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# Validation of the Recovery Experience Questionnaire in Malaysian Context

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**Abstract**

Recovery is an essential process to eliminate stress due to work demands. However, a valid and reliable instrument to examine different dimensions of recovery experience among Malaysian workers is currently unavailable. Thus, the purpose of the present study is to examine the psychometric properties of an existing and well-validated survey instrument on recovery in the work setting that was adapted for employees in Malaysia. The Recovery Experience Questionnaire (REQ) was empirically tested among 353 Malaysian employees. Confirmatory factor analysis (CFA) and measurement invariance were used for analysis. Results showed the four-factor structure of the instrument, consisting of psychological detachment, relaxation, control, and mastery, was supported. Internal consistencies of all subscales were satisfactory, and the instrument was invariant across gender, age, type of occupation, and over time. The present study provides initial evidence that the REQ is a valid and reliable instrument to simultaneously measure psychological detachment, relaxation, control, and mastery among workers in Malaysia.

**Keywords:** Factor Analysis, Measurement Invariance, Psychometrics, Recovery Experiences, Work Health

## Introduction

Individuals who face stressful work situations experience poor psychological well-being and tend to suffer from health problems. In recent years, processes related to recovering from job stressors have become crucial for individuals' health, well-being, and job performance (Sonnentag & Fritz, 2015; Sonnentag & Schiffner, 2019; Trogolo et al., 2020). Thus, the Recovery Experience Questionnaire was developed to measure the recovery levels of individuals. Sonnentag and Fritz (2007) have proposed the Recovery Experience Questionnaire to measure how individuals recover from job stress issues. This recovery experience version was adapted from several theories, such as the Conservation of Resources (COR) theory and the Effort-Recovery model.

The COR theory posits that gaining sufficient resources can create a resource caravan (Hobfoll, 2012). For example, a pool of resources can build a resource "caravan", which can help to maintain and sustain the loss of resources. Resource "caravan" helps employees retain, protect, and obtain their personal resources through adequate resources at work (Hobfoll et al., 2018). The recovery process can generate new internal resources such as self-motivation, energy, and a positive mood that can help restore resource depletion. Therefore, individual and organizational resources must complement each other to build a resource caravan that maintains resources at work.

The Effort-Recovery (E-R) model (Meijmen & Mulder, 1998) emphasized the mood regulation process. Stress that leads to impaired mood often needs a recovery process to replenish a positive mood. For instance, take a mental break to allow an individual body system to reproduce internal resources to deal with stressors. This process allows "load reactions" to return to their original health conditions. Both COR theory and the E-R model provide effort-reversal processes that allow opportunities for recovery.

Although the Recovery Experience instrument has been widely used across research work, most of it was tested in Western or European countries such as Germany, Argentina, Spain, Finland, and Holland. Although a few studies on the Recovery Experience instrument were tested in Eastern countries, the studies were investigated in Confucian cultures such as Japan (Shimazu et al., 2012) and South Korea (Park et al., 2011). Thus, the current study ought to investigate the psychometric properties of an adapted survey instrument to simultaneously measure the four dimensions (i.e., psychological detachment, relaxation, control, and mastery) of the Recovery Experience Questionnaire in Eastern Muslim-dominated countries, specifically in the Malaysia context.

## Literature Review

### Recovery Experience and Current Study

Recovery has been defined as a psychological and/or physiological relaxation process after exposure to stressful situations (Geurts, 2014; Sonnentag, 2011). The recovery process can take place in the workplace. A break at work is an essential process to relieve stress in order to reduce the individual's stress response (De Bloom, 2013). Studies show that daily recovery at the end of the workday or during off-days has a positive impact on an individual's health and wellbeing (Geurts & Sonnentag, 2006; Bakker et al., 2015; Almen et al., 2018; Wentz et al., 2020). Moreover, the Conservation of Resources (COR) theory and the Effort-Recovery (E-R) model have highlighted that the recovery process helps to re-build individual and personal resources (for example, energy, motivation, and ability) in order to maintain individual health and performance (Hobfoll et al., 2018; Van Veldhoven, 2008). In line with COR theory and the E-R model, therefore, Sonnentag and Fritz (2007) have proposed a recovery experience that focuses on four dimensions, which are psychological detachment, relaxation, control, and mastery.

Psychological detachment also means disengaging oneself mentally from work (Sonnentag & Fritz, 2015). It also implies not being absent from work, but individuals must not be doing anything and stop thinking about work or other job-related problems. For instance, individuals should not be involved in work during off-hours or when outside of the workplace. He or she must stop thinking about any issues or problems raised in the workplace when he or she is not at the "work" time or place. In other words, an individual is completely physically and mentally away from work circumstances.

