted to identify evidence on the impact of remote working on individual workers. The identified factors were categorized accordingly to identify the most influenced factors. In addition, the gender differences of these impacts were identified. The evidence from the studies were then used to develop recommendations for employers to improve the health of their employees and carry remote working practices in a more effective manner, during its highest peak of adoption. Also, there is a need to shift the research focus on how to get the most out of remote working (Wang et al. 2020) in the context where remote working is not simply an option for employees anymore.

2. Literature Review
2.1 Change in method of working
The word 'telecommuting' was first coined by Nilles in 1975. "Telecommuting is a work practice that involves members of an organization substituting a portion of their typical work hours (ranging from a few hours per week to nearly full-time) to work away from a central workplace, typically principally from home, using technology to interact with others as needed to conduct work tasks." This practice was first used during the oil crisis in the United States with the idea of moving "the work to workers" rather than "move workers to the work", to reduce traffic problems and energy consumption. The practice was first used by the US government. Then the private companies such as Control Data Corporation and IBM realized this is a great method to address workforce issues and started the practice in their companies. Changes in economy, rapid advancement in technologies and the shift from a manufacturing to an information economy has played a key role in expanding the increase of telecommuting among employees (Allen et al. 2015). The International Labor Organization (ILO) estimated that 7.9% of the world's workforce (260 million workers) has worked from home permanently before the COVID-19 pandemic. "Working from home is a working arrangement in which a worker fulfills the essential responsibilities of his/her job while remaining at home, using information and communications technology (ICT)" (ILO 2020). The pandemic had led to mass remote working. Therefore, the concept of working from home have currently gained a significant amount of popularity during this time (Shareena and Shahid 2020). Before the pandemic, many employees were used to physically going to their office and was not used to the practice of working from home. Even organizations have not predicted such a change and had to adapt to this sudden change quickly to support the employees. But in the current context, Remote working has become the "new normal" almost overnight (Wang et al. 2021). Teleworking is beneficial for both employees and the company. Employees have more autonomy over their tasks, increased flexibility, saves time and can work during their most productive time of their preference. Companies can reduce operational costs, higher productivity and can recruit highly qualified employees from different geographical locations (Allen et al. 2015). As at now this has become a practice which has been adopted worldwide by small, medium, and large-scale organizations.

2.2 The results from past pandemics
Throughout the history people around the world has faced different kinds of pandemics and therefore pandemics are not something new to the world. Other than the term "pandemic" the terms "endemic", "outbreak" and "epidemic" can be used. This happens when the occurrence of a health condition is higher compared to its predicted rate as well as to its spread in geographic areas. Such diseases are known as an "endemic" when the condition occurs at a predictable rate among a population, they are known as an "outbreak" when there is an unpredicted increase in the number of people with a health condition or in the occurrence of cases in a new area, they are known as an "epidemic" when a disease is spread to larger geographic areas and finally a "pandemic" is an epidemic that spreads globally such as COVID-19. (Piret and Boivin 2020). But the mental health issues that occur with pandemics and other emerging diseases are ignored mainly due to cultural considerations (Huremović, 2020).

The first outbreak that caught the attention of the public in the 21st century is the Severe Acute Respiratory Syndrome (SARS) caused by the SARS Corona virus (SARSCoV). SARS was first discovered in China which affected fewer than 10,000 individuals with a mortality rate of about 10%. It was contained by mid-2003. Another recent pandemic is the 2009 H1N1 or the "swine flu" which became a pandemic within a few weeks and infected over 10% of the global population and the number of estimated deaths varying from 20,000 to over 500,000. Other than these, there have been outbreaks such as the Ebola virus in 2013, endemic to Central and West Africa which caused over 28,000 cases and over 11,000 deaths. Previous but limited studies done during past pandemic reveal that there is an extreme psychological impact on the population. As per the population surveys done in Taiwan after the SARS outbreak in 2003 it was found out in about one-tenth of the population in the months following the outbreak had a more pessimistic outlook on life. Another practice which has lasting consequences is social distancing and isolation. As per a study done in 2003 in Canada during the quarantine period for the SARS outbreak, a survey done on a representative sample, quarantined for a median of 10 days, revealed that 29 percent had symptoms of posttraumatic stress disorder and 31 percent had symptoms of depression. Other factors that contributed for PTSD and depressive symptoms were longer duration of quarantine and direct exposure to someone with a diagnosis of SARS (Huremović, 2020). The studies done in previous epidemic outbreaks have mainly focused on the healthcare workers and the focus on the public is relatively low. In a situation where a pandemic large as the current COVID-19 pandemic is still ongoing, additional research on these areas is necessary to understand the experience of remote workers, and the impact of remote working on employees' wellbeing on the degree of emotional stress that they must face daily, as there is possibility that companies will focus on a hybrid method of working in the future (Mostafa 2021).

