
Evaluation of Employee Satisfaction of Working Online During Covid-19 Pandemic in Colombo District

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A B S T R A C T

Online working has become a new normal concept with the Covid-19 pandemic, and it changes the way people live and work. Online working, telecommunicating, work from home (WFH), remote working, and more similar conditions were not new, and their necessity and accompanying settings gained significant traction during the Covid-19 pandemic. WFH is not an option for all industries before Covid-19. Whereas somehow due to the pandemic, most workers experienced WFH. Due to the Covid-19 pandemic, several organizations published guidelines to minimize the health and safety risks of employees with requirements to ensure business integrity and to check whether there is an association between WFH and employee job satisfaction. This study investigates the job satisfaction of workers, with the impact of online working during the Covid-19 pandemic. Through this, we assess how the workers allocate their time throughout their working day and the facilities and knowledge they must have to perform their WFH. All the data were collected from employees of the Colombo district through a distributed online questionnaire. The survey mainly targeted four factors physical, technological, performance, and social. According to the analysis, most workers satisfy their job working online. However, the research advises that it is important to resolve the issues realized by the research findings to carry out such a WFH concept without interruption.

Keywords: Covid-19 pandemic, Employee satisfaction, Working online

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1. Introduction

Covid-19 is a new disease that has begun to spread around the world since December 2019. It was identified in Wuhan, China. The world health organization declared the Covid-19 eruption as an emergency on 31 January 2020 (World health organization, 2020). Countries around the world warned the public to be responsive since the virus spread all over the world affecting many more countries. As the coronavirus continues to spread across the world, some governments in the world have imposed lockdowns. Many countries follow the rules strictly to force their citizens to stay at home and social distancing. Locking home and strategies have been implemented it is necessary to flatten the curve and control the spread of the disease. One change that can be observed in the Covid-19 pandemic is the policy of telecommunicating, teleworking, or WFH jobs as mentioned in (Kramer & Kramer, 2020; Messenger, 2020; Contreras,2020) previous study.

With the rise of the Covid-19 pandemic world having to adapt, many businesses opted to try working online. Especially in the world of organization, it is likely to reshape the way people live and work and the industry and the war organizations operate. Most organizations began to see the traditional opportunity from physical to virtual work. Millions of workers were forced to suddenly relocate their work out of their offices into their homes (Brynjolfsson et al., 2020). According to (Heavey et al., 2020), organizations have begun to consider extending WFH arrangements beyond the pandemic. Online working guidelines were issued by the government, where the government and private organizations forced their employees to join online working. Currently, online working has been adopted by different industries. There are many fields that use online working and each of these fields has different and various requirements. Some field requirements are similar to the traditional job. The employees must be available by email, phone and video conferences during the set hours. Also, there is another part of this online working, which is allowing employees to submit their work on or before deadlines. In most online jobs, employees are required to continue the communication with the team via online meetings, calls, or emails. There are more online jobs now than ever before as technology advances.

One of the most observable changes because of the Covid-19 pandemic is online working. Working from home is inevitable, but the pandemic turned it into a necessity. Mainly after the launch of internet services, the concept of online working became very useful and popular. The development of smartphones and various operating systems and services are some other factors that contribute to working online successfully and efficiently. Nowadays, with the intensity of cloud computing technology and broadband services, using a remote server and working remotely with a collection of portable hardware and software is a better option (Watad & Jenkins, 2010). After the identification of Covid-19, most of the organizations in Sri Lanka are also seeking the traditional opportunity from physical to remote working and WFH. The private sector and most of the government organizations in Sri Lanka follow the WFH concept. Therefore, the main purpose of this study is to identify online working and job satisfaction as well as the association between them and investigate and analyze the relationship between them.

1.2. Problem statement

The Covid-19 pandemic spread worldwide all over the countries and a large number of workers have to move for working online to minimize the spread of the virus. In Sri Lanka also both the government and the private sector employees had to move to work online and remote working. According to that, most of the employees get experience in online working. Online working and job satisfaction of the workers are highly associated. It is really important to find out the factors that influence employee satisfaction with working online during the Covid-19 pandemic. Based on those factors we can give solutions to employee problems and decide whether we are in a good position to continue this online working concept as a developing country. Because of that, in this study, we focus on factors that influence on job satisfaction of workers who works online in the Covid-19 pandemic situation. We find out the factors that affect the online working of employees who work online under this pandemic situation. Figure 1 illustrates the mapping of research questions to research objectives which support achieving the main objective of the research by answering research questions.

