INVESTIGATING THE WELL-BEING AMONG PRIVATE UNIVERSITY EMPLOYEES DURING MOVEMENT CONTROL ORDER: A CLUSTER ANALYTIC APPROACH

Zaifilla Farrina Binti Zainuddin
Manufacturing Engineering Technology Section,
Applied Statistics and Data Science Research Cluster, Malaysia Italy Design Institute,
Universiti Kuala Lumpur,56100, Kuala Lumpur, Malaysia
Email: zaifilla@unikl.edu.my

Norhaidah A. Haris
Software Engineering Section
Applied Statistics and Data Science Research Cluster, Malaysia Institute of Information Technology,
Universiti Kuala Lumpur, 50250, Kuala Lumpur, Malaysia
Email: norhaidah@unikl.edu.my

Wan Suriyani Che Wan Ahmad
Foundation Centre Section
Applied Statistics and Data Science Research Cluster, Malaysia Institute of Information Technology,
Universiti Kuala Lumpur, 50250, Kuala Lumpur, Malaysia
Email: wsuriani@unikl.edu.my

Yasmin Yahya
Email: yasminyahya@gmail.com

ABSTRACT

The world has been affected by the spread of the coronavirus disease (COVID-19) which resulted in forced businesses closing including the High Education Institutions (HEI). The closing of the university makes a difference in the change of routine, especially in teaching and learning activities. It also affected the management and service staff. The study aims to explore the employees' well-being in one of the private universities during the Movement Control Order (MCO) in Malaysia. A few factors were examined to understand the employees' well-being. The data was collected through online questionnaires that involved 261 respondents. Questions are based on six (6) well-being factors that are related to work engagement, organizational motivation, organizational learning growth, job satisfaction, working environment, and leisure activities. This study employed a cluster analytic approach to investigate the well-being of the employees. The analysis was classified into three (3) clusters and three (3) classes of respondents. The results suggested that Working from Home (WFH) has a significant difference between the working groups in the clusters.

Keywords: Movement Control Order, COVID-19, Well-being, Cluster Analysis, Working from Home

INTRODUCTION

Malaysia is one of the countries that has been affected by the Covid-19 pandemic. The virus infection has caused fatal condition to some people. Thus, to curb infectious diseases from spreading at an alarming rate globally, the lockdown was introduced in many countries (Atalan, 2020).

The Malaysian government has initiated the Movement Control Order (MCO) for Malaysian people to control the transmission of the disease (Bunyan, 2020). MCO is an action in response to COVID-19 which was declared as a pandemic by the World Health Organization (WHO) that is caused by the virus. In other words, MCO is a lockdown to curb social distancing between people by slowing down the spreading of the Covid-19 virus.

The COVID-19 pandemic had a significant impact on people's health and lives in various ways such as economic and social crises (Usher, 2020). Many public and private organizations such as Higher Educational Institutions (HEI) have been affected by the pandemic situation. The MCO situation has led many private HEIs to enforce their employees' working remotely from the office. In other words, a new norm of working environment that required the employees to Work from Home (WFH).

The employees have to struggle and balance their lives as working employees, household chores, and family-related matters. This study also investigates the Work from Home (WFH) environment for the employee and the possibility of creating a similar ambience as the working environment in the office. During the MCO, the employee has to manage their time between office work and their children. The children are required to be homeschooled as the schools were closed down. The employees' adaption to a new working norm during MCO has raised concerns about the employee working engagement with the HEI.

Another concern of this study is how the WFH environment could affect the employees. There are studies about the working environment that could affect the overall health well-being of the employees such as physical, environmental, psychological factors of an individual's mental and physical health (Oakman et al, 2020 and Allen et al, 2015). The environmental ambiance was

identified as not conducive such as extended hours, lack of unclear delineation of office work, and limited support (Allen et al, 2015).

Thus, this study attempts to understand the employees' cluster profile according to their well-being factors. The employees' happiness in managing their tasks would continuously serve the organization effectively and efficiently.

LITERATURE REVIEW

An individual's well-being in the workplace is related to physical, emotional, psychological, and mental perspectives (Danna & Griffin, 1999). According to Kahneman et al. (1999), an individual's general well-being is strongly correlated with their work-specific well-being, which in turn influences their overall perceptions of job satisfaction. A person's assessment of their self-worth, stable personality, and the emergence of a variety of positive psychological outcomes, including psychological adjustment, positive emotion, social confidence, prosocial behaviour, and life satisfaction, are considered to be indicators of their self-esteem (Waterman, 1992; Diener et al., 1985; Leary & MacDonald, 2003).