3. Methodology

A systematic review of literature was conducted using the PRISMA reporting guidelines (Page et al. 2021). Figure 1 portrays the PRISMA diagram of the current research. To find the literature needed for the current study Emerald Insight, Science Direct, Research Gate, JSTOR, MDPI, Oxford Academic, MDPI, BMJ and Sage databases were searched during July 2021 to August 2021. Only articles written in English were chosen. Articles should focus on the remote working effect on employees, therefore studies focusing on health care workers were excluded. The search criteria were "working from home" ("teleworking", "telecommuting", "remote working) and "effect" ("impact", "well-being"). Titles, abstracts, and full texts were screened by the author by reading the content in them. Several articles were excluded from the review and the reasons were noted. Qualitative data were organized using narrative synthesis to identify how working from home has affected employees. Studies were grouped based on the broad factors identified.
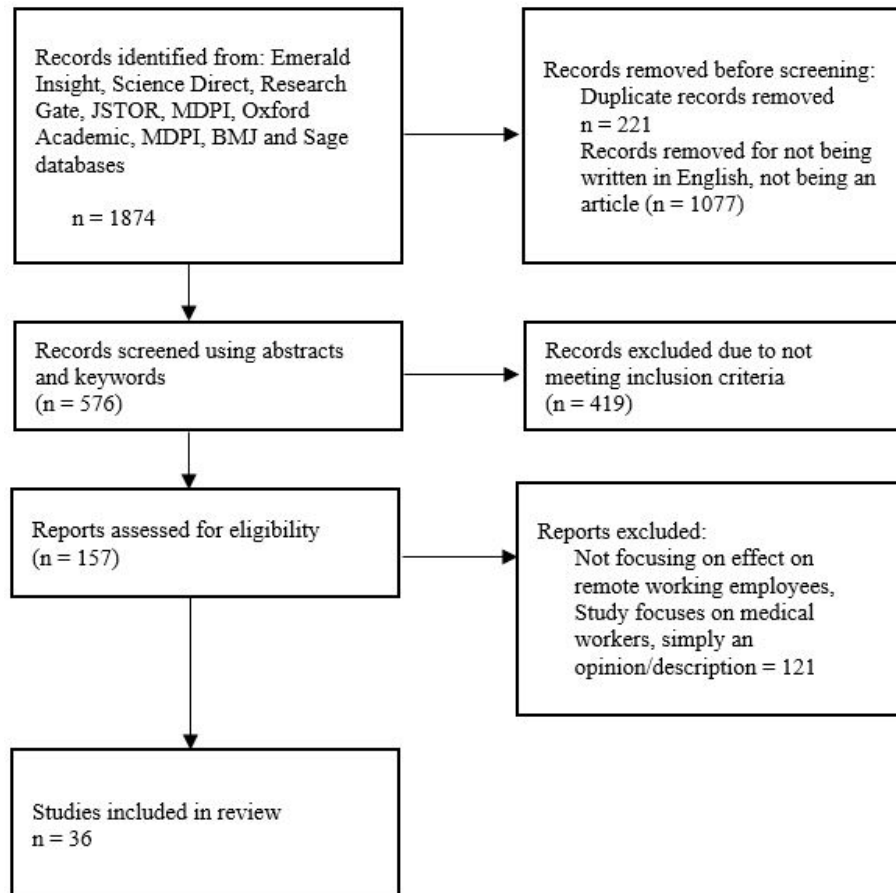

Figure 1. PRISMA Diagram

The concept of teleworking is not a brand-new concept and was introduced in the 1970's therefore a significant amount of research has been done on the concept. Research have focused on the impact on the organization as well as the impact on the employees. Even before the pandemic some of the employees around the world have been working from home permanently. But with the COVID-19 pandemic and the lockdown situation it has again become popular almost overnight because companies were suddenly moving into mass remote working.

