Psychosocial Working Conditions and Work Engagement: The Mediating Role of Psychological Well-Being

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With the evolution of the global landscape towards remote work, the working conditions of such arrangements tend to pique the interest of researchers. This framework seeks to assess the role of psychological well-being as a mediator between job demands, social support, family-work conflict, and work engagement by combining Conservation of Resources (COR) theory and Boundary theory. Quantitative designs utilizing cross-sectional studies have been conducted. A total of 315 Malaysian employees with remote working experience were recruited as respondents via homogeneous sampling. The COPSOQ II was used to assess job demands and social support, the WAFCS to assess work-family conflict, and the WHO-5 to assess psychological well-being. The Hayes Process Macro Version 4 was employed for hypothesis testing. The results indicate that job demands and social support are significant predictors of work engagement, but work-family conflict is not. For mediation analyses, it was found that psychological well-being mediates the relationship between job demands, social support, work-family conflict, and work engagement. This study offers empirical support for the conceptual framework of JD-R model, COR theory, and boundary theory as a means of predicting work engagement in remote work settings. HR professionals and organizations considering the implementation of work-from-home policies can gain valuable insights from this study, which can be used to develop policies and procedures that promote employee engagement, productivity, and well-being.

Keywords: psychological well-being; work engagement; JD-R model; job demands; social support; work-family conflict

Numerous researchers have highlighted employees as an organization’s most valuable asset. A robust workforce can bolster competitive advantage by generating profits through services and output (Ahmad et al., 2021; Kuean et al., 2010). Employee engagement is crucial because it amplifies productivity and fosters job satisfaction (Mustaffa et al., 2022; Ng et al., 2021; Zainab et al., 2022). Such engagement not only helps in retaining talent but also reduces resource wastage, including recruitment costs. To ensure talent retention, it’s vital to engage employees and nurture a robust organizational commitment. Work engagement, described as the
degree of involvement, is directly linked with elevated productivity and organizational loyalty (Anitha, 2016). Research by Mohd et al., (2016) identified 21 key factors that drive work engagement, including employee welfare, organizational justice, career opportunities, work-life balance, and the working environment. Work environment is a key factor in determining work engagement (Teo et al., 2020). However, the COVID-19 pandemic’s surge in remote work poses challenges. While working from home offers flexibility, it can engender feelings of social isolation, potentially intensifying anxiety and depression, especially if workers’ families have experienced COVID-19 related tragedies. Alarmingly, mental health issues like anxiety, depression, and stress afflict a significant proportion of employees, with one in three being diagnosed (Chua, 2020). The conditions surrounding remote work remain a critical focus for organizations. Previous studies suggest that work conditions significantly influence psychological well-being (Leka et al., 2015). Wang et al., (2020) also noted that perceived organizational support can impact an employee's psychological well-being.

Despite the attention, a research gap persists regarding work engagement as a distinct construct (Marathe et al., 2019). Limited research has been dedicated to the influence of psychological well-being on job outcomes, particularly work engagement. Most studies have concentrated on psychosocial work conditions and their direct impact on employee psychological well-being (Ervasti et al., 2022; Felstead & Henseke, 2017; Lee et al., 2016; Schütte et al., 2014). The current pandemic underscores the need to investigate the mediating role of psychological well-being between psychosocial work conditions of remote employees and their work engagement. By delving into the mediation of psychological well-being in this relationship, researchers can glean deeper insights into the interplay among these factors. Such findings can illuminate managerial perspectives on fostering healthy work environments. They can also guide policymakers and HR professionals in promoting better engagement by ensuring a salubrious work environment for remote staff. Governments and related entities can accentuate and champion mental health services. By educating and raising public awareness about the importance of psychological well-being, they can pave the way for more robust external supports to tackle mental health challenges, consequently elevating work engagement and overall productivity.

**Underpinning Theories**

Three key frameworks that explain how working conditions affect psychological well-being and engagement at work are the Job Demand-Resource Model (JD-R), the Conservation of Resources Theory (COR), and the Boundary Theory.

According to the JD-R model, employees’ positive and negative outcomes are influenced both directly and indirectly by their job demands and job resources (Adisa et al., 2021; Bakker et al., 2014; Chen & Fellenz, 2020; Teo et al., 2020; Van Steenbergen et al., 2018; Wood et al., 2020b). Positive outcomes can be accelerated by job resources, but job demands can deplete energy and result in negative outcomes like stress and emotional exhaustion (Breevaart & Bakker, 2018; Tripathi et al., 2021). Additionally, the JD-R model has been used to forecast how resources and job demands will affect employees’ engagement and well-being at work (Radic et al., 2020).