In a study conducted by Kim (2003), usually, mental health problems among adults are usually related to psychological factors such as self-esteem and self-efficacy. Low self-esteem could lead to depression, hopelessness and suicidal intentions (Mann et al, 2004). The employee's optimistic well-being would become a motivation to work harder and develop a cheerful ambience in the organization. The organization involved could see an increase in work productivity. Thus, the rise in staff work performance would result in economic growth (Grawitch et al, 2006).

The literature of this study will discuss the well-being of the employees related to work engagement, organizational motivation, organizational learning growth, job satisfaction, working environment, and leisure activities. Therefore, this study suggested investigating further the well-being factors of the private university as follows:

Work Engagement

The work engagement in this study is defined as the work performance commitment in the organization. The work engagement component variables in this study were adopted and modified from studies conducted by Hanaysha (2016). The work engagement in this study intended to identify the employees' feelings about long working hours continuously, their pride and enthusiasm for the work, and their feelings about the number of work and managing time to complete the given tasks. In a study conducted by Sanz et al (2015), men have no issue with long working hours but women prefer to have fewer working hours so they can have time to take care of their family. The WFH environment is possible if the employees are fully equipped with reliable technologies (Messenger et al, 2017, Henke et al, 2016). The technology is defined as telework in which the usage of information and communication devices together such as smartphones, tablets, laptops, or desktop computers. The technology availability could be beneficial according to location and time flexibility for both employers and employees (Messenger et al, 2017).

Organisational Motivation

Organisational Motivation in this study is related to the employees' motivation during MCO. The support from the supervisors in inspiring the employees to continue their Work from Home (WFH) is important. This study investigates the employees' opinions about job security, promotion or career development, gratitude or awards for job performance, salary increments for good achievements, and support from supervisors when they have problems unrelated to jobs. Usually, good health has a positive effect on the working hours contribution to the organization (Booth and Van Ours, 2008). Thus, health, happiness and well-being have various consequences influencing employee's job performance, absence from work and turnover (Warr, 2013).

Organisational Learning Growth

This study also investigated employee learning growth in the HEI. The factors are regarding the employee's continuous learning opportunities, encouragement to share knowledge and conduct training with their colleagues through the various programs during MCO.In a study conducted by Madsen (2006), employees who are willing to change usually have positive attitudes, and beliefs and understand changes are necessary for the organization. Thus, organizations that utilize effective vision and driven change strategies would have sustainable profit and competitive advantages (Kantabutra, 2009). Usually, employees satisfied with the learning growth in an organization will boost their motivation (Joo & Lim, 2009).

Job Satisfaction

The employee's awareness of the importance of balancing their work-life and family might increase their job satisfaction (Bowling et al, 2010). Thus, employees' job satisfaction includes factors such as salary and benefits, colleagues, supervision, working conditions, job nature, career advancement, job stability, personal development, and the amount of work (Satuf et al, 2018). Employee happiness is reflected in the workplace and organization when the employees are satisfied with income-earning, and also serve happily in their current post (Hanaysha, 2016, Craig et al, 2003). Studies on job satisfaction have been conducted by many researchers who believe that employees with high productivity and performance are usually satisfied with their working environment (Moradi et al, 2013, Saleem et al, 2010, Naufal et al, 2012, Sohail et al, 2014). During the MCO, the employees are forced to WFH, thus the employees' happiness and commitment to do their job could either get better or worse. Job satisfaction has different effects on life satisfaction between men and women (Booth and Van Ours, 2008). Even, job satisfaction could

influence people's health, happiness and well-being of their family members (Sanz-Vergel et al, 2015). Thus, this study investigates the employees' job satisfaction during the MCO as they have to manage their office work at home.

