The Moderating Role of Personal Resources in the Relationship Between Job Demands and Work Engagement

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This study aimed to examine the role of personal resources in the job demands–resources (JD–R) model of work engagement. We hypothesized that personal resources weaken the negative impact of job demands on work engagement. The hypothesis was
examined using a sample of employees \((N = 58)\) from multiple branches of four international fast-food chains based in Ireland and Taiwan who completed questionnaires focused on personal resources, job demands and work engagement over 7 consecutive workdays \((N = 58*7 = 406\) occasions). The results support the hypothesis. Theoretical contributions and practical implications are discussed.

*Keywords*: Personal resources, Work engagement, Job demands-resources model (JD–R model), Conservation of resources theory, Social cognitive theory

**Highlights:**

- Personal resources buffer the impact of job demands on work engagement.
- The JD–R model is extended by proposing a novel role of personal resources in the model.
- Empirical evidence supporting the JD–R model, social cognitive theory (SCT), and conservation of resources theory (COR) is provided.

Work engagement has become an important issue due to its contributions to employees’ and organizational performance (e.g., Sarwar et al., 2020). A widely recognized theoretical model for explaining the dynamic of work engagement is the job demands-resources (JD–R) model; Demerouti et al., 2001; Schaufeli & Bakker, 2004),
which demonstrates how a job positively and negatively influences work engagement. Personal resources were later theoretically included in the model as the most proximal factor of work engagement and as a mediator between job resources and work engagement (Schaufeli & Taris, 2014; Xanthopoulou et al., 2007).

However, the role of personal resources in the relationship between job demands and work engagement has been overlooked in the model. Not considering this specific role may limit our understanding of the internal process through which individuals minimize the impact of job demands on their work engagement. We therefore aim to extend the JD–R model by proposing a moderating role of personal resources in the relationship between job demands and work engagement. To investigate this undiscovered role of personal resources in the JD–R model, this study adopted both social cognitive theory (SCT) (Bandura, 1986) and conservation of resources theory (COR; Hobfoll, 1989, 2002).

The present study contributes to the literature in three ways. First, using SCT and COR, we examine whether personal resources moderate the negative relationship between job demands and work engagement. We offer insights into how personal resources may buffer the negative impact of job demands on work engagement, thereby extending the JD–R model and contributing to the work engagement literature. Second, we provide empirical evidence that supports the JD–R model, SCT, and COR from
different perspectives. Third, we adopt a multilevel design that enables us to model within-person daily variations among the measured constructs.

Literature Review

The Existing Role of Personal Resources in the JD–R Model

Work engagement is defined as “…a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (Schaufeli et al., 2002, p. 74). Existing studies have widely used the JD–R model to study work engagement (Demerouti et al., 2001; Schaufeli & Bakker, 2004). Job demands account for the physical, psychological, social, or organizational aspects of a job that require sustained physical and/or psychological effort and are therefore associated with certain physiological and/or psychological costs (Demerouti et al., 2001). Job resources account for the same aspects of a job that are functional in reaching work goals; reducing job demands and the associated physiological and psychological costs; and/or promoting personal growth, learning, and development (Schaufeli & Bakker, 2004). At the heart of the model, job demands hinder work engagement by increasing job stress, while job resources improve work engagement by increasing well-being (Bakker et al., 2003). Personal resources were further studied and included in the model. Personal resources account for positive self-evaluations that are linked to resilience and that refer
to individuals’ sense of their ability to successfully control and impact their environment (Hobfoll, Johnson, Ennis, & Jackson, 2003). Existing studies have revealed that personal resources directly improve work engagement and also serve as a mediator between the relationship between job resources and work engagement (e.g., Xanthopoulou et al., 2009; Xanthopoulou et al., 2007).