The COR theory suggests that individuals are innately driven to invest effort in safeguarding their resources and averting their loss, which in turn shapes their psychological well-being and motivation at work (Halbesleben et al., 2014; Hobfoll, 2011; Meyer et al., 2021; Tagoe & Amponsah-Tawiah, 2020). A depletion of these resources can culminate in emotional exhaustion, stress, and waned motivation, while the acquisition of new resources can foster positive outcomes (Wang et al., 2020). This theory has been instrumental in probing the repercussions of psychosocial hazards on well-being and elucidating emotional exhaustion
precipitated by resource loss (Meyer et al., 2021; Tagoe & Amponsah-Tawiah, 2020). Social interactions play a quintessential role in resource acquisition and bolstering self-esteem (Gardner et al., 2015; Hobfoll et al., 2016).

The Boundary Theory delves into how individuals delineate distinct role boundaries to harmonize work-life balance and seamlessly transition between work and familial roles (Allen et al., 2014; Yang et al., 2019). It underscores the necessity of setting lucid demarcations between professional and personal realms. The ease with which one transitions between these roles hinges on one’s adeptness in self-management (Imhanrenialena et al., 2021). The confluence of home and work in remote settings can obscure these boundaries, potentially exacerbating stress and emotional weariness (Bhumika, 2020; Mellner et al., 2016; Greer & Payne, 2014; Sonnentag & Fritz, 2015).

In summation, these theories illuminate the interrelationships among psychosocial work conditions, psychological well-being, and work engagement. They underscore the paramountcy of job resources, social support, self-efficacy, and work-life equilibrium in engendering positive employee outcomes.

Hypothesis Development

**Job Demands and Work Engagement**

According to Breevaart and Bakker (2018), there is a direct negative relationship between job demands and teacher engagement. The prevailing thought is that heightened job demands could demoralize teachers, leading them to be less involved in their daily responsibilities. Echoing the outcomes of another qualitative research, respondents conceded that their commitment waned owing to frustrations and an unsatisfactory work environment (Adisa et al., 2021). Furthermore, studies have highlighted the adverse repercussions of an escalating workload on productivity (Wang et al., 2021; Wu & Chen, 2020). When an unwavering commitment to excellence is absent, organizational performance can be compromised. Radic et al., (2020) asserted that elevated job demands exert a direct influence on employee engagement. However, when individuals possess substantial autonomy over their tasks, their engagement levels are expected to mirror that control (Bakker et al., 2014; Sonnentag et al., 2020). Additionally, Ahmad et al., (2020) emphasized that extant literature corroborates a substantial association between job demands and work engagement. Investigations into both challenging and hindering job demands have established a marked connection with employee engagement (Rastogi & Chaudhary, 2018). Given these findings, this study hypothesized:

H1. Employee work engagement is negatively influenced by Job demands.

**Social Support and Work Engagement**

Research has shown that strong social support from superiors motivates employees to be more engaged (Amano et al., 2021). Furthermore, several studies have established a positive relationship between social support and employee engagement (Contreras et al., 2020; Sonnentag et al., 2020). Building on this, research suggests that when coworkers are willing to provide encouragement and support, it inspires others to reciprocate, thus enhancing overall engagement (Zeijan et al., 2020). Echoing an earlier study, receiving support from superiors is often interpreted as organizational backing, which in turn positively influences work engagement (Caensens et al., 2016; Kiema-Junes et al., 2020). Tan et al., (2020) utilized the JD-R model to establish a direct correlation between support and work engagement in a sample of 214 individuals employed full-time. In contrast, a study of 200 microfinance employees found that neither social support from colleagues nor professional support significantly influenced employee engagement (Jean &
Mathurin, 2021). However, the bulk of the research does underline a connection between the two constructs. The following hypothesis is proposed, based on the literature reviews and the JD-R model's presumptions from earlier studies:

H2. Employee work engagement is positively influenced by social support.