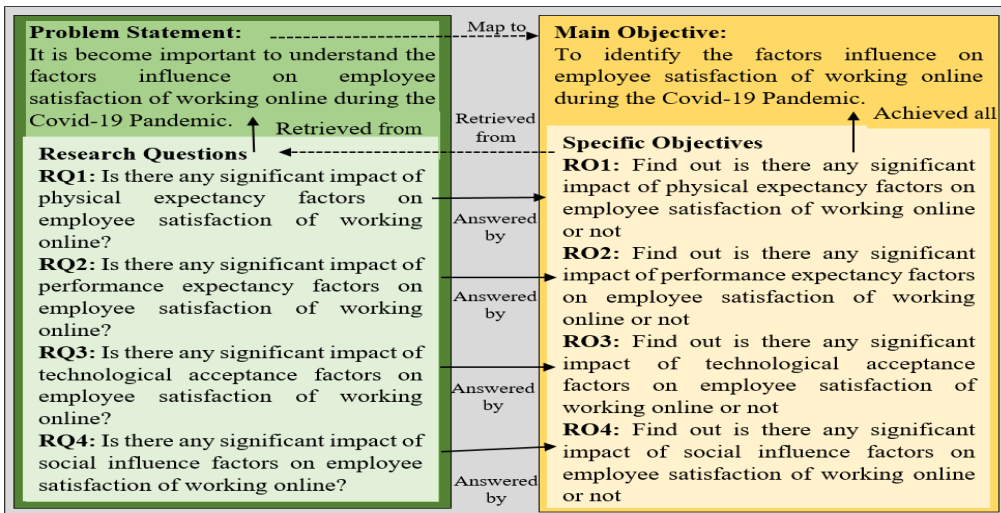


Figure 1: Mapping of Research Questions to Research Objectives

2. Literature review

The Covid-19 pandemic situation has caused the biggest disruption to the working system and employees all over the world. Within a short span of the Covid-19 pandemic, many researchers have shared their works on online working and WFH in different ways. The Covid-19 pandemic has provided us with an opportunity to pave the way for online working.

2.1. Theoretical background of the study

2.1.1. Online working

Online working is now referred to as an alternative way to reduce the risk of Covid-19 infection. However, there are some special jobs like healthcare and farming, while that kind of fields cannot be completely performed through online working. Over the four decades, online working has been defined in different words, namely remote work, flexible workplace, telecommunication and e-work. These conditions refer to the ability of employees to work in flexible workspaces especially at home, using technology implementation work duties (Gajendran & Harrison, 2007; Robertson, 2003).

2.1.2. Job satisfaction

Job satisfaction of psychological, physical, and environmental circumstances that cause a person to honestly say that they can be satisfied with their job. In Vrooms' definition (Darboe, 1999) job satisfaction focused on the role of the workplace. Thus, it defines job satisfaction as the orientation that influences individuals' job roles. According to Armstrong, 2006; John, 2020, job satisfaction refers to people's attitudes and feelings about their work. Positive attitudes toward work indicate job satisfaction and negative attitudes indicate job dissatisfaction.

2.2. Empirical background of the study

2.2.1 Physical expectancy

Pouwels et al., (2008) showed that working hours are negatively related to happiness similarly, to the physical work environment. At home when a person has a comfortable chair, a designed workplace, and limited access to heating and air-conditioning, the system affects job performance and job satisfaction. Many studies found features of the physical environment affect online working and job satisfaction with the availability of a computer, network, fax, software, and assistance of a help desk (Onwuegbuzie et al., 2007). And characteristics such as the size of the living area, the number of family members sharing the same accommodation, and the number of children affect online working (Maarleveld et al., 2009).

2.2.2. Performance expectancy

Performance expectancy is a construction that has received intense attention from several authors and researchers from different fields (Venkatesh et al., 2003). As Rogers & Singhal (2003) pointed out, some of these studies sought to identify and use them to build an information system to explain acceptance and usage. Side effects and risks should be considered when introducing online working such as social isolation which can be a serious problem that causes workers to be isolated and causes decreased motivation and performance. Empirical studies (Olmos-Vega et al., 2015; Baker,2007) found some results from online working such as increased job performance, improved job satisfaction and turnover intentions and reduced pressure. An imbalance between work and personal life affected the low performance of an individual for an organization (Konrad & Mangle, 2000).