Relaxation is a process often associated with pleasant feelings and leisure activities. Some degree of relaxation may also be achieved when performing other activities such as taking a light walk in a beautiful natural environment, reading a book, watching a movie, gardening, or listening to music (Sonnentag & Geurts, 2009). This is particularly related to doing favourite activities during leisure time. Positive affect resulting from relaxation experiences would be helpful in reducing negative affect resulting from job stress. Empirical evidence found that relaxation experiences help reduce stress-related complaints both in the short and long run (Muhamad Nasharudin et al., 2020; Sonnentag et al., 2010; Sonnentag & Fritz, 2015).

Mastery experiences refer to off-the-job activities that offer opportunities by providing challenging experiences and learning new things to expand competencies (Sonnentag & Fritz, 2007). This type of experience is often related to attempting new hobbies or extreme activities such as hiking or climbing a mountain, scuba diving, camping, or volunteering. A study by Mojza et al. (2011) found that participation in volunteer work helps individuals recover from stressful conditions. These challenging activities allow the development of new skills that can facilitate the recovery process.

Control refers to an individual's ability to determine and decide his or her own activities (Sonnentag & Fritz, 2015). Individuals can decide which activities to perform during their leisure time and when or how to pursue them (Geurts, 2014). For example, an individual who can decide his or her own activities during vacation time has improved his or her health and wellbeing (De Bloom et al., 2013). As an individual can control his or her own activities, this may reduce the effect of stress, allowing the process of recovery to occur.

In the current study, we focus on these four dimensions of the Recovery Experience instrument in order to check the validity of each construct in the Malaysian context. Therefore, using the 16-item instrument created by Sonnentag and Fritz (2007), the first aim of the current study was to identify the factor structure of the Recovery Experience instrument in a sample of Malaysian workers. The second aim was to examine the invariance of structural properties across gender groups, age groups, types of occupations, and over time. Based on the assumptions of the recovery process, the following hypotheses were proposed:

Hypothesis 1: A four-factor model consisting of psychological detachment, relaxation, mastery, and control has fitted the data precisely.

Hypothesis 2: The four dimensions of recovery experience—psychological detachment, relaxation, mastery, and control—have achieved internal consistency.

## Methods

### Procedure and Participants

By using the household maps provided by the Malaysian Department of Statistics, we approached participants from nine districts in the State of Selangor, Malaysia. Data collection took place from March 2019 to March 2020. We distributed our paper-based questionnaires, labeled with a unique code (which was used to match the longitudinal data), to those who agreed to participate. We only used matched data between Time 1 (T1) and Time 2 (T2) in the analysis. All study participants were given informed consent, and ethical approval was obtained from the authors' university.

The researcher has visited the household and invited them to take part in the survey, and 540 individuals agreed to participate at T1. After four months, we approached the same

participants again (T2), but only 353 (N = 353) were willing to retake the survey. The rest of the participants who did not return the questionnaire or dropped out were omitted from the study. The dropout rate between T1 and T2 was 34.62%. To check if this dropout rate affected our analysis, we ran a missing value analysis by performing a Little's MCAR test. The results confirmed that the data were missing completely at random (Chi-square = 32.48; DF = 50; Sig. =.974) for Little's MCAR test. By performing an analysis pattern, only 5 variables were found to contain less than 1% of missing values. The number of cases is at 4.05%, and based on the rule of thumb, if the number of cases is less than 5% of the sample, then the authors can drop or ignore those (Jakobsen et al., 2017).

From the total respondents (*N* = 353), most worked in the private sector: 214 (60.62%); 241 (68.27%) were aged between 30 and 49 years; and 191 (54.10%) had at least a high school education. In total, 208 (58.92%) respondents were men, and 145 (41.07%) were women. Lastly, 317 (89.80%) respondents were Malay, while 317 (89.80%) were Muslim.

**Instrument**

The instrument adopted in the current study was translated into the Malay language using the back-translation method (Brislin, 1970). The original English version of the survey questionnaire was translated into Malay by the first translator and then back-translated into English by the second translator. Both translators are psychologists and can be considered well versed in both the English and Malay languages. Discrepancies in meaning were resolved by a discussion among the translators and the researcher.

The first subscale measured was *psychological detachment*. This sub-scale was measured using the Recovery Experience Scale (Sonnentag & Fritz, 2007). This sub-scale has four items. The scales ranged from "1" (strongly disagree) to "5" (strongly agree). An example of the item was "I distance myself from my work". The reliability of relaxation was 0.70.

Second, *relaxation* was measured using the relaxation sub-scale of the Recovery Experience Scale (Sonnentag & Fritz, 2007). The relaxation subscale has four items. The scales range from '1' (strongly disagree) to '5' (strongly agree). An example of the item is "I use the time to relax". The reliability of relaxation was 0.85.

Third, *control* was measured using the relaxation subscale of the Recovery Experience Scale (Sonnentag & Fritz, 2007). The relaxation subscale has four items. The scales range from '1' (strongly disagree) to '5' (strongly agree). An example of the item is "I decide my own schedule". The reliability of the control was 0.82.