Work Environment

The work environment is a workplace for people with diverse natures such as demographics, professional characteristics, education, orientation, experience, culture, identity, sex, religion, and skills that respond or react differently. The employees' commitment would be reflected when the employees exhibit a high motivation to do their jobs and are less likely to exhibit behaviour such as high absenteeism, sabotage, turnover, etc. (Oludeyi, 2015). This study investigates the work environment of the employees who work from their home such as the space allocation to do the office work, clean workplace or workspace, adequate space, and quiet environment. A study on the work environment in Hong Kong has found that the WFH practice is not practical if the people do not have specified space to perform work duties (Vyas & Butakhieo, 2021). A suitable work environment could develop positive benefits for employees with the use of current technologies so they can deliver their work efficiently and be able to balance the integration between family life and work, fatigue reductions, and increased productivity (Gajendran & Harrison, 2007). However, this study does not investigate the space area of the employee's houses and the people who live with them.

Leisure Activities

In this study, leisure activities are defined as employees scheduling downtime for naps or relaxation, exercising regularly, and drinking water on a daily basis (Hanaysha, 2016, Craig et al, 2003). As a result, this study also looked into how satisfied the workers were with their regular food consumption, healthy lifestyle, and sleeping schedule during MCO.

METHODOLOGY

The methodology used in this study begins with the design and instrument used, demographic profile, reliability test and data analysis as below,

Design and Instrument

This study is a cross-sectional research design that uses a survey as a data collection. The target population comprised all employees for various working groups in one of the private universities in Kuala Lumpur, Malaysia. The questionnaires employed in this study were adopted and modified from various studies such as Hanaysha, 2016, Craig et al, 2003, Parmenter & Wardle, 1999 and Pedrelli et al, 2014. The total number of males is 43% and females is 57% from 261 employees. The questionnaire is divided into seven parts: the first part is on the demographic background. The demographics section consists of a questionnaire regarding the respondents' university, sugar and blood pressure reading (optional), gender, age, height, weight, race, education, job status, income per month, smoking, financial situation, and frequency of hospitalization in the last five years. The other six parts of the questionnaire consist of item factors related to work engagement, organizational motivation, organization learning growth, job satisfaction, working environment, and leisure activities. The questionnaire uses a Likert rating scale from 1 to 5. The scale starts with No. "1" - strongly disagree, No. "2" -disagree, No. "3"- neither agree nor disagree, No. "4" - agree, and No. "5"- strongly agree. The questionnaire link was given to employees via email. The data were analyzed using open-source statistical software R-Studio version 1.4 commonly known as Machine Learning analysis tools (Oussous et al, 2018). The number of clusters was determined using the elbow method.

Demographic Profile

The result of the simulation analysis has divided the employees into three clusters of demographic profiles as shown in Table 1. There are three groups of employees in the private HEI: Academician, Management, and Services. This study has identified that most employees grouped into Cluster-1 are Academicians. Most of the employees in Cluster-2 and Cluster-3 consist of the employees from the Management and Services group. The employment service range of the employees is between 0 to over 15 years. Employees who have worked for more than 15 years are divided into three clusters:(Cluster-1(6.9%), Cluster-2(10.0%) and Cluster-3(8.4%)).

The percentage of male and female employees' data has no significant difference as male consists of 43% and female 57% with most female employees in Cluster-2. More than 50% of the employees are aged 40 years and above. Many of the employees are Academicians (Cluster-1 (18.4%), Cluster-2 (22.6%) and Cluster-3 (14.2%)). The employees in management (Cluster-1(0.4%), Cluster-2(5.0%) and Cluster-3 (2.3%)) and the employees who work in services (Cluster-1(6.5%), Cluster-2(18.8%) and Cluster-3(11.9%)). This study also identified that 90% of the employees are non-smokers (Cluster-1(22%), Cluster2-(44.8%) and Cluster-3(23%)).

Table 1: Employee Profile

Employee Profile	Each Cluster Frequency (percentage)		
	Cluster 1	Cluster 2	Cluster 3
	Gender		
Male	30(11.5)	53(20.3)	29(11.1)
Female	36(13.8)	68(26.1)	45(17.2)
	Age		
Less 25	3(1.2)	3(1.2)	7(2.7)
25-29	12(4.6)	23(8.8)	14(5.4)
30-39	15(5.8)	32(12.3)	16(6.1)
40 and above	36(13.8)	63(24.1)	37(14.2)
	Working Group		
Academician	48(18.4)	59(22.6)	37(14.2)
Management	1(0.4)	13.(5.0)	6(2.3)
Services	17(6.5)	49(18.8)	31(11.9)
	Service Employment		
less 1 year	5(1.9)	5(1.9)	3(1.2)
1 - 4 years	8(3.1)	15(5.8)	12(4.6)
5 - 10 years	19(7.3)	14(18.8)	23(8.8)
11 - 14 years	16(6.1)	26(10.0)	14(5.4)
More 15 years	18(6.9)	26(10.0)	22(8.4)
	Smoking Status		
Non - Smoker	58(22)	117(44.8)	60(23.0)
Smoker	8(3.1)	4(1.5)	14(5.4)