2.2.3. Technological acceptance

Almost every company uses technology to perform its specific tasks. Technology has changed the way people work and it brings a certain hobby to the job and reduces the human error that can result from it. Responding to the pandemic situation rapid development of information and communication technology and telephone services were reintroduced. Many organizations are coming up with a new way of working. Dutcher (2012) and Grant et al., (2013) said that by adopting e-work, telework and telecommunication, the particular task improves its productivity. According to Kramer & Kramer (2020), one change that can be observed because of the Covid-19 pandemic is the policy of telecommunications or WFH. Business technologies such as social networks, accounts software, virtual meeting software, and more applications remove the boundaries and move information at the workplace thereby speeding them up in decision-making in any organization. There is recent literature discussing the telecommunication due to the forced locking by many countries around the world in response to the spread of the Covid-19 pandemic. According to Tan et al., (2020), telecommunication has been positively linked to a sense of well-being with the findings of several studies as online working reduces the risk for depression and stress.

2.2.4. Social influence

The coronavirus spread around the world was in economic and social upheaval, especially in the organized world. It is likely to reshape the way people live and work while the industry and the way organization's structure. Reshaping the efficiency of online working services has also increased in line with the demand for a balance of work and life because of the increasing number of single parents in the world today (Baruch, 2000). Considering this, the ability to work online is a means of increasing a person's work-life balance and the opportunity to care for family members (Johnson et al., 2007). Working collaboratively online helps minimize the adverse effects of social isolation and minimize work conflict between family and work-life balance (Contraras et al., 2020).

2.3. Methodological literature

Baruch (2000) has explored how employees perceive telework in relation to the office and investigates the expected mixed effects on jobs and satisfaction as well as the productivity based on the understanding of employees of the teleworking experience. According to that study teleworking for family life and relationship and support, sections prove that home is the better office environment and respondents report that they have great satisfaction and performance and stress reduced. Bhattarai (2020) has explored the job satisfaction factors and how they are associated with online working. The result indicates that some factors which were chosen, to have agreed with significant association with job satisfaction.

According to the results of the study, many employees were satisfied with WFH, and some crucial points of job satisfaction were also seen. Moreover, Teodorovicz et al., (2021) has analyzed how to shift extensively to online working in the pandemic situation. The results indicate that the forced transition of WFH during the Covid-19 pandemic was associated with a drastic reduction in travel time and an increase in the time spent on work and personal activities. Irawanto et al., (2021) has utilized a quantitative approach to understand the association among online working and measured variables such as WFH, work stress, job satisfaction, and work-life balance.

2.4. Gaps in literature

Based on the found literature relevant to our research, some studies are available in different countries in the world and based on different regions. Most of the research discusses the work-from-home concept before the Covid-19 pandemic. However, there is a big difference in this online working concept after the Covid-19 pandemic. Regarding those, research was found which are based on their own country before and after Covid-19 pandemic. As a country, Sri Lankan jobs culture, technologies, equipment, and family background are different from other countries. It is important to have this kind of study in Sri Lanka too as a developing country. Especially in the Colombo district, most of the employees are moved to working online. When evaluating the previous studies, there are no exactly similar studies to our research review. To fill in this research gap, our research is based on job satisfaction with the impact of online working during the Covid-19 pandemic in Colombo district, Sri Lanka.

2.5. Conceptual framework

The conceptual framework of this present study was developed based on the review of job satisfaction of workers with the impact of online working during the Covid-19 pandemic. In this section, conceptual model figures out the independent variable is online working, and the dependent variable is job satisfaction. The independent variable is divided into four parts and

the influence of the factors on job satisfaction on online working was studied under the literature review. We mainly found four factors and dimensions such as physical expectancy, performance expectancy, technological acceptance, and social influence. Table 1 and Figure 2 explain more details about these four factors.