**Work-Family Conflict and Work Engagement**

According to Breevaart and Bakker (2018), motivation and engagement at work are negatively impacted by role conflicts between work and family. As per Shaheen et al., (2019), effectively balancing work and family empowers employees to feel more relaxed and competent, especially when situations are under their control. In line with reviews of the literature based on the JD-R model, Wood et al., (2020a) found that a significant predictor of work engagement was work-family conflict. Park and Lee (2020) observed that work-family conflict negatively influenced work engagement, especially among women. Concurrently, Labrague and Obeidat (2021) found that a lack of boundaries leading to work-life imbalance curtails job engagement. When such conflicts emerge, it is expected that they would consume more time and dilute focus. Yucel et al., (2021) posited that unresolved work-family conflicts have a direct negative impact on work engagement, often culminating in decisions to resign. This sentiment is bolstered by Mache et al., (2014), who noted that organizations can significantly boost work engagement by addressing work-family conflicts. As an example, a survey conducted in 2021 by Žnidaršič and Marič found a weaker correlation between work-family conflict and employee engagement, but it confirmed that conflicts lead to dissatisfaction, which in turn affects engagement. In other studies, researchers discovered that there is a negative correlation between work engagement and the interface between work and family commitments. It is widely accepted that a high level of work engagement reflects an individual's ability to manage family responsibilities, which in turn reduces work-family conflict (Ilies et al., 2017; Jiang et al., 2020). These studies emphasized that balancing work and personal obligations depends on the amount of time spent working, which supports concentration and energy in the workplace. The following theories are put forth in this study in light of these findings:

H3. Employee work engagement is negatively influenced by work-family conflict.

**Psychological Well-Being and Work Engagement**

Work engagement encompasses the positive attitudes employees hold towards their job responsibilities. Numerous studies have highlighted a relationship between work engagement and psychological well-being (Aiello & Tesi, 2017; Radic et al., 2020). When an individual is in a positive emotional state, they are generally more motivated to complete tasks (Saad et al., 2018). Given that psychological well-being mirrors an individual's optimistic perspective, it embodies their positivity. It is often posited that content and happy individuals tend to be more dedicated to their professional performance (Mubeen et al., 2022). This link between psychological well-being and work engagement among teachers has been explored and affirmed (Greenier et al., 2021). Additionally, Mlangeni and Van Dyk (2017) underscored the role of well-being in enhancing the commitment of 178 soldiers and 57 police officers to their roles. A study involving 200 employees from an oil and gas company probed the influence of both psychological and subjective well-being on work engagement, unveiling a positive correlation between well-being and heightened work engagement (Jayasekera, 2017). Employees with a clearer life vision tend to exhibit greater commitment. This notion finds backing in recent research suggesting that those with robust well-being generally foster a more positive work attitude (Oktavia et al., 2020). Paramitta et al. (2020) mirrored these findings, elucidating the uplifting effect of psychological well-being on work engagement. In a contrasting dimension, research has shown that mental health complications can
undercut motivation, thereby affecting work engagement adversely (Kotera et al., 2020). This study operates on the premise that employees who are content with their remote working conditions are more likely to excel in their roles. As such, the following hypotheses were formulated for this study:

H4. Employee work engagement is negatively influenced by psychological well-being.

**Job Demands, Psychological Well-Being, and Work Engagement**

Contrary to prior studies, the research by Ganguly et al., (2020) suggests that when employees were mandated to work from home, both their workloads and productivity increased. Bakker et al., (2021), Imhanrenialena et al., (2021), and Ten Have et al., (2015), extensive research has demonstrated the influence of job demands on an individual's psychological well-being, often leading to employee fatigue and distress. A study by Lee et al., (2016) using a representative sample of 33,569 workers found a relationship between job demands and psychological well-being at work. In line with the COR theory, it posits that grappling with a demanding workload necessitates augmented efforts to achieve desired goals, primarily because such burdens drain employees' vitality (Adil & Baig, 2018). This perspective aligns with Mudrak et al., (2018), who demonstrated a connection between job demands and deteriorating psychological health. Further, there's evidence suggesting that remote work escalates work intensity (Grant et al., 2019). While the allure of remote work offers flexibility and accommodative hours, job demands indisputably influence well-being. A decline in motivation or losing sight of life objectives can deter one's zeal for success, leading to subpar work outcomes. Tesi et al., (2019) highlighted the instrumental role of psychological well-being as a personal resource in harmonizing job demands and work engagement. Even though direct impacts of job demands on work engagement have been identified, studies indicate that the psychological well-being of employees can temper the effects of this relationship (Radic et al., 2020). Most research points to an indirect relationship between elevated job demands and employee engagement. Drawing from this extensive body of literature, the subsequent hypothesis is formulated:

H5. There is a mediating effect of psychological well-being on the relationship between job demands and employees’ work engagement.