**The Moderating Role of Personal Resources**

We combined SCT (Bandura, 1986) with COR (Hobfoll, 1989, 2002) to elucidate the effect of the interrelationship between job demands and personal resources on work engagement. At the core of SCT, human functioning is a product of the interplay of intrapersonal influences (e.g., personal resources; Xanthopoulou et al., 2007), individual behaviors (e.g., actual behaviors performed in practice), and environmental influences (e.g., job demands) that impinge on them (Bandura, 2012). According to SCT, the strength of intrapersonal effects may shape how individuals perceive the impact of environmental influences on them (Bandura, 2012). Compared to individuals experiencing weak intrapersonal effects, individuals with strong intrapersonal influences (e.g., high self-efficacy) are more likely to perceive a less detrimental impact of environmental effects on them since they visualize successful scenarios that enable them to fully utilize their abilities and optimize their performance (Bandura, 1988,
Therefore, it is conceivable that compared to individuals with fewer personal resources, individuals with more personal resources may be more likely to minimize the negative impact of job demands on them, which may, in turn, prevent work engagement from being reduced by demands. Our claim may be supported by the buffering hypothesis, which specifies that “the buffering variable can reduce the tendency of organizational properties to generate specific stressors, alter the perceptions and cognitions evoked by such stressors, moderate responses that follow the appraisal process, or reduce the health-damaging consequences of such responses” (Kahn & Byosserie, 1992). Existing studies have also presented supportive findings that individuals with self-efficacy (i.e., personal resources) are more likely than individuals without self-efficacy to minimize the detrimental impact of job demands on their psychological state (e.g., Panatik et al., 2011). A recent study found that individuals with high levels of organization-based self-esteem (OBSE) tend to use political skills at work (e.g., Basit, 2020), which implies that they may be more proactive in addressing the impact of demands on them at work than individuals with low levels of OBSE. Therefore, we posit that personal resources buffer the negative relationship between job demands and work engagement.
Method

Procedure and Participants

We studied a group of frontline employees from different branches of four international fast-food chains based in Ireland and Taiwan. These employees are appropriate to study because of the variety of job influences that they must address daily (Xanthopoulou et al., 2012). We employed a diary design because job demands may fluctuate over time and thus affect personal resources and work engagement daily (Xanthopoulou et al., 2012). The managers and employees were informed of the purpose of the study, assured that their data would be kept confidential, and asked for their permission to participate in the survey. The questionnaire was reviewed for adequacy and approved by the managers prior to circulation.

Two sealed survey packages were used (e.g., general/daily package). The general package included a letter of survey invitation, a general questionnaire, and a return envelope, and the daily package contained a letter of daily survey instructions, a diary questionnaire, and a return envelope. The managers were asked to circulate the general package to the respondents and ensure that the sealed envelope, in which the completed questionnaire was inserted, was placed into the box that we provided, where retrieval was unlikely. With a two-week time lag, the managers were asked to distribute the packages to the respondents daily after their shifts but before leaving the restaurants.
and to ensure that the sealed envelopes were inserted into the box that we provided, where retrieval was unlikely. Sealable envelopes and boxes preventing retrieval were used to prevent socially desirable responses. Due to the work characteristics of fast-food restaurants, the managers continuously interacted with their on-shift employees and customers did not allow the managers sufficient time to observe the employees who were completing the questionnaires, conceivably reducing the potential for socially desirable responses. Over seven consecutive workdays, the respondents were instructed to complete the general questionnaire at their earliest convenience and to complete the daily diary questionnaire before leaving the restaurants. The respondents were instructed to seal their completed questionnaires in the envelopes provided each time prior to inserting them into the boxes. We collected the boxes from the managers at the end of the survey.