K Means Clustering Analysis

Cronbach's Alpha coefficient is the most widely used reliability test to assess internal consistency estimation [36]. Reliability was indicated by the computation based on the average instrument approximation that consistently scores allocation with equal amounts (Lakshmi & Mohideen, 2013, Vaske et al, 2017).

The reliability indication is based on the value of the coefficient ranges from 0 to a maximum of 1. The greater the number of the coefficient, the better the reliability of the measurement. The Alpha coefficient for the component instruments ranges between 0.70 to 0.89 (Lakshmi and Mohideen, 2013) Thus, these values show that reliability measurements for all the items are adequate. Table 2 shows the measurements of items instrument's reliability consistency.

Table 2: Instruments of Well-Being Factors

Instrument	No of Items	Coefficient
Work Engagement	9	0.73
Organisational Motivation	5	0.75
Organisational Learning	5	0.71
Job Satisfaction	4	0.71
Work Environment	5	0.70
Leisure Activities	5	0.89

K Means cluster analysis is the most commonly used clustering algorithm for grouping data into clusters based on the similarity of their responses. This study utilized the algorithm to identify the employee group of clusters nearest mean related to the well-being factors such as Work Engagement, Organizational Motivation, Organizational learning, Job Satisfaction, Work Environment, and Leisure Activities.

The algorithm randomly selects the first group of centroids that are applied as the starting point for each cluster. Subsequently, the execution of the iterative calculation would maximize the position of the centroids. Three clusters were proposed in relation to the six health well-being factors according to variance ratio criteria as presented in Table 3. During the MCO, WFH had no effect on the well-being of employees in Cluster-1. However, Cluster-2 and Cluster-3 show that their well-being is affected especially for factors such as Work Engagement, Organisational Motivation, Organisational Learning, Job Satisfaction and Work Environment. Only Leisure Activities for all three clusters almost have similar mean values (Cluster-1 (3.18), Cluster-2(3.72), Cluster-3(3.60)). Analysis of Variance (ANOVA) was also used to simulate this data in order to identify any significant differences between the three clusters. All well-being factors showed significant variations between the three clusters, as confirmed by the ANOVA result (p-value, 0.05). In order to compare the significant differences between the clusters pairwise, the study additionally performed the Tukey test, also known as a post hoc test, as indicated in Table 3. At a significant level of 0.05, the Tukey test additionally confirms that the mean results are normal and independently distributed between clusters (Tukey, 1949).

Table 3: Well-Being Factors

Well-Being Factors	Cluster 1 (n=66)	Cluster 2 (n=22)`	Cluster 3 (n=74)	Anova (P Value)	Tukey
Work Engagement	3.45 (0.67)	1.44 (0.54)	2.28 (0.80)	44.44 (0.000)	(2,1) (3,1) (3,2)
Organisational Motivation	3.00 (0.83)	1.72 (0.52)	2.84 (0.75)	0.37 (0.001)	(2,1) (3,2)
Organisational Learning	3.40 (0.73)	1.14 (0.32)	1.94 (0.75)	70.98 (0.000)	(2,1)(3,1) (3,2)
Job Satisfaction	3.48 (0.63)	1.33 (0.52)	2.01 (0.70)	77.67 (0.000)	(2,1) (3,1) (3,2)
Work Environment	3.58 (0.74)	1.16 (0.34)	2.23 (0.70)	50.82 (0.000)	(2,1)(3,1) (3,2)
Leisure Activities	3.18 (0.80)	3.72 (0.69)	3.60 (0.74)	10.37 (0.000)	(2,1)(3,1)

Table 4 shows the number of employees in each cluster vs the well-being factors. The score value for each cluster is classified into High as Strongly Agree (Score is between 4.00 to 5.00), Medium as Neutral (Score is between 3.00 to 3.99) and Low as Strongly Disagree (Score is between 1.00 to 2.99).