The database search identified 1874 articles out of which 36 articles were identified for the inclusion criteria. One of the key reasons for exclusion was the study not focusing on remote working employees.

Table 1 shows the summary of 36 research papers which were selected for the review based on the inclusion criteria.

Table 1. Summary table of papers selected for review

Authors and Year/Country	Sample/Study design	Factors considered
(Ward and Shabha 2001) UK	Various types of small- to medium-sized businesses based in Birmingham, UK between 1996 and 1998 Questionnaire Survey	Social - Companionship, Physical interaction, Sense of belonging, Well supported, Isolation - Loneliness, No contact, Neglected, Unaided
(Bently et al. 2006) New Zealand	804 teleworker respondents, from 28 participating organizations in New Zealand Online survey	social isolation, teleworker support, organizational social support, psychological strain, job satisfaction
(Kossek 2016) USA	No sample. Exploratory study	work life boundaries
(Fujimoto et al. 2016) Japan	Exploratory interviews with 10 Japanese workers in technologically advanced areas in Japan, namely, Tokyo, Osaka, and Kanagawa Qualitative	job autonomy, work engagement, emotional exhaustion
(Grant et al. 2019) UK	260 e-workers and a subsample of 119 workers Quantitative	job effectiveness - E-working effectiveness, E-job effectiveness, Relationship with the organization - Management style, Trust, E-well-being, work-life balance - work-life integration, Role management/conflict, Managing boundaries
(Madsen 2006) USA	308 employees in 7 for-profit companies in Minnesota Quantitative	work family conflict - work interference with family, Family interference with work, Time-based conflict, Strain-based conflict, behavior-based conflict
(Solis 2016) Costa Rica	142 teleworkers in public institutions in Costa Rica Quantitative	work interference with family - work-family conflict, Additional hours worked, Teleworking space, Persons in the home, Days of telework, Flexibility, Responsibility, Teleworking time
(Morganson et al. 2010) USA	578 employees in USA working at one of four locations (main office, client location, satellite office, and home) Quantitative	Primary work location, Work life balance support, Job satisfaction, Workplace inclusion

Authors and Year/Country	Sample/Study design	Factors considered
(Teo and Lim 1998) Singapore	285 IT professionals from a leading local IT organization in Singapore. Quantitative	Advantages of teleworking to individuals - Quality of life, Relationship with family, Commuting cost, Productivity. Disadvantages of teleworking to individuals - Career development, Home-work interface, Workspace, Impact on others. Advantages of teleworking to Organizations- Productivity/overheads, Staff recruitment/sick leave/turnover Disadvantages of teleworking to Organizations- Supervision/evaluation, Technical/equipment
(Barros 2017) Colombia	156 teleworkers in an educational institute Quantitative	satisfaction with life, and the burnout syndrome (emotional exhaustion, depersonalization and personal accomplishment)
(Raisiene et al. 2020) Lithuania	436 Lithuanian remote workers Quantitative	motivational factors of telework, factors negatively affecting telework efficiency, and required qualities for telework.
(Pradhan and Hati 2019) India	316 employees of the Indian service industry Quantitative	Social well-being, psychological well-being, subjective well-being, and workplace well-being
(Page and Vella-Brodrick 2009) Australia	No sample Exploratory study	employee well-being - subjective well-being, psychological well-being, workplace well-being
(Kun et al. 2016) Hungary	397 employees from postgraduate courses at the Budapest University of Technology and Economics Quantitative	PERMA (positive emotion, engagement, relationships, meaning and accomplishment, depression, anxiety)
(Khan 2021) Pakistan	56 teachers from government schools in Pakistan Diary study	social media misinformation, COVID-19 threat, anxiety, work engagement, resilience
(Mann and Holdsworth 2003) UK	12 full-time remote working journalists from Trinity Mirror plc and Times Newspapers Ltd. and 32 office based journalists from Trinity Mirror plc and Times Newspapers Ltd. Qualitative	stress, loneliness, enjoyment, irritability, worry, resentment, guilt, frustration, physical illness, stressful life events
(Wepfer et al. 2018) Not specified	1916 employees from Germany, Switzerland, Austria, and "other" Online survey	work-to-life integration, exhaustion, work-life balance, recovery activities