The participation in the survey was completely voluntary. A lottery of either $30 euros (for the field sites in Ireland) or NTD $960 (for the field sites in Taiwan) was offered for full participation. To link the specific questionnaires to the specific respondents and maintain anonymity, a self-created identification code was applied. In total, 77 employees were invited, and 64 agreed to participate. At a later stage of the survey, 6 respondents either changed their minds and chose to not participate in the survey or left their jobs. Their returned questionnaires became invalid and were
removed. A total of 58 completed and usable survey packages were returned (\(N=58\) for the general questionnaire; \(N = 406\) for the daily questionnaire). The overall response rate was 90.6%. Among the 58 respondents, 28 (48.3%) were male, and 30 (51.7%) were female. A total of 5 respondents (8.6%) were 18 years of age or younger, 32 were between 19 and 30 years of age (55.2%), 15 were between 31 and 40 years of age (25.9%), and 6 were between 41 and 50 years of age (10.3%). Six respondents (10.3%) had completed some secondary school, 13 (22.4%) had completed secondary school, 22 (37.9%) had completed some college, 17 (29.3%) possessed a Bachelor’s degree, and none of them had completed some postgraduate study. Six respondents had worked for 1–6 months (10.3%), 14 has worked for 6 months–1 year (24.1%), 21 has worked for 1–2 years (36.2%), 13 has worked for 2–5 years (22.4%), and 4 has worked for more than 5 years (6.9%). Overall, 37 respondents (63.8) were from Taiwan.

**Measures**

The original scales applied for all measures were used in Ireland without translation. The scales were translated into Chinese when they were applied in Taiwan. Back-translation was performed to ensure accuracy.

The personal resources that were measured include self-efficacy, OBSE, and optimism, as they have been viewed as personal resources (Xanthopoulou et al., 2007).
Self-efficacy was evaluated using a short version of the occupational self-efficacy scale (Rigotti et al., 2008), which contains a single dimension with 6 items (e.g., I can remain calm when facing difficulties in my job because I can rely on my abilities). All measurement items were scored on a 5-point Likert scale ranging from 1 = *Not at all true* to 5 = *Completely true*, and the scale showed high levels of reliability (Cronbach’s alpha values ranged from .85–.89 across the seven survey occasions). *OBSE* was measured using the scale developed by Pierce et al. (1989), which contains a single dimension with 10 items (e.g., “I am valuable”). To address the focus of this research, the wording “for this restaurant” was added to the end of each item. All measurement items were scored on a 5-point Likert scale ranging from 1 = *Strongly disagree* to 5 = *Strongly agree*, and the scale showed high levels of reliability (Cronbach’s alpha values ranged from .83–.88 across the seven survey occasions). *Optimism* was evaluated using the revised Life Orientation Test (Revised LOT; Scheier et al., 1994), which contains a single dimension with 10 items (e.g., Overall, I expect more good things to happen to me than bad things), including 4 filler items that were not used for the analysis. All measurement items were scored on a 5-point Likert scale ranging from 1 = *Strongly disagree* to 5 = *Strongly agree*, and the scale showed high levels of reliability (Cronbach’s alpha values ranged from .87–.93 across the seven survey occasions).

Job demands that were measured include perceived work overload, mental load,
job monotony, and customer contact. Perceived work overload was measured using the scale developed by Moore (2000), which contains a single dimension with 4 items (e.g., “I feel that the number of requests, problems, or complaints I deal with is more than expected”). All measurement items were scored on a 5-point Likert scale ranging from 1 = *Strongly disagree* to 5 = *Strongly agree*, and the scale showed high levels of reliability (Cronbach’s alpha values ranged from .89–.91 across the seven survey occasions). Mental load was evaluated using the Questionnaire on the Experience and Assessment of Work (QEAW–English version; Van Veldon & Meijman, 1994), which contains a single dimension with 7 items (e.g., “Does your work demand much concentration?”). All measurement items were scored on a 5-point Likert scale ranging from 1 = *Never* to 5 = *Always*, and the scale showed high levels of reliability (Cronbach’s alpha values ranged from .82–.86 across the seven survey occasions). Job monotony was appraised using the scale developed by Consiglio et al. (2013), which contains a single dimension with 3 items (e.g., “I always have to repeat the same things to customers”). All measurement items were scored on a 5-point Likert scale ranging from 1 = *Strongly disagree* to 5 = *Strongly agree*, and the scale showed high levels of reliability (Cronbach’s alpha values ranged from .87–.94 across the seven survey occasions). Customer contact was measured using the scale developed by the same authors that developed the scale for Job monotony (Consiglio et al., 2013). The scale
contains a single dimension with 3 items (e.g., “Customers are often impolite to me for no reason”); all measurement items were scored on a 5-point Likert scale ranging from 1 = Strongly disagree to 5 = Strongly agree, and the scale showed high levels of reliability (Cronbach’s alpha values ranged from .86–.91 across the seven survey occasions).