Table 4: Number of Employees in Cluster vs Well-Being Factors

Organisational Motivation				Work Environment		
Class	**Cluster1**	**Cluster 2**	**Cluster3**	**Cluster1**	**Cluster 2**	**Cluster3**
High	5	0	5	4	0	0
Medium	29	1	25	52	0	14
Low	32	120	44	10	121	60
Work Engagement				**Organisational learning**		
Class	**Cluster1**	**Cluster 2**	**Cluster3**	**Cluster1**	**Cluster 2**	**Cluster3**
High	1	0	0	1	0	0
Medium	54	4	19	45	0	9
Low	11	117	55	20	121	65
Job Satisfaction				**Leisure Activities**		
Class	**Cluster1**	**Cluster 2**	**Cluster3**	**Cluster1**	**Cluster 2**	**Cluster3**
High	2	0	0	8	41	22
Medium	52	3	9	35	68	40
Low	12	118	65	23	12	12

RESULT AND DISCUSSION

K-means clustering analysis has proposed three clusters based on the higher value of variance ratio criterion with distance ratio measure as 1.58. Each cluster's workforce is organised as follows: There are 66 employees in Cluster-1 (25.3%), 121 in Cluster-2 (46.4%), and 74 in Cluster-3 (28.3%) in total. The six health and well-being factors—work engagement (6 items), organisational motivation (7 items), organisational learning growth (5 items), job satisfaction (6 items), work environment (7 items), and leisure activities (6 items)—were used to cluster the three groups of employees based on how similar their responses were to each other. The employee demographic data pertaining to each cluster's frequency and percentage is displayed in Table 1.

The data consists of 50% of employees that are in the age range of 40 years and above. Cluster-2 consists of the highest female employees compared to Cluster-1 and Cluster-3. The total of male employees is 43% and female is 57%.

The majority of the academician resides in Cluster-2 and most of the employees in Cluster-1 and Cluster-3 are from services groups. The employees from the Management group have the least number of participants compared to the Academicians and Services groups. Only 5% of the employees in the Management group are in Cluster-2, 2.3% are in cluster-3 and 0.4% are in Cluster-1. As demonstrated in Table 1 under the category of service employment, even though the majority of the employees are older than 40, they have only been employed by the university for five to ten years.

The result analysis also showed that 90% per cent of employees participating in the survey were nonsmokers. Only 1.5% of employees who are smokers resided in Cluster-2, the lowest number of smokers compared to Cluster-1 (3%) and Cluster-3 (5%). Only Cluster-1 has the highest mean score for all well-being factors. Cluster-2 and Cluster-3 have the highest mean score for the leisure activities factor only. The leisure activities factor result revealed the mean for Cluster-1 (3.18), Cluster-2 (3.72), and Cluster-3 (3.60) had not much difference. The results revealed that the private university employees do not have any issues with their leisure activities during MCO.

The result analysis also showed that 90% per cent of employees participating in the survey were nonsmokers. Only 1.5% of employees are smokers in Cluster-2, the least number of smokers compared to Cluster-1 and Cluster-3. Cluster-1 has the highest mean score for all well-being factors; on the other hand, Cluster2 and Cluster-3 have the highest mean score for health self-esteem factors only. The result analysis showed that Cluster-2 has the lowest mean for all well-being factors compared to the other two clusters. The mean score for Cluster-3 is within the range of 1.94 to 2.84 except for the leisure activities factor (mean score = 3.60). The standard deviation value for well-being factors in Cluster-2 showed that the employees' data were well-distributed and fairly dispersed. The Analysis of Variance (ANOVA) was also conducted to determine the mean significant differences in the well-being among the employees in the three clusters. The ANOVA result verified that there were significant differences among all clusters for all health well-being factors (p-value 0.05).

The mean differences between clusters as displayed in Table 3 could be investigated using the Tukey test. The Tukey test was selected for this investigation because of its ability to confirm that the mean results are normally distributed between clusters and have a significant threshold of 0.05 (Vaske et al, 2017). As a result, the Tukey multiple comparisons tests would verify that there was a significant difference between the paired clusters comprising the well-being factors.