**Social Support, Psychological Well-Being, and Work Engagement**

Social support encompasses assistance from both superiors and peers. This kind of support is thought to mitigate feelings of isolation, especially during remote work. According to He et al., (2018), earlier research has demonstrated the beneficial relationships between psychological well-being and social support. Employees who have limited social support frequently report lower levels of psychological well-being, which may be attributed to pervasive feelings of hopelessness and helplessness (Schütte et al., 2014; Ten Have et al., 2015). Given the stress and job uncertainties instigated by the pandemic, extending such support is imperative to counteract these negative emotions, thereby reinforcing a sense of worthiness. Cho (2019) posits that the detrimental effects of emotional dissonance on psychological well-being can be attenuated with appropriate support from peers and managers. When employees feel adequately equipped with support or resources to tackle tasks, it can act as a catalyst, boosting their motivation and aiding them in reconciling internal conflicts (Carrasco et al., 2014). An employee's perception of internal resources can thus spur their commitment to task completion. Furthermore, Bakker et al., (2021) discovered that social support can act as a cushion, diminishing the impact of psychological distress among nurses. Based on these insights, the subsequent hypothesis is posited:
H6. The relationship between social support and employees’ work engagement is mediated by psychological well-being.

**Work-Family Conflict, Psychological Well-Being, and Work Engagement**

Remote work can amplify the risk of role conflict when boundaries between work and personal matters become blurred. Imhanrenialena et al., (2021) found that work-family conflict emerged as a primary stressor in navigating the challenges of remote work. The flexibility inherent in remote work hours can lead to boundaryless working, potentially harmful to one's well-being (Mellner et al., 2016). Specifically, escalating job demands might compel employees to stay engaged for prolonged durations, potentially weakening their familial connections. As suggested by the boundary theory, individuals can undergo latent stress when striving to balance their professional and personal spheres. Research indicates that work-life conflict adversely impacts employee health and well-being (Sirgy & Lee, 2018). Such conflicts can hinder one's ability to savor life, thereby dampening happiness. As noted by Obrenovic et al., (2020), the repercussions of work-family conflict on psychological well-being directly influence job performance (Novitasari et al., 2020). This research posits that understanding this relationship can provide organizations with a strategy to address work-family conflict effectively. When considering the three dimensions of work engagement, dissatisfaction can erode feelings of accomplishment, which may, in turn, undermine the motivation to immerse oneself in work. But within the framework of the JD-R model, having enough resources could lessen the negative impact that conflict has on worker engagement. In light of these discoveries, the research puts forth the following hypothesis:

H7. The relationship between work-family conflict and work engagement is mediated by psychological well-being.

The conceptual framework of this study is depicted in Figure 1.

![Figure 1. Conceptual Framework](image)

**Method**

**Participants**

A cross-sectional study was conducted using a quantitative method (Chiv et al., 2022). Due to the pandemic and the research objective focusing on employees working from home, data was collected via online questionnaires. This study encompassed 315 respondents aged 18 years and above. All participants are employed full-time in Malaysia and have experienced working from home for a minimum of three months. DeVellis and Thorpe (2021) proposed that a sample size of at least 300 is suitable for a study containing more than 20 construct items. The sample size of this study meets the requirements for further data analysis. Tietze and Musson (2010) defined working from home as the study of experiences associated with identity work when it is...
a new practice for a portion of their weekly working hours (equivalent to 2.5 days a week) over the past year, which equates to 3 months. This study refined the definition to exclude employees with less than three months of remote work experience. Those not based in Malaysia or with less than three months of remote work experience were excluded.

As per Table 1, fewer than half of the participants, 45.4% to be exact, have over six months of remote work experience. This means that 172 participants, which is 54.6% of the sample, have worked from home between three to five months. The sample comprises 199 females (63.2%), 116 males (36.8%), with 56.8% aged between 25 and 30. The next age groups are those 41 and older (15.2%), 31 to 35 years old (12.4%), and 36 to 40 years old (8.4%). Notably, only a minor segment, 7.4%, of participants between 36 and 40 years participated. The analysis reveals that 67.9% of the participants are unmarried, 30.2% are married, and around six individuals or 1.9% are divorced. Regarding education, 60.6% hold a bachelor's degree, 15.2% have a master's or doctorate, 14.6% possess a diploma or its SPM/STPM equivalent, and 1.9% have a certificate. In terms of job roles, 55.2% are at the Executive level, 22.9% at the non-Executive level, and 18.8% at the Manager level. Only 3.8% of participants from the executive level took part in this study.

Table 1
Demographic Profile of Respondents (n=315)