Work engagement was determined using the short version of the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2002), which contains 3 dimensions (i.e., vigor, dedication, and absorption). Vigor was evaluated with 3 items (e.g., “At my work, I feel that I am bursting with energy”). Dedication was measured with 3 items (e.g., “I am enthusiastic about my job”). Absorption was excluded, as it has recently been viewed as an irrelevant aspect of engagement and has been excluded in existing studies (e.g., Gonzalez-Roma et al., 2006; Schaufeli & Bakker, 2001). All measurement items were scored on a 5-point scale ranging from 1 = Never to 5 = Always, and the scale showed high levels of reliability (Cronbach’s alpha values ranged from .89–.95 for Vigor and .85–.92 for Dedication across the seven survey occasions).

We controlled for sex (1 = male, 2 = female), age (1 = 18 years old and under, 2 = 19–30 years old, 3 = 31–40 years old, 4 = 41–50 years old, 5 = 51 years old or older), academic background (1 = some secondary school, 2 = secondary school completed, 3 = some college, 4 = bachelor’s degree, 5 = some postgraduate studies, 6 = postgraduate
degree completed), country (1 = Taiwan, 2 = Ireland), and tenure (1 = 1–6 months, 2 = 6 months–1 year, 3 = 1–2 years, 4 = 2–5 years, 5 = more than 5 years) since these variables have been theoretically shown to affect work engagement (e.g., Christian et al., 2011; Swaminathan & Rajasekaran, 2010).

Results

Descriptive Statistics

Due to our small sample size, we simplified the model by using manifest variables as suggested by Xanthopoulou and collaborators (2009). With a second-order principal axis factor analysis with direct oblimin rotation applied the 3 personal resources, the 4 job demands, and the 2 work engagement dimensions, one personal resources factor was extracted with 67.0% of the explained variance, one job demands factor was extracted with 71.1% of the explained variance, and one work engagement factor was extracted with 68.4% of the explained variance. Table 1 summarizes the factor loadings. The personal resources factor represents the factor score of the 3 personal resources scales, the job demands factor represents the factor score of the 4 job demands scales, and the work engagement factor represents the factor score of the 2 subscales.

Table 2 presents the means, standard deviations, and correlations between the measures. Tenure was significantly correlated with work engagement ($r = .30; p < .05$),
and, therefore, it was used as a control variable in our later analysis. We performed a common method variance (CMV) test based on Harman’s single-factor test for each day’s entry (Podsakoff et al., 2003). The results reveal that the main factor across the seven survey days did not explain a large portion of the common variance among the measures since the explained variance of each was measured at less than 50% (9.91%, 12.08%, 10.43%, 11.40%, 11.69%, 12.07%, and 12.56%). Therefore, CMV was not an issue in this study.