The results for all clusters in Table 3 show different mean values for Work Engagement, Organization Motivation, Organization Learning Growth, Job Satisfaction, Work Environment, and Leisure Activities. Table 4 shows in detail the number of employees in each cluster according to well-being factors. The only significant difference is the Organizational Motivation factors that are paired to two clusters together such as the combination of (Cluster-2 & Cluster-1), (Cluster-3 & Cluster-2) and (Cluster-3 & Cluster1). This study is consistent with the study conducted by Chen (2021) suggested that virtual work communication skills could cause the employees who WFH to develop new online office skills and unplanned virtual work sessions. Usually, the employees who WFH are unable to interact face-to-face with their coworkers, and they may find it challenging to promptly resolve issues at work through online virtual contact.

The leisure activities factor result showed that the only two clusters with little variation were Cluster-2 and Cluster-3. The outcome implied that the workers' health was good throughout the MCO. In contrast to Cluster-1, the employees in both groups demonstrate a high level of health consciousness. The majority of the well-being factors indicated that many academicians are grouped in Cluster-2, which differs from the other two clusters. The work environment, job satisfaction, organisational learning, work engagement, and work motivation factors indicated that the employees in Cluster-2 are not accustomed to the new WFH environment norm during MCO.

The Cluster-2 conclusion is in line with prior research suggesting that unfavourable work environments, such as those with poor internet connections (Dwidienawati et al., 2020) or inadequate IT infrastructure (Rahim et al., 2018), may have an impact on employees' job satisfaction. According to Extrememera et al. (2018), work engagement that entails social connection with coworkers may also hinder employees' productivity. This study highlights concerns regarding the conditions of WFH environments since employees are forced to juggle home-related responsibilities (such as childcare and house chores) with professional obligations. This might have a detrimental effect on the work motivation and work engagement factors of private HEI employees at work.

The result showed also 24% of the employees aged more than 40 years old were grouped in Cluster-2 and this age group of employees have similar perceptions towards their well-being factors.

CONCLUSION

The study concluded that most employees are aware of their well-being WFH policies during MCO. WFH policy has limited the employee's social interactions with colleagues. The employees have to adapt to the new norm. The new norm needs more adaption on computer literacy rather than the human network. The findings show that the employees aged 40 years and above are mature enough to handle well-being issues. However, there are 121 employees in Cluster-2 who are not happy with WFH during MCO. The low happiness scores are likely due to challenges associated with remote working, such as poor internet and juggling housework which it more effected to women. The finding aligns with prior research, indicating that unfavourable work environments can impact job satisfaction and work engagement. The study also reveals a concentration of academicians in Cluster 2, differing from the other clusters. This underscores the impact of remote work on employees' well-being, particularly for those unaccustomed to the new norm.

The study analysis provides valuable insights for addressing the well-being challenges faced by private university employees, particularly in the context of remote work. Targeted interventions and support for Cluster-2 are crucial, considering the unique difficulties experienced during the pandemic. As the world of work continues to evolve, adapting to these challenges is critical to both employee satisfaction and company success.

REFERENCES

Allen, T. D., Golden, T. D., and Shockley, K. M. (2015) *How Effective Is Telecommuting? Assessing The Status Of Our Scientific Findings.* Psychological science in the public interest, vol. 16, no. 2, pp. 40–68.

Atalan, A. (2020). *Is The Lockdown Important To Prevent The Covid-19 Pandemic? Effects On Psychology*. Environment and economy-perspective. Annals of medicine and surgery, vol. 56, pp. 38–42.

Bunyan, J.(2020) *Malaysia Under Movement Control Order From Wed Until March 31, All Shops Closed Except For Essential Services* [Online]. Available: https://www.malaymail.com/news/malaysia/2020/03/16/pm-malaysia-in-lockdown-from-weduntil-march-31-all-shops-closed-except-for/1847204

Booth, A. L. and Van Ours, J. C. (2008) *Job Satisfaction And Family Happiness: The Part-Time Work Puzzle*. The Economic Journal, vol. 118, no. 526, pp. F77–F99.

Bowling, N. A., Eschleman, K. J., and Wang,Q.(2010) *A Meta-Analytic Examination Of The Relationship Between Job Satisfaction And Subjective Well-Being*.Journal of Occupational and Organizational Psychology, vol. 83, no. 4, pp. 915–934.

Chen, Z. (2021). Influence of working from home during the COVID-19 crisis and HR practitioner response. *Frontiers in psychology*, *12*, 4177.