Authors and Year/Country	Sample/Study design	Factors considered
(Nakrošienė et al. 2019) Lithuania	128 teleworkers from IT, insurance, and telecommunication sectors in Lithuania Quantitative	Factors - Telework factors, Time planning skills, Possibility to work during the most productive time, Supervisor's trust, Supervisor's support, Reduced time for communication with co-workers, Possibility to take care of family members, Possibility to work from home in case of sickness, Suitability of a working place at home, Possibility to access organization documents from home, Possibility to save expenses for travel. Outcomes - Overall satisfaction with telework, Perceived advantages of telework, Subjective career opportunities, Self-reported productivity
(Kapoor et al. 2021) India	326 remote working mothers in various sectors of Delhi NCR region of India Quantitative	perceived stress, psychological well-being, resilience
(Palumbo 2020) Italy	9,877 people employed in the public sector across Europe Quantitative	work-life balance, work engagement, work-related fatigue
(Palumbo et al. 2021) Italy	2,046 people employed in the education sector across Europe Quantitative	organizational meaningfulness, well-being at work, work-life conflicts
(Bellmann and Hübler 2021) Germany	2012/2013 (N = 7,508), 2014/2015 (N = 7,282), 2016/2017 (N = 6,779) Quantitative	job satisfaction, work-life balance
(Wong et al. 2021) Hong Kong	1976 full-time workers who worked from home during the Coronavirus outbreak Quantitative	work from home effectiveness - well-being factor, environmental factor, office resource factor, personal and family well-being, environmental constraint, resource constraint
(Madero et al. 2020) Mexico	332 Mexican workers Quantitative	myths and facts about COVID-19, perception of preventing the effects of the arrival of COVID-19, issues related to stress perceived by COVID-19
(Heiden et al. 2020) Sweden	392 academics in Swedish public Universities Quantitative	health, work-related stress, recuperation, work-life balance, intrinsic work motivation

Authors and Year/Country	Sample/Study design	Factors considered
(Molino et al. 2020) Italy	First study - 878 participants, Second study - 749 participants Quantitative	techno stress - techno invasion, techno overload, techno complexity, work-family conflict, behavioral stress
(Prasad et al. 2020) India	400 participants from the IT industry in Hyderabad Metro Quantitative	Occupational stress, psychological well-being
(Muralidhar et al. 2020) India	400 participants from the International Agricultural Research Institute Quantitative	remote working factors - social/ workplace isolation, infrastructure deficiencies, personal habits/health issues, career development, work schedule, ergonomic issues, additional costs. work-life balance – workplace benefits, policies, programs, workplace environment, workplace harassment, current job of employee, job control, work overload
(Afonso et al. 2021) Portugal	143 full-time teleworkers alumni from the Portuguese AESE Business School Quantitative	anxiety, depression, and sleep quality
(Kumar et al. 2021) India	433 working professionals of private and public organizations in the Delhi and NCR region Quantitative	role overload, family distraction, lifestyle choice, discomfort, distress, job performance, life satisfaction
(Toscano and Zappala 2020) Italy	265 employees in Italy Quantitative	social isolation, stress, productivity, satisfaction, COVID-19 concern
(Mostafa 2021) Egypt	318 remote working employees from different sectors Quantitative	employee perception of remote working, psychological wellbeing, emotional exhaustion, work-life integration
(Kelliher and Anderson 2009) UK	37 interviews Qualitative	Overall job satisfaction, stress Organizational commitment
(Caillier 2011) USA	263,475 full-time federal government employees Quantitative	work motivation - job satisfaction, organizational commitment, and job involvement
(Eddleston and Mulki 2015) USA	52 semi-structured interviews for remote working employees and 299 respondents for survey Mixed method	work-to-family conflict, family-to-work conflict, job stress, work–family integration, inability to disengage from work
(Uresha 2020) Sri Lanka	110 employees Quantitative	work-life balance, employee happiness (Hedonic Happiness, Eudemonic Happiness)

