A Conditional Process Analysis on the Relationship between Work-Life Balance, Well-Being, Job Satisfaction, and Work from Home Practice during the COVID-19 Pandemic

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Abstract

The unprecedented of the COVID-19 pandemic has enforced many Indonesian organizations to introduce work from home (WFH) arrangements. With a lack of preparation and little prior experience, such working arrangements may adversely impact employees' well-being and work-related outcomes. This study aims to investigate the conditional or moderator effect of the work from home arrangements on the relationship between work-life balance (WLB), and job satisfaction as well as the mediating effect of well-being during the COVID-19 pandemic. A cross-sectional study design using an online survey gathered data from 405 Indonesian employees during October-November 2020. A conditional process analysis using Process Macro Model 5 showed that the relationship between WLB and job satisfaction was completely mediated by employees' well-being levels. Moreover, with the same levels of WLB, employees who WFH perceived more satisfied with their jobs while the same effect was not expected to be observed among employees who remained working at their offices or work-sites. The use of a conditional process analysis was able to link the difference of working arrangement and in a more complex relationship involving WLB, well-being, and job satisfaction in the pandemic context. Our findings suggested the benefits of WFH arrangement for individual and organizational outcomes despite potential increased stressors during the pandemic.

Keywords
Work-Life Balance, Job Satisfaction, COVID-19, Work from Home, and Well-Being.

1. Introduction

The COVID-19 pandemic has greatly changed to social and economic conditions, affecting work behaviors, family experiences, and personal well-being (Bouziri et al. 2020, Wang et al. 2020). To prevent the spread of the coronavirus while maintaining the business operations, governments and firms have encouraged employees to work from home (WFH). Prior to the pandemic, WFH – often interchangeably with telework or remote work – was not a widely used practice, particularly in developing countries (Gottlieb et al. 2020). Such a working arrangement seemed to be a

privilege for higher-income earners and white-collar workers (e.g., over 40% of teleworkers are executives, managers, or professionals) (Desilver 2021).

One of the main advantages of WFH arrangement is a better work-life balance which refers to an individual's perception of how well her or his multiple life roles are balanced following her or his current life priorities (Haar et al. 2014, Hill et al. 2001). However, the abrupt shift in the nature of work and life or family boundaries due to the COVID-19 crisis escalated potential role conflict. Employees, particularly those having children, may encounter increased household chores and family care demands because of the widespread school and daycare closures and restrictions on public facilities. Furthermore, employees also encountered WFH-related challenges such as social isolation, difficulty to communicate with co-workers and clients, limited information and communication technologies (ICT) infrastructure, and lack of dedicated workspace and equipment (Wang et al. 2020, Wong et al. 2020) which may worsen their physical and psychological health as well as negatively affect their job-related outcomes such as job satisfaction, turnover intention, and productivity (Bouziri et al. 2020, Schieman et al. 2021). Not only home-based employees, but the extant research has also demonstrated the importance of work-life balance for health and job-related outcomes among general working populations (Nijp et al. 2012, Sirgy and Lee 2018).

Studies on the bivariate relationship between work-life balance, well-being, and job satisfaction are well-documented. However, no studies were conducted amidst the pandemic context particularly in a developing country in which such working arrangement was very slowly adopted. This study fills the literature gap by offering a more complex relationship of work-life balance, well-being, and job satisfaction among both home-based work employees or not in a special context. This study aims to investigate how Indonesian employees' work-life balance influences job satisfaction through the well-being mechanism, and how their work-life balance crosses over the working arrangement to influence their job satisfaction during the COVID-19 pandemic. Assessing how psychosocial risk work-life balance is affected is one key to preserve both occupational health and organizational outcomes.