Insert Tables 1-2 about here

**Personal Resources as a Moderator**

The collected data are multilevel in nature with repeated measurements nested within individuals, resulting in a two-level model with the repeated measurements (i.e., daily measures) at the first level ($N = 406$ occasions) and individual persons (i.e., general measure) at the second level ($N = 58$ participants). The HLM 7 was applied to examine the hypothesis (Raudenbush et al., 2000). Maas and Hox (2004) argue that a sample of no less than 30 at the highest level of analysis is required to make robust estimations of fixed effects in multilevel modeling, which implies that our sample size offers sufficient power for the analyses. We centered the level-one data on the respective
person mean and the level-two data on the sample mean. The results of the intraclass correlation (ρ) based on the intercept-only model (Tims et al., 2011) demonstrate significant daily fluctuations in all variables (for work engagement, ρ = .14 suggests that 86% of the variation is attributable to within-person variations, for job demands, ρ = .10 (90%), and for personal resources, ρ = .22 (78%). The multilevel structure of the data should therefore be considered when testing the hypotheses.

The hypothesis states that personal resources moderate the negative relationship between job demands and work engagement. Table 3 summarizes the results. After controlling for tenure, job demands, and personal resources, the interaction term is significant (t = 2.25, p < .05). The hypothesis is thus supported by the data. A graphical representation of the interaction was generated from simple slope analyses (Aiken & West, 1991). We computed the predicted values of work engagement for two groups, namely, for those scoring 1 standard deviation below and above the mean on the predictor and moderator variables. A figure representing the form of the interaction can thus be drawn (e.g., Figure 1). The relation between job demands and work engagement is more negative for the respondents with fewer personal resources (t = -5.81, p < .01) than for the respondents with more personal resources (t = -1.10, p > .05).
Discussion

Theoretical Contributions and Practical Implications

As the main contribution of our study, we investigate the buffering role of personal resources in the relationship between job demands and work engagement, which has not yet been included in the JD–R model (Demerouti et al., 2001; Schaufeli & Bakker, 2004). We contribute to the literature by offering insights into the internal process through which individuals minimize the negative impact of job demands on their work engagement in the model.

Based on our findings, we assert that personal resources may serve as a moderator that may minimize the detrimental effect of job demands on work engagement. Our result echoes other study findings (e.g., Panatik et al., 2011) and supports Kahn and Byosserie’s (1992) buffering hypothesis and the buffering assumptions of resources in the JD–R model (Demerouti et al., 2001; Schaufeli & Bakker, 2004). Conventionally, job resources are the sole buffer in the JD–R model (Demerouti et al., 2001; Schaufeli & Bakker, 2004). We extend the model by claiming that individuals with significant
personal resources (e.g., self-efficacy, OBSE and optimism) are more likely to eliminate the negative impact of job demands on work engagement because they can visualize successful scenarios that enable them to sufficiently apply their abilities and optimize their performance. Our results account for within-person daily variation among personal resources, job demands, and work engagement, thus reflecting real conditions since the three elements may change over time.

In general, our results show the importance of increasing employees’ personal resources at work. Employees with significant personal resources can minimize the impact of job demands on their work engagement. Employees with fewer personal resources, however, are less capable of minimizing such impacts on their work engagement. In addition to making an attempt to reduce job demands as widely proposed by existing studies (e.g., Skaalvik, 2020), we suggest that managers help improve employees’ personal resources at work, which can be achieved by developing and implementing human resource practices that help improve employees’ self-efficacy, OBSE, and optimism at work. This may be done by, for example, providing regular training that facilitates employees in better and more effectively handling negative interactions with customers; developing a specific standard operating procedure for employees when they experience higher workload than usual; and gamifying their work to enable them to reach work goals and be recognized and appreciated.
Research Limitations and Research Avenues

Some research limitations must be reported. The study method used may suggest CMV concerns because the surveys used are self-reports (Podsakoff et al., 2003). However, the results of Harman’s single-factor tests across seven survey days reveal that all measures were empirically distinguished and that, therefore, CMV did not appear to influence the study results. Second, this study solely investigated employees from a single occupational setting, although they were from two different countries. Such a homogeneous focus might limit the generalizability of our findings to other occupational settings (Koekemoer & Mostert, 2006). However, the respondents of this study were based in two countries, which may have improved this study’s heterogeneity from a cultural perspective. Future research should still investigate this study’s findings in other occupational settings to improve its generalizability.