The factors which were identified from the systematic review can be categorized into broad categories such as Psychological (isolation, loneliness, stress, work-life balance, anxiety, depression) Behavioral (engagement, sleep quality, work schedule) Organizational (management style, workplace inclusion, supervision/evaluation, workplace well-being) Physical (physical illness, recovery activities, work-related fatigue, health) Emotional (trust, employee happiness, relationships, resilience)   Teleworker related (E-working effectiveness, E-job effectiveness, telework efficiency, required qualities for telework) Family related (work-family conflict, work interference with family, relationship with family, family distraction) and COVID-19 related (myths and facts about COVID-19, perception of preventing the effects of the arrival of COVID-19, issues related to stress perceived by COVID-19).

4. Discussion

Out of the 36 studies, 17 studies have been conducted during the pandemic and 19 studies were done before the pandemic. As mentioned above the factors which affect teleworking employees can be broadly categorized. The first main category is psychological factors. The study done by Ward and Shabha (2001) has used the social motivation theory and has focused on psychological factors such as social isolation and stress. Their findings reveal that employees feel isolated when working from home and that loss of sense of belonging with their company. Studies of Bently et al. (2015) and Kelliher and Anderson (2011) has focused on psychological factors such as psychological strain and social isolation. Kossek (2016) study was about work life boundaries and introduced that there are 3 types of workers: integrators, separators, and cyclers. Fujimoto et al. (2016) focused on psychological factors such as emotional exhaustion, job autonomy, work engagement and work-life boundary. It shows mobile technology helped Japanese workers be more engaged with work and they felt more fulfilled. The study done by Wepfer (2018) introduced the use of recovery activities to balance out work and life. A study done during the pandemic by Kapoor (2021) on a sample of working mothers revealed that there is a negative association between teleworking and resilience but a positive relationship between resilience and psychological well-being. According to the study done by Callier (2011) frequent teleworkers were less motivated than infrequent teleworkers. As per Mostafa (2021) another study done during the pandemic revealed that employees' perception of remote working positively affected employees' psychological wellbeing, work-life integration and negatively affected their emotional exhaustion. A study done in the Sri Lankan context by Uresha (2020) identified that there is a positive relationship between telecommuting and work-life balance and employee happiness.

The next category would be behavioral based factors. A study done by Toscano and Zappala (2020) during the pandemic revealed that there was a high prevalence of sleep disturbances in studied sample of teleworkers, high prevalence of depressive and anxiety symptoms.

The next category is the organizational factors. Studies done by Bently et al. (2015) has focused on factors such as organizational social support - perceived supervisor, co-worker, and organizational support), job satisfaction. Results revealed that organizational social support was positively related to job satisfaction and reduced psychological strain and social isolation. Grant (2019) introduced a new scale specially for e-workers which focuses on the areas of Job effectiveness, Relationship with the organization, E-well-being, work-life balance. Prasad et al. 2020 who conducted his during the pandemic on IT sector employees, talked of factors such as peer, role ambiguity, organization climate, and job satisfaction significantly influence the psychological well-being of the employees.

The next broad category is family-related factors. Madsen (2006) and Eddleston and Mulki 2017 discussed about work and family conflict. It was revealed that when teleworking, the work-family conflict was low in the employees in the study. A study done by Palumbo (2021) during the pandemic revealed that there are negative effects on work-to-life and life-to-work conflicts which affects the work-life balance of employees.

The next broad category which was identified is teleworker-related factors. Solis (2016) talked about teleworker-related factors such as space used at home for teleworking, other persons at home and its effect on work-family conflict. It was revealed the longer the teleworkers worked and the responsibilities they had the more exhausted they were. Teo and Lim (1998) and the studies of Nakrošienė, 2018 talked about the advantages and disadvantages for individuals when teleworking. Advantages include, quality of life, relationship with family, commuting costs and productivity. Disadvantages to individuals, career development, home-work interface, workspace, and impact on others. A study done during the pandemic by Wong (2020) studied a new concept called "work from home effectiveness" revealed that when workers experience high work from home effectiveness, they have a higher preference to continue work from home practices even after the pandemic and it was higher among female workers.