Craig, C. L., Marshall, A. L., Sjostrom, M., Bauman, A. E., Booth M. L., B. E. Ainsworth, M. Pratt, Ekelund, ¨ U., Yngve, A., Sallis, J. F. et al., (2003) *International Physical Activity Questionnaire: 12-Country Reliability And Validity*. Medicine & science in sports & exercise, vol. 35, no. 8, pp. 1381–1395.

Cronbach, L. J., (1951) *Coefficient Alpha And The Internal Structure Of Tests.* Psychometrika, vol. 16, no. 3, pp. 297–334.

Danna, K., and Griffin, R. W. (1999) *Health And Well-Being In The Workplace: A Review And Synthesis Of The Literature* .Journal of management, vol. 25, no. 3, pp. 357–384.

Diener, E., Emmons, R., Larsen, R., and Griffin, S. (1985) *The Satisfaction Eith Life Scale, Journal Of Personality Assessment.*

Dwidienawati, D., Tjahjana, D., Y. Pradipto, D., and Gandasari, D. (2020) *Is Your Work From Home Job Satisfying? Lesson Learned From Work From Home During Covid-19 Outbreak In Indinesia*. Journal of Social Sciences, vol. 48, no. 3, pp. 743–752.

Extremera, N., Merida-Lopez, S., Sanchez- Alvarez, N., and Quintana-Orts, C. (2018) *How Does Emotional Intelligence Make One Feel Better At Work? The Mediational Role Of Work Engagement*. International journal of environmental research and public health, vol. 15, no. 9, p. 1909.

Gajendran, R. S. and Harrison, D. A. (2007) *The Good, The Bad, And The Unknown About Telecommuting: Metaanalysis Of Psychological Mediators And Individual Consequences*. Journal of applied psychology, vol. 92, no. 6, p. 1524.

Grawitch, M. J., Gottschalk, M., and Munz, D. C. (2006) *The Path To A Healthy Workplace: A Critical Review Linking Healthy Workplace Practices, Employee Well-Being, And Organizational Improvements*. Consulting Psychology Journal: Practice and Research, vol. 58, no. 3, p. 129.

Hanaysha, J. (2016) *Determinants of job satisfaction in higher education sector: Empirical insights from Malaysia*. International Journal of Human Resource Studies, vol. 6, no. 1, pp. 129–146.

Henke, R. M., Benevent, R., Schulte, P., Rinehart, C., K. Crighton, A., and Corcoran, M. (2016) *The Effects Of Telecommuting Intensity On Employee Health*. American Journal of Health Promotion, vol. 30, no. 8, pp. 604–612.

Joo, B.-K. and Lim, T. (2009) *The Effects Of Organizational Learning Culture, Perceived Job Complexity, And Proactive Personality On Organizational Commitment And Intrinsic Motivation*. Journal of Leadership & Organizational Studies, vol. 16, no. 1, pp. 48–60.

Kahneman, D., Diener, E., and Schwarz, N. (1999) *Well-being: Foundations of hedonic psychology*. Russell Sage Foundation.

Kantabutra, S. (2009) *Toward A Behavioral Theory Of Vision In Organizational Settings*. Leadership & organization development Journal.

Lakshmi, S. and Mohideen, M. A.(2013) *Issues In Reliabilityand Validity of Research*. International journal of management research and reviews, vol. 3, no. 4, p. 2752.

Leary, M. R. and MacDonald, G. (2003) *Individual Differences In Self-Esteem: A Review And Theoretical Integration*.

Kim, Y.-H. (2003) Correlation of mental health problems with psychological constructs in adolescence: Final results from a 2-year study," International journal of nursing studies, vol. 40, no. 2, pp. 115–124.

., and Miller,D. (2006) *Influential Factors In Individual Readiness For Change*. Journal of Business & Management, vol. 12, no. 2.

Mann, M. M., Hosman, C. M., Schaalma, H. P., and De Vries, N. K. (2004) *Self-Esteem In A Broad-Spectrum Approach For Mental Health Promotion.* Health education research, vol. 19, no. 4, pp. 357–372.

Messenger, J., Llave, O. V., Gschwind, L., Boehmer, S., Vermeylen, G., and Wilkens, M. (2017) *Eurofound And The International Labour Office. Working Anytime, Anywhere: The Effects On The World Of Work*. Publications Office of the European Union, Luxembourg, and the International Labour Office. Disponible en: http://eurofound. link/ef1658.