Table 1: Operationalization

Independent variable	Dimensions (Variables that effect to the main variable)
Physical Expectancy Factors (PE)	Have all the equipment to work online (PE1). Have very long working hours per day (PE2). Efficiency of WFH environment to working from office (PE3).
Performance Expectancy Factors (PX)	Flexible for working online (PX1). Have technical knowledge to work online (PX2). Have to face trouble in working online (PX3).
Technological Acceptance Factors (TA)	Have good connectivity while working online (TA1). Telecommunicating will increase productivity (TA2). Rate of proficiency in technology (TA3).
Social Influence Factors (SI)	Need help to do housework (SI1). Have a healthy work-life balance (SI2). Would prefer to continue online working (SI3).

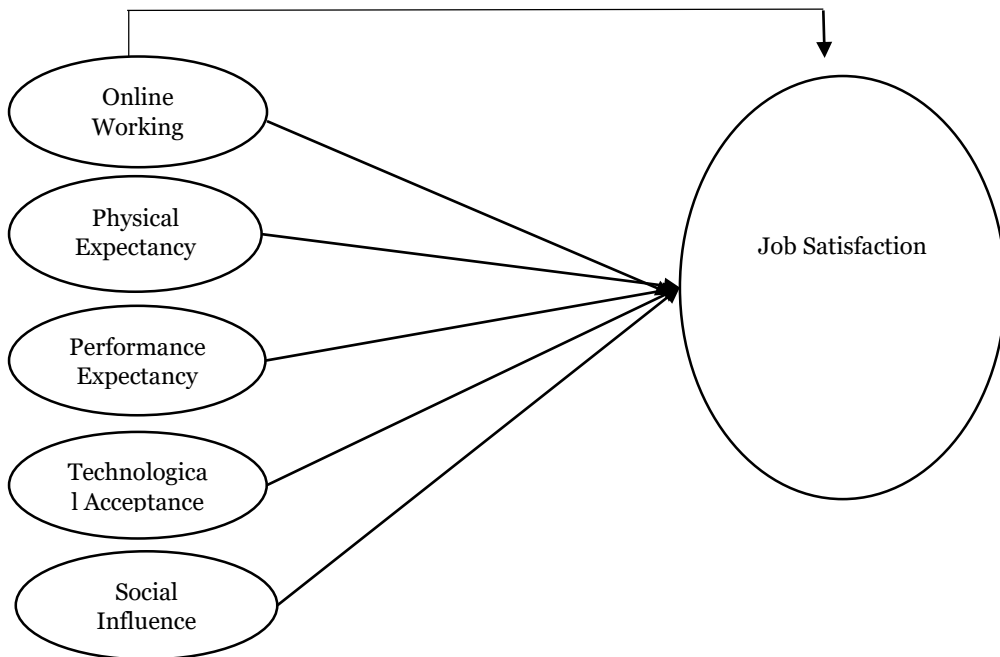


Figure 2: Main Factors of The Job Satisfaction Which Influence to Online Working

2.6. Hypothesis development

Establish a relationship between independent and dependent variables. H_0 = Null hypothesis and H_1 = Alternative hypothesis.

H1: There is a significant impact of physical expectancy on job satisfaction during the Covid-19 pandemic period.

H2: There is a significant impact of performance expectancy on job satisfaction during the Covid-19 pandemic period.

H3: There is a significant impact of technological acceptance on job satisfaction during the Covid-19 pandemic period.

H4: There is a significant impact of social influence on job satisfaction during the Covid-19 pandemic period.

3. Methodology

3.1. Scope of the study

The population of this study was employees of the Colombo district who worked online during the Covid-19 pandemic period. The sample was selected randomly and the questionnaire was sent to the online workers in the entire district. It included both government and private sector offices that continued their work online.

3.2. Data collection

The random sampling procedure was started by deciding the population of employees in the Colombo district who worked online during the Covid-19 pandemic period. The sample size was decided by the researchers as 90-120, and then the sample was selected randomly. The questionnaire was distributed online and collected data from the sample. The questionnaire was developed through Google form and shared online for the data collection. For this study, primary data was collected by distributing a questionnaire. The questionnaire was distributed online to the respondents randomly and gathered responses online in the Colombo district. Hence, 99 workers responded to the shared questionnaire from the Colombo district and the survey questions were relevant to the satisfaction of working online during the Covid-19 period. The questionnaire was developed according to the Conceptual Framework and evaluated the independent variable and dependent variable, and collected data for factors of variable as Physical Expectancy, Performance Expectancy, Technological Acceptance, and Social Influence. Mainly two separate sections were included in the questionnaire; the first section is about personal information like age, gender, education level, and employment sector. The questions of the second section were targeted towards job satisfaction, their issues and their idea about continuing the online working concept in future while the other main questions were relevant to online work. These questions were designed to cover all the objectives of the study.