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiences of remotely working</td>
<td>3-5 months</td>
<td>172</td>
<td>54.6</td>
</tr>
<tr>
<td></td>
<td>6 months and above</td>
<td>143</td>
<td>45.4</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>116</td>
<td>36.8</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>199</td>
<td>63.2</td>
</tr>
<tr>
<td>Age</td>
<td>Below 24</td>
<td>26</td>
<td>8.3</td>
</tr>
<tr>
<td></td>
<td>25 to 30</td>
<td>179</td>
<td>56.8</td>
</tr>
<tr>
<td></td>
<td>31 to 35</td>
<td>39</td>
<td>12.4</td>
</tr>
<tr>
<td></td>
<td>36 to 40</td>
<td>23</td>
<td>7.3</td>
</tr>
<tr>
<td></td>
<td>41 and above</td>
<td>48</td>
<td>15.2</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Single</td>
<td>214</td>
<td>67.9</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>95</td>
<td>30.2</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>6</td>
<td>1.9</td>
</tr>
<tr>
<td>Education</td>
<td>Certificate</td>
<td>30</td>
<td>9.5</td>
</tr>
<tr>
<td></td>
<td>Diploma</td>
<td>46</td>
<td>14.6</td>
</tr>
<tr>
<td></td>
<td>Bachelor Degree</td>
<td>191</td>
<td>60.6</td>
</tr>
<tr>
<td></td>
<td>Master Degree and above</td>
<td>48</td>
<td>15.2</td>
</tr>
<tr>
<td>Position</td>
<td>Non-Executive</td>
<td>72</td>
<td>22.9</td>
</tr>
<tr>
<td></td>
<td>Executive</td>
<td>174</td>
<td>55.2</td>
</tr>
<tr>
<td></td>
<td>Manager</td>
<td>57</td>
<td>18.1</td>
</tr>
<tr>
<td></td>
<td>Top Management</td>
<td>12</td>
<td>3.8</td>
</tr>
</tbody>
</table>
Data Collection

We employed a homogeneous sampling strategy in the current study because the traditional convenience sampling method is known to be less accurate and generalizable than a homogeneous convenience sampling method, which can cause estimation bias (Jager et al., 2017). The study's homogeneous group of respondents was limited to respondents who were at least eighteen years old and had worked for themselves in Malaysia for at least three months. A Google link was generated and shared with the target list. Simultaneously, the researcher identified and approached several respondents at the managerial level to assist in distributing the questionnaires to their subordinates within the organization. This strategy has been recognized as effective in reducing the risk of bias, especially when applied to homogeneous populations (Naderifar et al., 2017). As a result, both sampling methods are suitable for this study. Each participant provided informed consent before participating in the survey.

Measurement

Job Demands

To assess job demands, the Copenhagen Psychosocial Questionnaire (COPSOQ II) was adapted from Pejtersen et al., (2010). As recommended in Kristensen and Borg (2003)'s version of brief questionnaires, this study has chosen only six items to assess the quantitative and emotional demands of job demands. As a result, only six items for job demands scales were included in this study using a 6-point scale, ranging from (1) Never to (6) Always. Alpha Cronbach was 0.82.

Social Support

For the social support construct, this study used a 4-item scale with a 6-point scale ranging from (1) Never to (6) Always derived from Kristensen and Borg (2003)'s Copenhagen Psychosocial Questionnaire (COPSOQ II). These scales are used to determine the frequency with which employees receive support from neither coworkers nor superiors. Pejtersen et al., (2010) state that if a scale has a Cronbach's alpha of 0.70 or higher, it is considered reliable. Cronbach alpha is 0.87 for this study.

Work Family Conflict

In this study, the Work–Family Conflict Scale (WAFCS) developed by Netemeyer et al. (1996) was utilised to measure the work-family conflict construct. A total of ten items with 7-point scales, ranging from (1) Strongly Disagree to (7) Strongly Agree, were used. Cronbach alpha is 0.95 for this study.

Psychological Well-Being

Regarding the psychological well-being construct, the World Health Organization-5 Well-Being Index (WHO-5) was chosen to measure the construct using 5 item scales adapted from Lee et al., (2016). This research employed a 6-point scale ranging from (0) Never to (5) Daily. Cronbach alpha is 0.92 for this study.

Work Engagement

The Utrecht Work Engagement Scale-9 (UWES-9) developed by Schaufeli et al., (2006) was modified to assess work engagement. This scale is based on the frequency of occurrence and ranges from (0) Never to (6) Daily. Employees were asked to rate their level of involvement in the workplace. Originally, the scale contained 17 items to measure three dimensions of vigour, dedication, and absorption. Based on the analysis collected from ten countries, the results showed that UWES can be reduced to only nine items that best fit to explain the engagement (Schaufeli et al., 2006). The later version of UWES-9 has been tested and found to be reliable, with a
minimum Cronbach's alpha value of more than 0.85. (Anasori, et al., 2021). The Cronbach alpha for this study is 0.93.

**Data Analysis**

The Statistical Software Package for Social Sciences (SPSS) version 23 was used to analyse all the collected data. Descriptive analysis techniques were applied to examine the demographic profile of the respondents and the variables. The data in this study were subsequently tested for validity, normality, and reliability. Through normality analyses, outliers were identified and removed. To address the hypothesis, the Hayes Process Macro Version 4 was used to examine the indirect effect between job demands, social support, work-family conflict, and work engagement via psychological well-being.