2. Literature Review

Work-life balance is the degree to which an individual perceives can simultaneously balance the emotional, behavioral, and time demands of both work, family, and personal duties (Haar et al. 2014, Hill et al. 2001). The work-life family issue is one of the contemporary major factors that is important at both the organizational and employee levels. This issue has been associated with various health problems among developed countries workers including the US (Minnotte and Yucel 2018), New Zealand (Haar et al. 2014), Italy (Gragnano et al. 2020), and UK (Grant et al. 2013). Extant literature has also suggested a strong link between good work-life balance and better organizational outcomes (e.g., more job satisfaction, organizational commitment, productivity, and lower turnover intention) (Allen et al. 2000, Beauregard and Henry 2009, Brough et al. 2014) either directly or indirectly through increased well-being, lower job stress, and decreased burnout of the employees (Charalampous et al. 2019, Jackson and Fransman 2018, Nijp et al. 2012)

Although much research has demonstrated that work-life balance leads to increased job satisfaction and plays an important role in individual well-being in any working arrangement among the general working population (Brough et al. 2014, Nijp et al. 2012, Sirgy and Lee 2018), better work-life balance has been more frequently reported by those who had flexibility work arrangement such as work from home employees (Bloom et al. 2015, Crosbie and Moore 2004, Eddleston and Mulki 2017, Hill et al. 2001). The concept of WFH was introduced in the 1970s due to the oil crisis in the USA and rapidly increased due to the advanced ICT (Greer and Payne 2014). In this study, we used a broader definition of work from home, or also termed telework, remote work, telecommuting, that refers to any paid work (at least 20 hours per week) that is carried out at an approved alternative worksite, primarily from home, with the assistance of information and computer technology (Crosbie and Moore 2004, Hill et al. 2001).

Before the pandemic, WFH was very slowly adopted in Indonesia, although in several developing countries, it has been predicted that over 30% of employment might be completed from home (Gottlieb et al. 2020, Saltiel 2020). The reluctance of most Indonesian organizations towards adopting such working arrangement is mainly due to high need of intense communication, lack of support facilities such as dedicated workspace, technology infrastructure, and equipment to perform the jobs (Mustajab et al. 2020, Suarlan 2017), as well as technostress and cybersecurity issues (Gaudioso et al. 2017, Hernandez, 2020).
Scholars have found that WFH employees felt satisfied with their jobs which could be related to the flexibility of working times compared to more static office-based hours and reduced commuting time (Davidescu et al. 2020).

Research has also indicated the benefits of WFH practice on individual and organizational outcomes such as better physical and psychological health (Charalampous et al. 2019, Tavares 2017), higher job satisfaction and organizational commitment, enhanced productivity, and lower turnover intention (Allen et al. 2015, Green et al. 2020, OECD 2020). Nevertheless, in such an unprecedented and crisis situation as the COVID-19 pandemic, both organizations and employees may be unprepared physically, mentally or infrastructure-wise to address all WFH challenges. While struggling with their first-time experiences of full WFH, many workers are also isolated from co-workers and social life, one of the key disadvantages in WFH (ILO 2020, Wang et al. 2020). These stressors, even stronger in the current economic situation, may threaten their physical and mental health. Meanwhile, the positive effect of WFH on job satisfaction may also not be achieved because the current WFH is mostly mandatory, not necessarily an option. Working parents may deal with additional care responsibilities due to closures of schools and childcare facilities, making it difficult to maintain their work-life balance. The work-life balance issue may also occur among non-WFH employees because they also struggle to juggle work while caring for their children in the absence of alternative daycare arrangements.

Many studies have been conducted to investigate the impact of WFH on work-life balance (Aguilera et al. 2016, Crosbie and Moore 2004), the positive effect of WFH on mental well-being (Nakrošienė et al. 2019, Tavares 2017) and job satisfaction (Davidescu et al. 2020, Gragnano et al. 2020). Research on the strong association between work-life balance and mental well-being (Brough et al. 2014, Sirgy and Lee 2018) as well as job satisfaction (Allen et al. 2000, Soomro et al. 2018) was also well documented. However, to our knowledge, no studies have been conducted to investigate a more complex relationship among the aforementioned variables in the context of COVID-19 pandemic. There is also little research on the WFH, implemented in response to COVID-19 lockdown measures, in a developing country.