4. Data analysis

The Statistical Package of Social Science (SPSS) has been used to analyze the collected data while it determined the impact of online working on the job satisfaction during the Covid-19 situation. The variable of hypothesis controlled the dependent variable. The data analysis was mainly focused on independent, variable, and dependent variable and several factors were identified.

Tables, graphs and texts were used to present data. Further, the findings and the recommendations were based on the results of the data analysis.

4.1. Result and discussion

This study identifies the job satisfaction of workers with the impact of online working during the Covid-19 pandemic by the results of the online survey. It was mainly focused on the Colombo district and 99 respondents were selected for the discussion. In this section, the sample characteristics of collected data are illustrated graphically.

4.2. Descriptive statistics

Figure 3 shows the age distribution of the research sample. According to that, age between 21 to 30 is 78% workers, age between 31 to 40 is 15% workers, and age above 40 is 6% workers. Figure 4 shows the gender distribution of the research sample. Female 52% and male 47% responded. Figure 5 shows the education level of the research sample. According to that, the proportion of Diploma Qualified is 27%, G.C.E Advanced level qualified is 49%, and Degree qualified is 23%. Figure 6 shows the employment sector of the research sample. According to that, private sector is 80%, government sector is 16%, and self-employed is 3%.

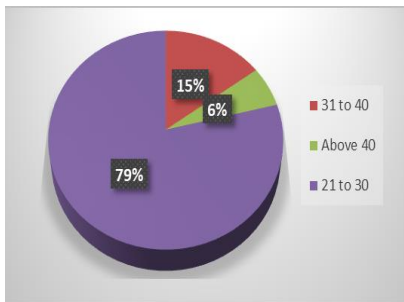


Figure 3: Respondents' Age

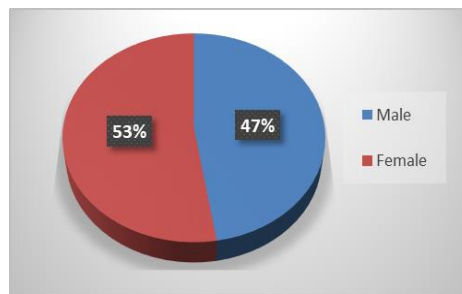


Figure 4: Respondents' Gender

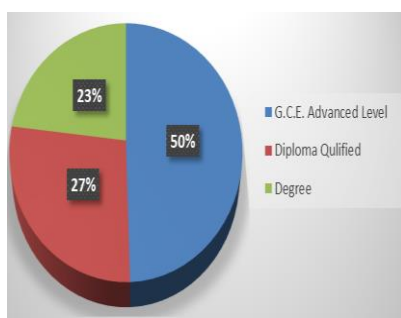


Figure 5: Respondents' Education level

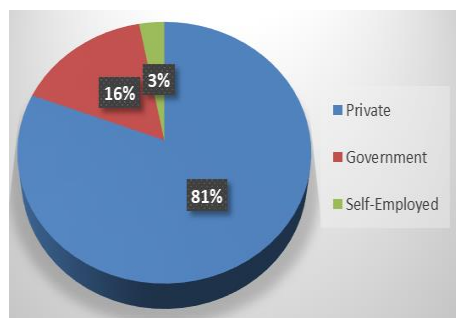


Figure 6: Respondents' Employment Sector

Table 1 explained the main factors in detail and based on those, descriptive statistics were explained by the following Table 2 Physical Expectancy Factors (PE), Table 3 Performance Expectancy Factors (PX), and Table 5 Social Influence Factors (SI). Here N is the total amount of data.