The study done by Molino et al. (2020) introduces a scale called the technostress creator's scale. The study revealed that workload was positively related to technostress, work-family conflict, and behavioral stress.

The final broad category of factors which was identified is COVID-19 related factors. The study done by Raiesene et al. (2020) during the pandemic talked about motivation to telework during COVID-19 and discovered that women preferred to work from home more than men. Khan (2021) studied the relationship between social media misinformation and perceived COVID-19 threat. It was discovered that the relationship between the two factors triggered anxiety and social media fatigue among the selected sample of teachers. Afonso et al. (2021) study introduced the factor concern about COVID-19 which moderated the negative relationship between remote working and social isolation.

Most of the studies have talked about factors which affect teleworkers. But the study done by Page and Vella-Brodrick (2009) talked about a unique concept of teleworking. They have defined the "What", "Why" and "How" of teleworking. According to the "What" concept employee well-being consists of: subjective well-being, workplace well-being and psychological well-being. The "Why" is the importance of employee well-being for the organization. Finally, the "How" of employee well-being, how well-being can be enhanced.

5. Conclusion

The current paper has systematically reviewed the literature related to remote working effect on employees conducted both before and during the pandemic. The studies show that each author has defined the same variable in different ways. This has been done to match the industry and the context of the study. Studies done before the pandemic shows that there is positive relationship between remote working and other factors. But studies also reveal that prolonged remote working can lead to a negative outcome. It was also evident that most of the studies have focused on the psychological factors of employees. The current review reveals that when teleworkers are supported by their organizations, they are more productive. Therefore, organizations should focus more on making the work from home experience more comfortable for their employees.

The future research conducted in remote working specially during the pandemic should focus more on specific industries and different types of economies.

References

Anderson, D. and Kelliher, C. Enforced remote working and the work-life interface during lockdown, *Gender in Management*, Vol. 35 No. 7/8, pp. 677-683, 2020.

Barros A. S. S., Subjective Well-being (Sb) and Burnout Syndrome (BnS): Correlational Analysis Teleworkers Education Sector, *Procedia - Social and Behavioral Sciences*, Volume 237, 2017, Pages 1012-1018, ISSN 1877-0428.

Bellmann, L. and Hübler, O., Working from home, job satisfaction and work–life balance – robust or heterogeneous links? *International Journal of Manpower*, Vol. 42 No. 3, pp. 424-441, 2021.

Bentley, T. A., Teo, S. T. T., McLeod, L., Tan, F., Bosua, R., & Gloet, M. (2016). The role of organizational support in teleworker wellbeing: A socio-technical systems approach. *Applied Ergonomics*, 52, 207–215.

Caillier, J. G. The Impact of Teleworking on Work Motivation in a U.S. Federal Government Agency. *The American Review of Public Administration*, 42(4), 461–480, 2011.

Damir Huremović, *Psychiatry of Pandemics, A Mental Health Response to Infections,* 2020.

Eddleston, K. A., & Mulki, J., Toward Understanding Remote Workers' Management of Work–Family Boundaries: The Complexity of Workplace Embeddedness. Group and Organization Management, 42(3), 346–387, 2017.

El-Elimat T, AbuAl Samen MM, Almomani BA, Al-Sawalha NA, Alali FQ (2021) Acceptance and attitudes toward COVID-19 vaccines: A cross-sectional study from Jordan. PLOS ONE 16(4): e0250555.

Fujimoto Y., Ferdous A. S., Sekiguchi T., Sugianto L., The effect of mobile technology usage on work engagement and emotional exhaustion in Japan, *Journal of Business Research*, Volume 69, Issue 9, 2016, Pages 3315-3323, ISSN 0148-2963.