Grounded in the literature concepts on work-life conflict and job satisfaction (Spector 1997) and work-life balance and flexible work arrangement (Crosbie and Moore 2004, Hill et al. 2001, Jackson and Fransman 2018), we aim to extend these concepts in the special context of a pandemic. Our conceptual model, as depicted in Figure 1, proposed that when people perceive more work-life balance, they will feel better well-being which in turn raises their job satisfaction. Job satisfaction is a major outcome of sustainable human resource management which is consistently correlated with job performance (Spector 1997). Well-being will act as a mediation variable that provides additional information on how work-life balance and job satisfaction are strongly associated with each other. We also introduce the conditional effect of working arrangement to explore to what extent the influence of work-life balance on job satisfaction between employees who suddenly shifted into WFH arrangement and those who remained work at the office or physical work-sites. We further posit the following hypotheses:

- Hypothesis 1. Employees who WFH will report better work-life balance, higher levels of well-being higher, and more satisfaction with their jobs as compared to employees who remained work at office or work-sites.
- Hypothesis 2. The levels of well-being will mediate the relationship between work-life balance and job satisfaction.
- Hypothesis 3. The influence of work-life balance on job satisfaction will be conditioned on or moderated by the WFH arrangement.

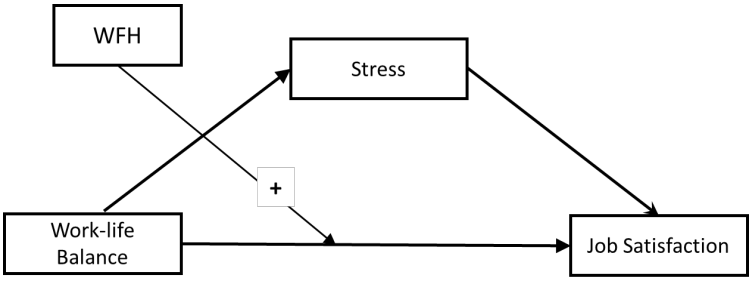

Figure 1. Conceptual model

3. Methods

3.1 Study Design

A cross-sectional study design using a convenience sample of Indonesian employees was conducted via an online questionnaire. The questionnaire was distributed in October-November 2020 through snowball sampling via collaborating author networks and various social media platforms. A total of 405 respondents who were working and residing in Indonesia have completed the questionnaires and provided informed consent at the start of the survey

3.2 Measures

To assess the extent to which employees perceived their levels of work-life balance, we used a work-life balance scale from (Haar et al. 2014), adapted to the context of the pandemic. The scale consists of three items measured on a 5-point Likert scale ranging from 1 ("completely disagree") to 5 ("completely agree") (e.g.; "I manage to balance the demands of my work and personal/family life well"). An average of all items was calculated to obtain the composite score with higher scores indicating better work-life balance. The internal reliability for this subscale, determined by Cronbach α, was 0.73.

We assessed employees' well-being levels with a WHO-Well-being Index (WHO-5) which consists of five positively worded items that reflect the presence or absence of well-being. Each of the five items of the WHO-5 was scored from 0 (at no time) to 5 points (all of the time). The total raw score was translated into a percentage scale ranging from 0 to 100. Higher scores (Topp et al. 2015). The internal consistency of the measure for this study was 0.92.

We captured the extent to which employees feel satisfied with their jobs with a single-item measure of job satisfaction on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) which was adapted from the Michigan Organizational Assessment Scale (Lawler et al. 2013): "Since pandemic, I am more satisfied with my present job than before"). Higher scores correspond to more satisfaction.

3.3 Data Analysis

Descriptive statistics were performed to report the count and percentage of categorical variables or the mean and standard deviation of numeric variables. Two analytical strategies were used in this study. Firstly, the study evaluated the bivariate relationship between all measured variables with various tests depending on the variable types (numeric, binary, or categorical): independent *t*-test, One-way ANOVA, Pearson correlation, and Chi-square.

Secondly, to evaluate the model, we used the Hayes PROCESS macro model 5 which combines a mediation with moderation of the direct effect of a predictor variable. In this model, there is an indirect effect of work-life balance on job satisfaction through mediator well-being as well as a direct effect that is a function of a fourth variable WFH, as depicted in the statistical diagram in Figure 2. The significance of the indirect effect was determined using a 5,000-bootstrapping procedure to estimate the 95% bias-corrected Confidence Interval (CI) (Hayes 2018). If the upper boundary and the lower boundary of the CI do not contain zero, then the indirect effect is significant. Additionally, the model enabled us to test whether employees who WFH or not influences the direct effect of work-life balance on job satisfaction.