**Results**

The data were checked for normality before running the correlation analysis. In terms of skewness, all five variables ranged from -0.57 to 0.01, with a value less than or equal to one indicating that the data in this study are normally distributed. Kurtosis analysis, on the other hand, showed that the data were normally distributed with a value of less than or equal to 3. However, compared to other variables, the negative kurtosis for job demands, work-family conflict, and psychological well-being suggests that the distribution is platykurtic. Nonetheless, if the values for Skewness and Kurtosis fall within the -2 to +2 range, normality can be assumed (Sharma & Ojha, 2020). Moreover, skewness and kurtosis are recommended to justify normality for sample sizes greater than 300 (Mishra et al., 2019). Consequently, we can conclude that all the variables are normally distributed.

The Pearson correlation analysis was employed in this study to determine the strength of the relationships between the variables. Based on Table 2, there are significant negative correlations found between job demands ($r = -0.308$, $p < 0.01$) and work-family conflict ($r = -0.131$, $p < 0.05$) with work engagement. This implies that higher job demands and work-family conflict are associated with lower work engagement among Malaysian employees working remotely. In contrast, social support is positively correlated with work engagement ($r = 0.385$, $p < 0.01$), suggesting that higher social support is associated with increased work engagement. Moreover, psychological well-being was found to be positively and significantly correlated with work engagement ($r = 0.769$, $p < 0.01$), indicating a robust relationship between good well-being and enhanced employee engagement.

<table>
<thead>
<tr>
<th>No.</th>
<th>Variables</th>
<th>M (SD)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Job Demands</td>
<td>3.65 (1.013)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Social Support</td>
<td>4.24 (1.139)</td>
<td>-0.258**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Work-Family Conflict</td>
<td>3.75 (1.435)</td>
<td>0.668**</td>
<td>-0.155**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Psychological Well-Being</td>
<td>3.17 (0.978)</td>
<td>-0.392**</td>
<td>0.360**</td>
<td>-0.255**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Work Engagement</td>
<td>3.60 (1.107)</td>
<td>-0.308**</td>
<td>0.385**</td>
<td>-0.131*</td>
<td>0.769**</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: **p < 0.05
The study investigated the impact of job demands, social support, and work-family conflict on work engagement. The analysis utilized Hayes’ (2017) SPSS macro process, incorporating a bias-corrected bootstrap confidence interval (CI) derived from 5,000 bootstrap samples. The mediation model involved positioning psychological well-being as a mediator, with job demands, social support, and work-family conflict as exogenous variables, and work engagement as the endogenous outcome variable. Job demand was found to significantly predict work engagement ($B = -0.307, t = -4.420, p < .01$), thus supporting H1. Similarly, social support significantly predicted work engagement ($B = 0.325, t = 6.206, p < .01$), supporting H2. Conversely, work-family conflict was not a significant predictor of work engagement ($B = 0.125, t = 1.833, p > .05$), indicating that H3 is not supported. Psychological well-being, however, significantly predicted work engagement ($B = 0.769, t = 21.283, p < .01$), supporting H4. Additionally, it was discovered that psychological well-being significantly mediated the relationship between work engagement and job demands ($B = 0.328, SE = 0.054$) with a 95% CI [-.44, -.22]; social support and work engagement ($B = 0.253, SE = 0.049$) with a 95% CI [.16,.35]; and work-family conflict and work engagement ($B = 0.154, SE = 0.036$) with a 95% CI [.23, -.09]. Consequently, H5, H6, and H7 are all supported. The results of the relevant direct and mediation analyses, as well as their summary, are depicted in Figures 2 to 4.

Figure 2. Mediation model showing the effect of job demand and psychological well-being on work engagement
Note: **p < 0.05

Figure 3. Mediation model showing the effect of social support and psychological well-being on work engagement
Note: **p < 0.05
The current study found that psychological well-being, social support, and job demand were significant predictors of work engagement. There was a positive, though insignificant, effect of work-family conflict on engagement in the workplace. The study also revealed that psychological well-being significantly mediates the relationships between job demand, social support, work-family conflict, and work engagement. Consequently, H1, H2, H4, H5, H6, and H7 were accepted, while H3 was rejected.