Third, having managers distribute our questionnaires may have increased the likelihood of socially desirable responses. However, by allowing the respondents to seal the return envelopes and insert them into boxes where retrieval was unlikely, we may have reduced socially desirable responses through our research design. Fifth, the work characteristics of fast-food restaurants, which require managers to continuously interact with on-shift employees and customers, may have minimized socially desirable
responses since the managers may not have had time to influence the respondents as they were completing the questionnaire. Finally, very few studies related to the service and hospitality industries have investigated the buffering role of personal resources in the relationship between job demands and work engagement. Hence, future research may reexamine our model by studying employees of fast-food chains in countries other than Ireland and Taiwan.

**Conclusion**

This study extends the JD–R model by theoretically and empirically including the moderating role of personal resources in the relationship between job demands and work engagement. Researchers may adopt our results as a theoretical underpinning to investigate the moderating effect of different personal resources on the relationship between different job demands and work engagement. Managers, such as those working in our studied restaurants, may utilize our practical implications to develop managerial interventions that enhance employees’ personal resources.

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**Moderatorska uloga ličnih resursa u odnosu između zahteva posla i angažovanosti na poslu**

Cilj ovo studije je da ispita ulogu ličnih resursa u okviru zahteva posla-resursi modela angažovanosti na radu (eng. job demands-resources model, prim. prev.). Pretpostavili smo da lični resursi umanjuju negativni efekat koji zahtevi posla imaju na angažovanost na poslu. Hipoteza je proverena na uzorku zaposlenih \((N = 58)\) iz različitih ogranaka četiri međunarodna lanca brze hrane iz Irske i sa Tajvana koji su popunjavali upitnike o ličnim resursima, zahtevima posla i angažovanosti na poslu tokom sedam uzastopnih radnih dana \((N = 58*7 = 406\) situacija popunjavanj upitnika). Rezultati podržavaju
hipotezu. Teorijski doprinosi i praktične implikacije su razmotrene.

*Ključne reči:* lični resursi, angažovanost na poslu, model zahtevi posla-resursi (eng. JD–R model), Teorija očuvanja resursa, Socijalno-kognitivna teorija

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Figure 1

*The moderating effect of personal resources on the relationship between job demands and work engagement*
Table 1

*Factor loadings of all factors*

| Manifest Variables<sup>2</sup> | Personal Resources<sup>1</sup> | Job Demands<sup>2</sup> | Daily Work Engagement<sup>1</sup> |
|--------------------------------|-----------------------------|-------------------------|-----------------------------------|
| Item 1                         | .73                         | .60                     | .69                               |
| Item 2                         | .79                         | .68                     | .73                               |
| Item 3                         | .71                         | .72                     | .79                               |
| Item 4                         | .76                         | .75                     | .73                               |
| Item 5                         | .73                         | .74                     | .68                               |
| Item 6                         | .83                         | .79                     | .67                               |
| Item 7                         | .80                         | .73                     |                                    |
| Item 8                         | .80                         | .73                     |                                    |
| Item 9                         | .85                         | .64                     |                                    |
| Item 10                        | .70                         | .77                     |                                    |
| Item 11                        | .81                         | .73                     |                                    |
| Item 12                        | .82                         | .60                     |                                    |
| Item 13                        | .70                         | .60                     |                                    |
| Item 14                        | .67                         | .61                     |                                    |
| Item 15                        | .85                         | .70                     |                                    |
| Item 16                        | .82                         | .67                     |                                    |
| Item 17                        | .75                         | .69                     |                                    |
| Item 18                        | .80                         |                         |                                    |
| Item 19                        | .84                         |                         |                                    |
| Item 20                        | .75                         |                         |                                    |
| Item 21                        | .82                         |                         |                                    |
| Item 22                        | .80                         |                         |                                    |