Table 2: Descriptive Statistics - Pe Factors

	N	Minimum	Maximum	Mean	Std. Deviation
PE1	99	1	2	1.07	.258
PE2	99	1	3	1.90	.440
PE3	99	1	4	2.27	.712
Valid N (listwise)	99				

Table 3: Descriptive Statistics – Px Factors

	N	Minimum	Maximum	Mean	Std. Deviation
PX1	99	1	5	2.36	.897
PX2	99	1	2	1.11	.316
PX3	99	1	2	1.49	.503
Valid N (listwise)	99				

Table 4: Descriptive Statistics – Ta Factors

	N	Minimum	Maximum	Mean	Std. Deviation
TA1	99	1	2	1.20	.404
TA2	99	1	2	1.14	.350
TA3	99	1	3	1.70	.504
Valid N (listwise)	99				

Table 5: Descriptive Statistics - Si Factors

	N	Minimum	Maximum	Mean	Std. Deviation
SI1	99	1	2	1.14	.350
SI2	99	1	2	1.09	.289
SI3	99	1	2	1.22	.418
Valid N (listwise)	99				

4.3. Correlation between independent variables

The following Tables 6, Tables 7, Tables 8, and Tables 9 explain the correlation between independent variables of factors such as physical expectancy factors, performance expectancy

factors, technological acceptance factors, and social influence factors respectively. Table 10 explains the summary of all correlations.

Table 6: Correlations - Pe Factors

			PE1	PE2	PE3
Spearman's Rho	PE1	Correlation Coefficient	1.000	-.034	.204*
		Sig. (2-tailed)	.	.742	.043
	PE2	Correlation Coefficient	-.034	1.000	-.076
		Sig. (2-tailed)	.742	.	.454
	PE3	Correlation Coefficient	.204*	-.076	1.000
		Sig. (2-tailed)	.043	.454	.

Table 7: Correlations - Px Factors

			PX1	PX2	PX3
Spearman's Rho	PX1	Correlation Coefficient	1.000	.489**	-.060
		Sig. (2-tailed)	.	.000	.558
	PX2	Correlation Coefficient	.489**	1.000	-.029
		Sig. (2-tailed)	.000	.	.779
	PX3	Correlation Coefficient	-.060	-.029	1.000
		Sig. (2-tailed)	.558	.779	.

Table 8: Correlations - TA Factors

			SI1	SI2	SI3
Spearman's Rho	SI1	Correlation Coefficient	1.000	-.028	.062
		Sig. (2-tailed)	.	.787	.542
	SI2	Correlation Coefficient	-.028	1.000	.000
		Sig. (2-tailed)	.787	.	1.000
	SI3	Correlation Coefficient	.062	.000	1.000
		Sig. (2-tailed)	.542	1.000	.

Table 9: Correlations - Si Factors

			TA1	TA2	TA3
Spearman's Rho	TA1	Correlation Coefficient	1.000	.157	-.145
		Sig. (2-tailed)	.	.121	.151
	TA2	Correlation Coefficient	.157	1.000	.001

	Sig. (2-tailed)	.121	.	.990
TA3	Correlation Coefficient	-.145	.001	1.000
	Sig. (2-tailed)	.151	.990	.

Table 10: Correlations Based on Four Factors

				REGR Factor score 1 for analysis			
				1	2	3	4
S p a r m a n ' s R h o	REGR factor score 1 for analysis 1 – PE factor	Correlation	1.000	.428**	.237*	.112	
		Coefficient					
		Sig. (2-tailed)	.	.000	.018	.269	
		N	99	99	99	99	
	REGR factor score 1 for analysis 2 – PX	Correlation	.428**	1.000	.176	.013	
		Coefficient					
		Sig. (2-tailed)	.000	.	.082	.902	
		N	99	99	99	99	
	REGR factor score 1 for analysis 3 – TA factor	Correlation	.237*	.176	1.000	.099	
		Coefficient					
		Sig. (2-tailed)	.018	.082	.	.329	
		N	99	99	99	99	
	REGR factor score 1 for analysis 4 – SI factor	Correlation	.112	.013	.099	1.000	
		Coefficient					
		Sig. (2-tailed)	.269	.902	.329	.	
		N	99	99	99	99	

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

* . Correlation is significant at the 0.05 level (2-tailed).

4.3. Regression analysis and testing hypothesis

Table 11 explains the model summary, Table 12 explains the Analysis of Variance (ANOVA) results, and Table 13 explains the coefficients. According to that, the constant value is 3.054, and the other independent variables create the model. The sample correlation coefficient (R), F-statistic (F), the degrees of freedom in the source (df), and standard regression coefficient (B) are used for the following results. The value of (t) measures the size of the difference relative to the variation in the sample data. P is the probability value and B is the beta-coefficient.