Moradi, E., Almutairi, D. O., Idrus, D., and Emami, R. (2013) *The Influence Of Organizational Learning Culture On Job Satisfaction Among Academic Staff*. Journal of Global Management, vol. 5, no. 1, pp. 56–66.

Naufal, P., Suryaputra, R., and Sondakh, O. (2012) *The Effect Of Work Environment And Job Motivation On Job Satisfaction And Job Performance In Pt. X*.Madsen, S. R., John, C. R

Parmenter, K. and Wardle, J. (1999) *Development of A General Nutrition Knowledge Questionnaire For Adults*. European journal of clinical nutrition, vol. 53, no. 4, pp. 298–308, 1999.

Pedrelli, P., Blais, M. A., Alpert, J. E., Shelton, R. C., Walker, R. S., and Fava, M. (2014) *Reliability and Validity of The Symptoms of Depression Questionnaire (SDQ)*. CNS spectrums, vol. 19, no. 6, p. 535.

Prihadi, K. D., Lim, E. S., Chan, K. C., Lee, S. M., and Ridwan, A. (2021) *Efficacy Of Working From Home Among Urban Professionals In Malaysia During The Pandemic: The Robust Predictive Role Of Mattering*. International Journal of Public Health Science, pp. 215–220

Oakman, J., Kinsman, N. (2020) Stuckey, Graham, R., M., and Weale, V., *A Rapid Review Of Mental And Physical Health Effects Of Working At Home: How Do We Optimise Health?*. BMC Public Health, vol. 20, no. 1, pp. 1–13.

Oludeyi, O. S. (2015) *A review of literature on work environment and work commitment: implication for future research in citadels of learning*. Journal of Human Resource Managemnt, vol. 18, no. 2, pp. 32–46.

Oussous, A., Benjelloun, F.-Z., Lahcen, A. A., and Belfkih, S. (2018) *Big Data Technologies: A Survey*.Journal of King Saud University-Computer and Information Sciences, vol. 30, no. 4, pp. 431–448.

Rahim, N. I. M., Rahman, A. A., and Iahad, N. A. (2018) *The Overview For Implementing Work From Home (Wfh) In Malaysia Higher Education Institution (HEI) Context*. International Journal of Innovative Computing, vol. 8, no. 3.

Saleem, R., Mahmood, A., and Mahmood, A.(2010) *Effect of work motivation on job satisfaction in mobile telecommunication service organizations of Pakistan*. International journal of business and management, vol. 5, no. 11, p. 213.

Sanz-Vergel, A. I. A. Rodr´ıguez-Munoz, and Nielsen, K. (2015) *The Thin Line Between Work And Home: The ˜ Spillover And Crossover Of Daily Conflicts*. Journal of Occupational and Organizational Psychology, vol. 88, no. 1, pp. 1–18.

Satuf, C., Monteiro, S., Pereira, H., Esgalhado, G., Marina Afonso, R., and Loureiro, M., (2018) *The Protective Effect Of Job Satisfaction In Health, Happiness, Well-Being And Self-Esteem*. International journal of occupational safety and ergonomics, vol. 24, no. 2, pp. 181–189.

Sohail, A., Safdar, R., Saleem, S., Ansar, S., and Azeem, M. (2014) *Effect Of Work Motivation And Organizational Commitment On Job Satisfaction:(A Case Of Education Industry In Pakistan).* Global Journal of management and business research.

Tukey, J. W. (1949) *Comparing individual means in the analysis of variance*. Biometrics, pp. 99–114.

Usher. K., Bhullar, N., and Jackson. D. (2020) *Life in the pandemic: Social isolation and mental health.*

Vaske, J. J., Beaman, J., and Sponarski, C. C. (2017) *Rethinking Internal Consistency In Cronbach's Alpha*. Leisure Sciences, vol. 39, no. 2, pp. 163–173.

Vyas, L. and Butakhieo, N. (2021) *The Impact Of Working From Home During Covid-19 On Work And Life Domains: An Exploratory Study On Hong Kong*. Policy Design and Practice, vol. 4, no. 1, pp. 59–76, 2021.

Warr, P. (2013) *Jobs and Job-Holders: Two Sources of Happiness and Unhappiness.* The Oxford handbook of happiness, vol. 54, pp. 733–750.

Waterman, A. S. (1992) *Identity As An Aspect Of Optimal Psychological Functioning.*