*Note.*  
1. Personal resources = self-efficacy + OBSE + optimism; items 1–6 are for self-efficacy, items 7–16 are for OBSE, and items 17–22 are for optimism.  
2. Job demands = perceived work overload + mental load + job monotony + customer contact; items 1–4 are for perceived work overload, items 5–11 are for mental load, items 12–14 are for job monotony, and items 15–17 are for customer contact.  
3. Work engagement = vigor + dedication; items 1–3 are for vigor and items 4–6 are for dedication.
Table 2

The means, standard deviations, reliabilities, and correlations among the observed variables

| Observed Variables          | Mean | SD  | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    |
|----------------------------|------|-----|------|------|------|------|------|------|------|------|
| 1. Sex                     |      |     | 1    |      |      |      |      |      |      |      |
| 2. Age                     |      | -.02| 1    |      |      |      |      |      |      |      |
| 3. Academic background     |      | -.21| -.18 | 1    |      |      |      |      |      |      |
| 4. Tenure                  |      | .05 | -.10 | .06  | 1    |      |      |      |      |      |
| 5. Country                 |      | .08 | .09  | -.30*| .06  | 1    |      |      |      |      |
| 6. Work engagement         | 3.58 | .36 | -.15 | -.03 | .01  | .30* | .07  | 1    |      |      |
| 7. Personal resources      | 3.68 | .27 | .14  | -.24 | -.02 | .45**| -.08 | .33* | 1    |      |
| 8. Job demands             | 2.39 | .31 | -.07 | .15  | -.09 | -.25*| .13  | -.27*| -.29*| 1    |

*Note. p < .05; **: p < .01 (N = 58).

Skewness and Kurtosis: work engagement (-.58; .19); personal resources (-.91; 1.70); job demands (.33; -.06).

sex (1 = male, 2 = female); age (1 = 18 years old and under, 2 = 19–30 years old, 3 = 31–40 years old, 4 = 41–50 years old, 5 = 51 years old or older); academic background (1 = some secondary school, 2 = secondary school completed, 3 = some college, 4 = bachelor’s degree, 5 = some postgraduate studies, 6 = postgraduate degree completed); country (1 = Taiwan, 2 = Ireland); and tenure (1 = 1–6 months, 2 = 6 months–1 year, 3 = 1–2 years, 4 = 2–5 years, 5 = more than 5 years).
Table 3
Multilevel estimates for the models predicting work engagement: job demands as a predictor and personal resources as a moderator (N= 406 occasions, N = 58 participants)

| Variables       | Model | Null | 1          | 2          | 3          |
|-----------------|-------|------|------------|------------|------------|
|                 |       | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t | Estimate | SE | t |
| Intercept       |       | 3.58 | .05 | 76.31*** | 3.58 | .05 | 76.85*** | 3.58 | .05 | 76.86*** | 3.58 | .05 | 76.84*** |
| Tenure          |       | .04  | .03 | 1.06*   | .04  | .03 | 1.29     | .05  | .03 | 1.37     |
| Job Demands (JD)|       | -.34 | .06 | -6.06***| -.27 | .05 | -3.97*   | -.26 | .19 | -3.80*   |
| Personal Resources (PR) | | .33  | .08 | 4.42*** | .30  | .22 | 4.33**   |
| JD*PR           |       | .14  | .06 | 2.25*   |       |     |          |

| $X^2$          |       |       |       |       |         |
|----------------|-------|-------|-------|-------|---------|
| Level 1 (Daily)| .42   | .37   | .36   | .34   |         |
| Level 2 (General) | .10  | 123.402*** | .08  | 138.571*** | .08  | 143.803*** |

-2 LL  
851.26  
815.39  
801.42  
798.44  
Δ-2 LL  
35.87***  
13.97**  
2.98*

*Note. p < .05; ** p < .01; *** p < .001