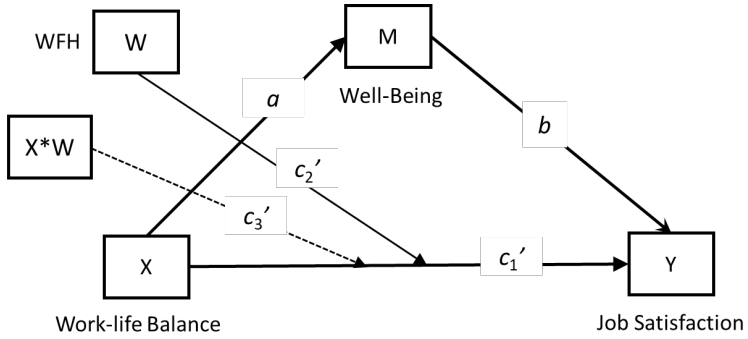

Figure 2. Statistical diagram

4. Results and Discussion

4.1 Demographic Characteristics and Descriptive Statistics

Table 1 displays the descriptive statistics of participants' demographics characteristics and all variables. The majority of respondents were female, age 37.5 years old, had job experience for more than 10 years (41.7%), attained diploma or bachelor degrees (46.1%), were married (77.8%), owned 1-3 children (65.5%), and worked from home (80.8%).

Table 1. Descriptive statistics of demographic characteristics and measure variables

Variable	Categories	Frequency (%) or Mean (SD)			
Gender	1. Male				194 (47.8%)
	2. Female				212(52.2%)
Age					37.55 (8.58)
Education level	1. ≤ High School				52(12.8%)
	2. University				187(46.1%)
	3. Post-graduate				167(41.1%)
Job tenure	1. < 1 years				34(8.4%)
	2. 1- 5 years				97(23.9%)
	3. 5 - 10 years				106(26.1%)
	4. > 10 years				169(41.7%)
Occupation	1. White-collar				298(73.4%)
	2. Blue-collar				108(26.6%)
Marital	1. Married				316(77.8%)
	2. Divorced / widowed				14(3.4)
	3. Single				76(18.7%)
Children	1. 0				120(29.6%)
	2. 1-3				266(65.5%)
	2. > 3				20(4.9%)
WFH Policy	1. No	78(19.2%)	**No WFH**	**WFH**	***t***
	2. Yes	328(80.8%)			
Work-life Balance		3.80(0.66)	3.58(0.62)	3.85(0.66)	-3.28*
Well-being		61.8(22.56)	54.46(24.94)	63.55(21.63)	-3.24*
Job Satisfaction		2.92 (0.88)	2.55(0.88)	3.01(0.93)	-3.95**

N=406. *significant at $p<0.01$, **<0.001

Employees who were working from home reported significantly higher levels of work-life balance ($t(404)=-3.28$), well-being ($t(404)=3.24$), and job satisfaction ($t(404)=3.93$) as compared to those who were not (see Table 1 lower-right corner). These results are in line with prior studies that found better work-life balance among home-based employees either under normal circumstances (Allen et al. 2015, Bloom et al. 2015, Tavares 2017) or during the pandemic (Song et al. 2020, Wong et al. 2020). This evidence was opposite to Schieman et al. (2021) who have reported an amplified work-life conflict among employees who worked from home and had younger children. However, our bivariate analysis (see Table 2) showed that there is no correlation between having children with both work-life balance and well-being. It might be explained by the cross-cultural differences. It is a common practice for middle-income-Indonesian families had assistance from their maids for doing household chores and babysitting (Sutarto et al. 2021).

4.2 Correlation Analysis

Table 2 shows the correlation analysis results between the variables involved in the study. The bivariate correlations between the WFH and all measure variables, namely work-life balance, well-being, and job satisfaction mindfulness, were statistically significant.