Grant C.A., Wallace L.M., Spurgeon P.C., Tramontano C. and Charalampous M., Construction and initial validation of the E-Work Life Scale to measure remote e-working, *Employee Relations*, Vol. 41 No. 1, pp. 16-33, 2019.

Heiden, M., Widar, L., Wiitavaara, B. and Eva Boman, Telework in academia: associations with health and well-being among staff. *High Educ 81*, 707–722 (2021).

Kapoor, V., Yadav, J., Bajpai, L. and Srivastava, S., Perceived stress and psychological well-being of working mothers during COVID-19: a mediated moderated roles of teleworking and resilience, *Employee Relations*, 2021.

Kelliher, C., and Anderson, D., Doing more with less? Flexible working practices and the intensification of work. *Human Relations*, 63(1), 83–106, 2009.

Khan A. N., A diary study of psychological effects of misinformation and COVID-19 Threat on work engagement of working from home employees, *Technological Forecasting and Social Change*, Volume 171, October 2021, 120968

Kossek E. E., Managing work life boundaries in the digital age, *Organizational Dynamics*, Volume 45, Issue 3, 2016, Pages 258-270, ISSN 0090-2616.

Kumar, P., Kumar, N., Aggarwal, P., Jasmine A.L. Yeap, Working in lockdown: the relationship between COVID-19 induced work stressors, job performance, distress, and life satisfaction. *Curr Psychol* (2021).

Kun A., Balogh P., Krasz K. G., *Periodica Polytechnica Social and Management Sciences,* 25(1), pp. 56-63, 2017.

Madero Gómez, S., Ortiz Mendoza, O.E., Ramírez, J. and Olivas-Luján, M.R., Stress and myths related to the COVID-19 pandemic's effects on remote work, *Management Research*, Vol. 18 No. 4, pp. 401-420, 2020.

Madsen, S. R., Work and family conflict: Can home-based teleworking make a difference? *International Journal of Organization Theory & Behavior*, 9(3), 307–350, 2006.

Mann, S. and Holdsworth, L., The psychological impact of teleworking: stress, emotions, and health. *New Technology, Work and Employment,* 18: 196-211, 2003.

Molino M, Ingusci E, Signore F, Manuti A, Giancaspro ML, Russo V, Zito M, Cortese CG. Wellbeing Costs of Technology Use during Covid-19 Remote Working: An Investigation Using the Italian Translation of the Technostress Creators Scale. Sustainability. 2020; 12(15):5911.

Morganson, V.J., Major, D.A., Oborn, K.L., Verive, J.M. and Heelan, M.P. Comparing telework locations and traditional work arrangements: Differences in work-life balance support, job satisfaction, and inclusion, *Journal of Managerial Psychology*, Vol. 25 No. 6, pp. 578-595, 2010.

Mostafa B. A. The Effect of Remote Working on Employees Wellbeing and Work-Life Integration during Pandemic in Egypt. *Journal of International Business Research*, Vol. 14, No. 3, 1913-9004, 2021.

Nakrošienė A., Bučiūnienė I., Goštautaitė B., Working from home: characteristics and outcomes of telework, *International Journal of Manpower*, 2019.

Noah C Peeri, Nistha Shrestha, Md Siddikur Rahman, Rafdzah Zaki, Zhengqi Tan, Saana Bibi, Mahdi Baghbanzadeh, Nasrin Aghamohammadi, Wenyi Zhang, Ubydul Haque, The SARS, MERS, and novel coronavirus (COVID-19) epidemics, the newest and biggest global health threats: what lessons have we learned? *International Journal of Epidemiology*, Volume 49, Issue 3, June 2020, Pages 717–726.

Pedro Afonso, Miguel Fonseca, Tomás Teodoro, Evaluation of anxiety, depression and sleep quality in full-time teleworkers, *Journal of Public Health*, 2021.

Pradhan, R. K., & Hati, L. The Measurement of Employee Well-being: Development and Validation of a Scale. *Global Business Review*, 2019.

Prasad K.D.V. and Rajesh W. V. and Mruthyanjaya R. M., Effect of occupational stress and remote working on psychological well-being of employees: an empirical analysis during covid-19 pandemic concerning information technology industry in hyderabad, *Indian Journal of Commerce and Management Studies*, Educational Research Multimedia & Publications,India, vol. 11(2), pages 01-13, May, 2020.