The findings indicate that job demand negatively and significantly affected employee work engagement when working from home. This is consistent with previous research (Adisa et al., 2020; Breevaart & Bakker, 2018; Radic et al., 2020; Van Steenbergen et al., 2018). According to the Conservation of Resources (COR) theory, job demands are personal demands that require increased effort and energy to preserve existing resources and prevent resource loss, potentially leading to emotional exhaustion over time. The Job Demands-Resources (JD-R) model posits that job demands like workload and pressure sap energy and can ultimately demotivate individuals (Tripathi et al., 2021; Breevaart & Bakker, 2018). Individuals working from home under intense job demands might adjust to their environment, enhancing their stress management abilities. Ojo et al., (2021) found that employees are more engaged when they meet job demands. Ismael and Yesiltas (2020) also found that job satisfaction is positively influenced by work engagement. Satisfaction, which can offer a sense of achievement, can motivate individuals. According to the JD-R model, job resources like flexibility and support can boost job satisfaction by amplifying positive work sentiments (Rai & Chawla, 2021). Employees working from home can adjust their hours while completing their tasks, possibly influencing their engagement, especially if results-oriented.

The current study also identified a significant and positive relationship between the amount of social support received by employees working from home and their work engagement level. This suggests that support from colleagues and supervisors can enhance employee engagement, with higher support correlating to greater engagement. These findings are consistent with earlier research (Caesens et al., 2016; Contreras et al., 2020; Sonnentag et al., 2020; Zeijen et al., 2020) that highlighted the significance of perceived social support in work engagement. Other research also supports the idea that support from superiors can boost employee engagement (Amano et al., 2021). The JD-R model postulates that aid in skill or development is seen as a social resource (Meyer et al., 2021). Supporting one another can indirectly help achieve team goals. Even though remote employees might experience reduced social interaction, support can still be conveyed through chats or video calls. Regular social interactions can foster positive self-esteem (Gardner et al., 2015; Hobfoll et al., 2016), potentially enhancing engagement.
Additionally, support or encouragement can amplify employees' job crafting behavior, indirectly fostering an innovative culture and bolstering well-being and engagement (Bakker & Demerouti, 2017; Breevart & Bakker, 2018; Radic et al., 2020; Waizenegger et al., 2020).

However, unlike some prior studies (Labrague & Obeidat, 2022; Yucel et al., 2021; Žnidaršič & Marič, 2021), this research did not find work-family conflict as a significant predictor of work engagement. According to Boundary theory (Allen et al., 2014; Yang et al., 2019), individuals craft diverse role boundaries based on their work functions and family, necessitating role transitions. This requires both physical and mental agility. With 45% of the respondents working from home for over 6 months and 67.9% being single, they might have adjusted to the role transitions, making work-family conflict less impactful. Hongbo et al., (2020) indicate that boundary negotiation is preference-based. If one can manage role interference, they likely stay engaged (Hislop et al., 2015; Liao et al., 2016). Additionally, adept conflict resolution can rejuvenate a sense of achievement, possibly enhancing engagement.

Empirical data showed that job demands, social support, and work-family conflict all indirectly influence work engagement through psychological well-being. This study revealed that psychological well-being acts as a mediator between job demands and work engagement. As job demands rise, psychological well-being can decrease, leading to diminished work engagement. Prior studies indicate that heightened job demands can detriment employees' psychological health, leading to distress (Ten Have et al., 2015; Bakker et al., 2021). Excessive workloads might sap an individual's energy, diminishing their drive to engage (Adil & Baig, 2018). This study concurs with the COR theory's view of psychological well-being as a personal resource balancing job demands and engagement (Tesi et al., 2019). Radic et al., (2020) echoed this perspective. In another mediation model, psychological well-being mediates the relationship between social support and work engagement. Increased social support is shown to improve psychological well-being, subsequently boosting work engagement. Earlier research corroborates this link between social support and psychological well-being (He et al., 2018). However, this study suggests that perceived low support can degrade psychological well-being (Schütte et al., 2014; Ten Have et al., 2015). The COR theory argues that encouragement is pivotal for bolstering motivation (Bakker & Demerouti, 2017; Breevart & Bakker, 2018). Hence, a lack of social support might be seen as resource depletion. Bakker et al. (2021) found that social support can mitigate psychological distress, suggesting that poor health might indirectly diminish engagement. Last but not least, work-family conflict and work engagement are mediated by psychological well-being. Experiencing a significant level of work-family conflict while working remotely can negatively impact one's overall well-being, resulting in reduced levels of engagement. Prior studies have showcased the negative impact of work-life conflict on well-being (Sirgy & Lee, 2018; Obrenovic et al., 2020; Imhanrenialena et al., 2021). This could potentially dampen an individual's dedication, potentially impacting organizational performance. This is corroborated by research by Novitasari et al., (2020), which discovered a favorable correlation between work-family interference and job performance. Lizano (2022) discovered that engagement and work-family conflict are mediated by satisfaction, a measure of well-being.