Table 2. Correlation among variables

No	Variable	1	2	3	4	5	6	7	8	9	10
1	Gender										
2	Age	0.63									
3	Education	9.77*	52.08*								
4	Job tenure	8.35	41.90*	78.94*							
5	Occupation	7.77**	10.19*	163.55*	33.10*						
6	Married	7.02*	96.66*	123.92*	110.71*	69.55*					
7	Children	2.64	0.57	1.11	9.33	1.63	2.59				
8	WFH	0.034	-5.91*	49.60*	15.48*	18.90*	39.87*	3.24			
9	WLB	-0.084	0.18*	4.69*	3.23*	3.23*	2.099	0.58	-3.28*		
10	Well-being	-1.581	0.24*	8.12*	3.83*	4.35*	4.12*	0.372	-3.24*	0.54*	
11	Job Satisfaction	1.03	0.023	5.21	2.367	4.61*	4.07*	3.12*	-3.95*	0.32*	0.26*

Note. N=406. WFH= Work from Home, WLB=Work-life Balance, *significant at p <0.05.

4.3 Mediation and Moderation Effects

As shown in table 3, work-life balance influences job satisfaction indirectly through employees' well-being and also directly with the magnitude of the direct effect being dependent on whether an employee was working at home or not. Participants who had higher work-life balance levels would report better well-being (a=15.39, see Figure 2), and participants who experienced better well-being would be more satisfied with their jobs (b=0.004). There was no evidence that work-life balance influenced job satisfaction, independent of its effect on well-being (c_1' = -0.11, p = 0.51). A bootstrap confidence interval for the indirect effect ($a*b$ = 0.08) based on 5,000 bootstrap samples that did not contain zero (0.002 to 0.16). Taken together, these results support the full mediation effect of well-being on the relationship between work-life balance and job satisfaction. This indicates the crucial role of well-being as an explanation mechanism for how work-life balance could improve job satisfaction during the pandemic. Aligned with our findings, in a relatively large sample of the general Australia and New Zealand working population, Brough et al. (2014) have also found the negative association between work-life balance and psychological strain (i.e., stress) and positive association with both family and job satisfaction. Evidence of these relationships was also demonstrated over time.

Furthermore, the direct effect of work-life balance on job satisfaction is contingent on whether employees work from home or not. For same levels of work-life balance both home-based employees or not reported a quite similarly satisfaction with their jobs, but as the levels of work-life balance increases, WFH employees perceived more satisfaction while the those who remained working at the site (i.e., office) were likely to feel less satisfied (see Table 3 and Figure 3). This supports our hypothesis and is consistent with prior studies (Dwidienawati et al. 2020, Raišiene et al. 2020) who demonstrated higher levels of job satisfaction among home-based workers compared to non-home-based workers regardless of potential increased stressors induced by the pandemic. OECD (2020) has also highlighted that WFH arrangements can help organizations function better by increasing employees' satisfaction and thus worker productivity.

Nevertheless, the same pattern was not observed among non-WFH employees who tended to feel less satisfied with their jobs although they reported similar levels of work-life balance as their WFH counterparts (see Figure 3 and Table 4). There might be other factors contributing to job satisfaction among this group of employees. Gragnano et al. (2020) have emphasized taking into account the heterogeneity and specificity of different groups of workers when considering

the work-life balance. Employees who were unable to work from home are mostly because of the nature of their jobs such as essential workers (i.e., employees who perform a variety of operations and services that are usually required to keep critical infrastructure running). It seems that they encountered similar or even higher work demands whereas they also tried to address increased life stressors, induced by the pandemic. On the other hand, a possible explanation for higher satisfaction among WFH employees might be attributed to higher levels of job autonomy and flexibility – some advantages of WFH – which allowed them to use their extra time dealing with additional household chores and family care. It also seems that organizations made some compassionate policies to adopt with new-way of working experience (e.g., adjusting job demand, flexible work schedule) (Hernandez 2020, Schieman et al. 2021), potentially contributing to lowered work-role expectations. In their integrative review, Sirgy and Lee (2018) have shown that organizational support programs such as flexible work arrangement could enhance work-life balance, leading to higher overall life satisfaction

Table 3. Mediation and indirect effect

Predictor	**Path**	**Outcomes**										
		M (Well-being)			**Y (Job Satisfaction)**				**Indirect Effect**			
		Index	**SE**	***p***	**Path**	**Index**	**SE**	***p***	**Index**	**SE**	***LL***	***UL***
X (WLB)	*a*	15.39	3.49	<0.001	c_1'	-0.11	0.16	0.51	----	----	----	----
M (Well-being)		----	----	----	*b*	0.004	0.002	0.05	0.08	0.04	0.002	0.16
W (WFH)		----	----	----	c_2'	-1.62	0.65	0.01	----	----	----	----
X * W		----	----	----	c_3'	0.54	0.18	<0.01	----	----	----	----
		R^2 =		0.29		R^2 =		0.15				
		F(1, 404)=		164.79		F(1, 402)=		17.58				
	p<0.001					p<0.001						