Page M J, McKenzie J E, Bossuyt P M, Boutron I, Hoffmann T C, Mulrow C D et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews *BMJ* 2021; 372: n71.

Page, K.M., Vella-Brodrick, D.A. The 'What', 'Why' and 'How' of Employee Well-Being: A New Model. *Soc Indic Res 90*, 441–458 (2009).

Palumbo, R., Let me go to the office! An investigation into the side effects of working from home on work-life balance, *International Journal of Public Sector Management*, Vol. 33 No. 6/7, pp. 771-790, 2020.

Palumbo, R., Manna, R. and Cavallone, M., Beware of side effects on quality! Investigating the implications of home working on work-life balance in educational services, *The TQM Journal*, Vol. 33 No. 4, pp. 915-929, 2021.

Piret, J. and Boivin G., Pandemics Throughout History, *Frontiers in Microbiology,* Vol. 11, 1664-302X, 2021.

Raišienė AG, Rapuano V, Varkulevičiūtė K, Stachová K. Working from Home—Who Is Happy? A Survey of Lithuania's Employees during the COVID-19 Quarantine Period. *Sustainability*. 2020; 12(13):5332.

Shareena, P., & Shahid, M. (2020). Work from home during COVID-19: Employees perception and experiences. *Global journal for Research Analysis*, 9(5), 1-3.

Solís, M.S., Telework: conditions that have a positive and negative impact on the work-family conflict, *Academia Revista Latinoamericana de Administración*, Vol. 29 No. 4, pp. 435-449, 2016.

Teo, T.S.H. and Lim, V.K.G., Factorial dimensions and differential effects of gender on perceptions of teleworking, *Women in Management Review*, Vol. 13 No. 7, pp. 253-263, 1998.

Toscano F, Zappalà S. 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*. 2020.

Wang, B. Liu, Y. Qian, J. and Parker, S.K. (2021), Achieving Effective Remote Working During the COVID-19 Pandemic: A Work Design Perspective. *Applied Psychology*, 70: 16-59.

Ward, N. and Shabha, G. (2001), "Teleworking: an assessment of socio-psychological factors", Facilities, Vol. 19 No. 1/2, pp. 61-71.

Wepfer, A.G., Allen, T.D., Brauchli, R. et al. Work-Life Boundaries and Well-Being: Does Work-to-Life Integration Impair Well-Being through Lack of Recovery? *J Bus Psychol 33*, 727–740 (2018).

Wong, A.H.K., Cheung, J.O. and Chen, Z., Promoting effectiveness of working from home: findings from Hong Kong working population under COVID-19, *Asian Education and Development Studies*, Vol. 10 No. 2, pp. 210-228, 2021.

World Health Organization. WHO Coronavirus Disease (COVID-19) Dashboard. Retrieved July 20, 2021, from https://covid19.who.int.

Biographies

Ruwan Wickramarachchi is a Senior lecturer at the Department of Industrial Management, University of Kelaniya. He holds BSc in Industrial Management from the University of Kelaniya and MPhil in Management studies (specialized in Information systems) from the University of Cambridge, United Kingdom. He received his PhD in distributed simulation from the Sheffield Hallam University, United Kingdom. His current research interests include applications in distributed simulation, management of information technology and project management. Currently, he is also servicing as Director of the Information and Communication Technology Centre in University of Kelaniya. He has published much research including,

- Saad S. M., T. Perera and R. Wickramarachchi, 2002, A new methodology for parallel and distributed Simulation, Proceedings of the 2002 International Conference on Responsive Manufacturing.
- Saad S. M., T. Perera and R. Wickramarachchi, 2002, A strategy selection approach in parallel and distributed simulation environment, International Journal of Advance Manufacturing Systems. Vol 6, No.2.

Narmada Siyambalapitiya is a final year undergraduate reading for B. Sc. (Honors) in Management and Information Technology in the Department of Industrial Management, University of Kelaniya, Sri Lanka. She is currently carrying out her final year undergraduate research in the areas of teleworking, social distancing, and social behavior of people.