Table 11: Model Summary

Model	R	R Square	Adjusted R square	Std. Error of the Estimate
1	.743 ^a	.633	.019	.325

Table 12: ANOVA^a

	Model	Sum of Squares	df	Mean Square	F	Sig. (P value)
1	Regression	.621	4	.155	1.470	.217 ^b
	Residual	9.925	94	.106		
	Total	10.545	98			

Considering a model according to the ANOVA table, it shows that the overall model is significant with the dependent variable. According to the following tables, R square value .633 meant that 63% of the variation in job satisfaction has been explained by the model.

There is a positive relationship between physical expectancy factors, performance expectancy factors and technological acceptance factors on employee satisfaction during the Covid-19 pandemic in the Colombo district. ($P < , b =$). However, there is a negative relationship between social influence factors and job satisfaction of workers during the Covid-19 pandemic in the Colombo district ($P > , = b$). If the P value is lower than 0.05, there is an association between the independent variables. Based on the results, the physical expectancy factor, performance expectancy factor, and technological acceptance factor have a positive relationship and influence employee satisfaction in working online. However, social influence factors have a negative relationship with employee satisfaction in working online. Based on the results, only H1, H2 and H3 hypotheses can be accepted.

Table 13: Coefficients^a

Model	Unstandardized		standardized	t	Sig. (P value)
	B	Std. Error	Beta		
1 (Constant)	3.054	.033		34.333	.000
REGR factor score 1 for analysis 1 – PE factor	.009	.042	-.028	-.224	.024
REGR factor score 1 for analysis 2 – PX factor	.011	.045	.032	.235	.014
REGR factor score 1 for analysis 3 – TA factor	.030	.038	.091	.780	.038
REGR factor score 1 for analysis 4 – SI factor	-.076	.033	-.230	-2.282	.325

5. Conclusion and future work

The online working experience gave the Covid-19 world the alternative option. In general, there were hidden challenges with online working during the Covid-19 pandemic period and different kinds of opportunities. This study mainly focused on the job satisfaction of workers with the impact of online working during the Covid-19 pandemic situation and mainly focused on Colombo district employees who work online during the pandemic situation. Job satisfaction is an overall sense of features, working environment, job cognitive value of tangible/intangible/pleasant, and unpleasant effects associated with input and output. This study evaluated the factors that affect online working and the workers' job satisfaction. For that, the independent variable and the dependent variable were identified and the factors such as physical expectancy, performance expectancy, technological acceptance, and social influence were studied. This study helped to understand the above factors and their influence

as well as affecting ways for the job satisfaction in online working. Workers like WFH if they could overcome the main issues like technological problems and equipment problems while they like to follow flexible online working guidelines. In terms of job satisfaction, there are several factors affected. The organization can take several actions to increase the job satisfaction of workers when working online. One of them is organizations can introduce guidelines for workers when working online and give training regarding at least minimum technological requirements that one must have for online working. Also trying to give technological facilities, free meeting facilities and necessary equipment for workers encourage them to work online. The government can take several actions like encouraging medium and small enterprises to adopt the new normal concept of WFH. And based on the results, they like to continue this as a hybrid method through both work at the office and WFH after the Covid-19 period.

This case study was only conducted for the Colombo district online workers. Because of that, in future work we are planning to collect data from other districts especially outside the western province to check the job satisfaction of the WFH concept in Sri Lanka.