Notes. N = 406. WFH= Work from Home WLB=Work-life balance, LL=Low-level confidence interval, UL=Upper-level confidence interval. Path *a*: WLB ~ Well-being, Path *b*: Well-being ~ Job Satisfaction, Path c_1': WLB ~ Y (direct effect), Path c_2': WFH ~ Job Satisfaction; Path c_3': WLB × WFH ~ Job Satisfaction

Table 4. Conditional direct effect

	b	***SE***	***p***
No WFH	-0.11	0.16	0.51
WFH	0.43	0.08	<0.001

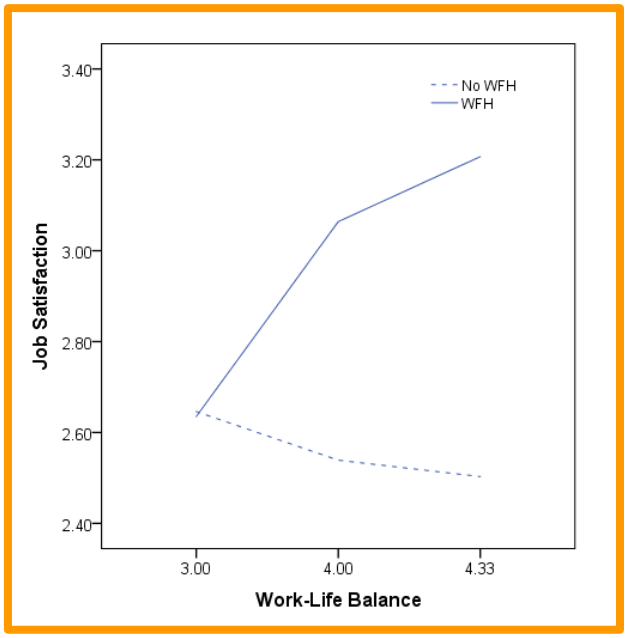

Figure 3. Moderation effect of WFH arrangement between work-life balance and job satisfaction

4.4 Practical Implications

Although most employees were lack of WFH experience prior to COVID-19, and neither they nor their organizations were equipped to support this practice, our research provides insight into the wider acceptance of WFH techniques. It has been estimated that most managerial and professional jobs could be undertaken from home (74%), almost 50% for clerical support workers, and 40% for technician and associate professionals (Gottlieb et al. 2020). ILO (2020) has also predicted approximately one in six occupations at the global level could be carried out at home, requiring countries to make the necessary investments in improving telecommunications infrastructure. Moreover, it is also important to raise worker satisfaction to enhance an organization's productivity, for example through better work-life balance or less distraction leading to more focused work or less absenteeism (OECD 2020).

4.5 Limitations of the Study

The current study had several limitations. First, our cross-sectional design restricts us to infer causality. Further prospective studies are needed to prove the causal relationship. Second, our small sample size and homogeneous sample characteristics (white collars, high educational levels) raise generalizability issues so our findings should be interpreted with caution. Third, self-reported measures – due to time and resource constraints – introduce possible selection bias. Future research is required to explore other potential mediators and moderators (e.g., physical health, organizational support) to better explain the relationship between work-life balance and job satisfaction using more comprehensive and validated measures.

5. Conclusion

To conclude, our study found that employees' well-being fully mediates the relationship between work-life balance and job satisfaction. Furthermore, the direct effect of work-life balance on job satisfaction is also significantly related to a working arrangement. The moderating effect of WFH arrangement on employees' job satisfaction was large when her or his work-life balance was also high, but employees who remained work at their offices or work-sites did not make large differences when their work-life balance levels increased. Despite the study limitations, our findings suggested that organizations may widely adopt WFH practice as an alternative work arrangement in the future. To increase organizational productivity, employers could raise workers' job satisfaction by assisting them better manage work and life demands to preserve their well-being.

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