Implications

The JD-R Model was extended in this study to incorporate work-family conflict as a distinct construct within the framework. This study contributes to the literature on work engagement by linking the JD-R Model with COR theory and integrating Boundary Theory to elucidate the effects of work-family conflicts. Several studies have explored the direct effects of psychosocial working conditions on employees' psychological well-being (Ervasti et al., 2022; Felstead & Henseke, 2017; Lee et al., 2016; Schutte et al., 2014) and on work engagement (Adisa
et al., 2021; Bakker et al., 2014; Chen & Fellenz, 2020; Teo et al., 2020; Van Steenbergen et al., 2018; Wood et al., 2020b). While the JD-R Model addresses both variables, the impacts on psychological well-being and work engagement have traditionally been studied in isolation. In order to investigate the relationship between psychosocial working conditions, psychological well-being, and work engagement as suggested by the JD-R Model, more research was done on these topics. This study distinguished the social support construct from the relationship domains in COPSOQ, highlighting the benefits of support from direct supervisors and colleagues, using the JD-R Model as a guide. The current findings showcased the mediating role of psychological well-being, grounding the explanations in both COR theory and Boundary Theory. The principles of boundary theory are highlighted by the change in the direction of the relationship between work-family conflict and work engagement after taking psychological well-being into account as a mediating factor.

Furthermore, this study stands out as one of the few to delve into the impacts of psychosocial working conditions on remote work in Malaysia during the pandemic. With a direct bearing on work engagement, this research offers invaluable insights for HR practitioners and organizations considering the implementation of a work-from-home policy. It equips policymakers, in both public and private sectors, with recommendations for rules and guidelines to integrate into their policy manuals. Such guidelines could serve as benchmarks for employees, outlining best practices for remote work. Such guidance could foster better boundaries, indirectly empowering employees to handle potential interferences and thereby enhancing engagement. The importance of social support is underscored for employers, emphasizing the significance of encouragement, moral support, and productive interpersonal interaction. Overburdening employees, expecting them to tackle tasks without concern for their well-being, can erode their motivation and commitment. Moreover, given that mental health challenges are prevalent in Malaysia—6.6% of 983 surveyed Malaysians reported severe anxiety, with 2.8% indicating extreme anxiety (Bahar Moni et al., 2021)—this study highlights the ripple effects of psychological well-being on job engagement. The findings also beckon the government and relevant stakeholders, such as the Ministry of Health, to champion public and employee mental health awareness and support.

Conclusions, Limitations and Future Recommendations

Our research successfully illustrated the connections between psychosocial working conditions and job engagement and underscored the mediating role of psychological well-being. This study elucidates how the JD-R model, COR theory, and Boundary Theory can serve as a conceptual framework for predicting work engagement during remote work. Although the JD-R model is commonly utilized to clarify the impact of psychosocial working conditions on work engagement and psychological well-being, there are still few studies that include all three variables. Our results accentuate the pivotal role psychological well-being plays in amplifying or diminishing the association between psychosocial working conditions and job engagement. The connections between psychosocial working conditions—like job demands, social support, and work-family conflict—and their effects on work engagement, as well as how psychological well-being influences these relationships, are better understood as a result of our findings. Ultimately, our insights will prove invaluable to policymakers, HR professionals, and governmental bodies aiming to devise strategies that optimize remote working conditions, bolster psychological well-being, and amplify work engagement.

Notwithstanding, this study possesses some limitations. Given the limited controls to curtail bias and the reliance on non-probability sampling, our findings could be prone to researcher bias, especially as the sample predominantly hails from a specific interest group. To mitigate this limitation, we recommend that subsequent studies employ probability sampling techniques to
guarantee an equitable selection chance. Broadening the research scope to encompass the entire Malaysian demographic might yield more generalizable outcomes. The utilization of self-assessment to quantify research variables might also introduce self-reporting bias. It would be prudent for future researchers to procure email addresses during responses to discern and nullify multiple submissions from identical participants. The present findings can serve as a springboard for scholars exploring the ramifications and importance of remote work. A cohort analysis might offer a more nuanced comparison of this influence, while a longitudinal study could furnish more robust causative insights, particularly as remote work continues its ascent in popularity. Moreover, while our study did not discern a marked influence of work-family conflict on work engagement, subsequent research could probe if this linkage fluctuates based on socio-demographic determinants. For instance, managers might experience diminished social support, rendering them more susceptible to the detrimental impacts of work-family conflict. Conclusively, this study intimates that extraneous variables might influence the nexus between work-family conflict and work engagement. Future endeavors could delve into this intricate relationship, contemplating the influence of elements like personality traits on the dynamic between work-family conflict and work engagement.

References