References

- Armstrong, M. (2006). *A handbook of human resource management practice*. Kogan Page Publishers.
- Baker, E., Avery, G. C., & Crawford, J. D. (2007). Satisfaction and perceived productivity when professionals work from home. *Research & Practice in Human Resource Management*.
- Baruch, Y. (2000). Teleworking: Benefits and pitfalls as perceived by professionals and managers. *New technology, Work and Employment*, 15(1), 34-49.
- Bhattarai, M. (2020). Working from home and job satisfaction during the pandemic times. Research Gate.
- Brynjolfsson, E., Horton, J. J., Ozimek, A., Rock, D., Sharma, G., & TuYe, H. Y. (2020). COVID-19 and remote work: An early look at US data (No. w27344). *National Bureau of Economic Research*.
- Contreras, F., Baykal, E., & Abid, G. (2020). E-leadership and teleworking in times of COVID-19 and beyond: What we know and where do we go. *Frontiers in Psychology*, 3484.
- Darboe, K. (1999). An empirical study of the social correlates of job satisfaction among plant science graduates of a Midwestern university: A test of Victor H. Vroom's (1964) expectancy theory. *South Dakota State University*.
- Dutcher, E. G. (2012). The effects of telecommuting on productivity: An experimental examination. The role of dull and creative tasks. *Journal of Economic Behavior & Organization*, 84(1), 355-363.
- Gajendran, R.S., & Harrison, D.A. (2007). The good, the bad, and the unknown about telecommuting: Meta-analysis of psychological mediators and individual consequences. *The Journal of Applied Psychology*, 92(6), 1524-41.
- Grant, C. A., Wallace, L. M., & Spurgeon, P. C. (2013). An exploration of the psychological factors affecting remote e-worker's job effectiveness, well-being and work-life balance. *Employee Relations*.
- Heavey, L., Casey, G., Kelly, C., Kelly, D., & McDarby, G. (2020). No evidence of secondary transmission of COVID-19 from children attending school in Ireland, 2020. *Euro Surveillance*, 25(21), 2000903.
- Irawanto, D. W., Novianti, K. R., & Roz, K. (2021). Work from home: Measuring satisfaction between work-life balance and work stress during the COVID-19 pandemic in Indonesia. *Economies*, 9(3), 96.

- John, S. F., Varghese, M. G. M., & Varghese, M. S. (2020). The impact of job satisfaction on job performance: An empirical analysis of virtual work during the pandemic. *PalArch's Journal of Archaeology of Egypt/Egyptology*, *17*(9), 1503-1510.
- Johnson, D. W., Johnson, R. T., & Smith, K. (2007). The state of cooperative learning in postsecondary and professional settings. *Educational Psychology Review*, *19*(1), 15-29.
- Konrad, A. M., & Mangel, R. (2000). The impact of work-life programs on firm productivity. *Strategic Management Journal*, *21*(12), 1225-1237.
- Kramer, A., & Kramer, K. Z. (2020). The potential impact of the Covid-19 pandemic on occupational status, work from home, and occupational mobility. *Journal of Vocational Behavior*, *119*, 103442.
- Maarleveld, M., Volker, L., & Van Der Voorde, T. J. (2009). Measuring employee satisfaction in new offices—the WODI toolkit. *Journal of Facilities Management*.
- Messenger, J. C., & Gschwind, L. (2016). Three generations of telework: New ICTs and the (R) evolution from home office to virtual office. *New Technology, Work and Employment*, *31*(3), 195-208.
- Olmos-Vega, F., Dolmans, D., Donkers, J., & Stalmeijer, R. E. (2015). Understanding how residents' preferences for supervisory methods change throughout residency training: A mixed-methods study. *BMC Medical Education*, *15*(1), 1-8.
- Onwuegbuzie, A. J., Witcher, A. E., Collins, K. M., Filer, J. D., Wiedmaier, C. D., & Moore, C. W. (2007). Students' perceptions of characteristics of effective college teachers: A validity study of a teaching evaluation form using a mixed-methods analysis. *American Educational Research Journal*, *44*(1), 113-160.
- Pouwels, B., Siegers, J., & Vlasblom, J. D. (2008). Income, working hours, and happiness. *Economics Letters*, *99*(1), 72-74.
- Rogers, E. M., & Singhal, A. (2003). Empowerment and communication: Lessons learned from organizing for social change. *Annals of the International Communication Association*, *27*(1), 67-85.
- Tan, J., Wang, L., Zhang, H., & Li, W. (2020). Disruptive innovation and technology ecosystem: The evolution of the inter cohesive public-private collaboration network in Chinese telecommunication industry. *Journal of Engineering and Technology Management*, *57*, 101573.
- Teodorovicz, T., Sadun, R., Kun, A. L., & Shaer, O. (2021). Working from home during COVID19: Evidence from Time-Use Studies. *Harvard Business School*.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 425-478.
- Watad, M. M., & Jenkins, G. T. (2010). The impact of telework on knowledge creation and management. *Journal of Knowledge Management Practice*, *11*(4), 237-251.