Fourth, *mastery* was measured using the psychological detachment sub-scale of the Recovery Experience Scale (Sonnentag & Fritz, 2007). This sub-scale has four items. The scales ranged from "1" (strongly disagree) to "5" (strongly agree). An example of the item was "I do things that challenge me". The reliability of mastery was 0.85.

Table 1
*Reliability (α), means (M), standard deviations (SD) and correlations between the study variables*

| Variables | α | M | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Gender | - | 1.40 | 0.49 | | | | | | |
| 2. Age | - | 1.53 | 0.50 | -.20** | | | | | |
| 3. Type of occupations | - | 1.80 | 0.61 | -.15** | .08 | | | | |
| 4. Psychological detachment | .70 | 2.86 | 0.69 | .08 | -.03 | -.13* | | | |
| 5. Relaxation | .79 | 3.74 | 0.51 | -.04 | -.07 | -.08 | .18** | | |
| 6. Control | .82 | 3.81 | 0.57 | .03 | -.15** | -.01 | .12* | .53** | |
| 7. Mastery | .85 | 3.92 | 1.36 | .05 | -.02 | -.07 | .06 | .25** | .29** |

*Notes: N = 353; **p ≤ .01; *p ≤ .05*

**Analysis procedure**

A confirmatory factor analysis (CFA) was conducted to check the empirical distinctiveness between the measurements of the studied variables. CFA was used to investigate the construct *validity* of hypothesis-based testing. We used five fit indices recommended by Hooper et al. (2008): the chi-square statistic (χ2); the goodness-of-fit index (GFI); the comparative fit index (CFI); the Tucker-Lewis index (TLI); the root mean square error of approximation (RMSEA); and the chi-square divided by the DF value (CMIN/DF). The cut-off values of GFI, CFI, and TLI should be equal to or greater than 0.90, whereas the best value of RMSEA should be equal to or smaller than 0.08.

Specifically, four models have been compared: a one-factor model that considers psychological detachment, relaxation, control, and mastery as one latent and correlated factor (Model 1); a two-factor model that considers psychological detachment and mastery as one latent while, relaxation and control as one latent and correlated factors (Model 2); a three-factor model which considers relaxation and control as one latent, while psychological detachment and mastery as one latent factor, respectively (Model 3); and a four-factor model that considers four latent and correlated factors of psychological detachment, relaxation, control, and mastery (Model 4).

Analyses of multiple group confirmatory factor analyses (MGCFAs) were conducted to determine the extent to which the factor structure was comparable across gender (men and women), age (20–39 years and 40–59 years), type of occupation (public, private, and others), and over time (Time 1 and Time 2 with a four-month interval). We followed the measurement-invariance procedures outlined by Brown (2014). The MGCFAs were conducted using four steps in which four nested models were compared (Vandenberg and Lance 2000). First, we ran a multi-group analysis with free parameters to test for configural invariance. Second, a multi-group analysis with fixed factor loadings was tested to measure metric invariance. Third, we ran a structural invariance (scalar model) test through a multi-group analysis with fixed variance and covariances. This method provides a systematic approach to measuring the same constructs across various groups of participants (Cheung & Rensvold, 2002)

Table 2
*Goodness-Of-Fit Statistics for Confirmatory Factor Analyses of the Recovery Experiences Questionnaire*

| Model | $X^2$ | df | GFI | CFI | TLI | RMSEA | $X^2$/df |
|---|---|---|---|---|---|---|---|
| M1: One factor | 668.543*** | 104 | .78 | .70 | .65 | .13 | 6.428 |
| M2: Two factor | 501.641*** | 103 | .83 | .79 | .75 | .11 | 4.870 |
| M3: Three factor | 288.357*** | 101 | .91 | .90 | .88 | .07 | 2.855 |
| M4: Four factor | 266.306*** | 98 | .91 | .92 | .90 | .07 | 2.717 |
| M4: Four factor (*) | 245.467*** | 97 | .92 | .92 | .91 | .06 | 2.531 |

*Notes: N = 353, $X^2$ = chi-square; df = degree of freedom; GFI = goodness-of-fit index; CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root-mean-square-error-of-approximation; p < .001***; (*) = item 5 and 6 were allowed to be correlate*

Table 3
*Standardized Factor Loadings*

| Subscale & items | Loading |
|---|---|
| Psychological detachment | |
| Item 1 | .60 |
| Item 2 | .74 |
| Item 3 | .65 |
| Item 4 | .44 |
| Relaxation | |
| Item 5 | .60 |
| Item 6 | .63 |
| Item 7 | .54 |
| Item 8 | .57 |
| Control | |
| Item 9 | .80 |
| Item 10 | .62 |
| Item 11 | .81 |
| Item 12 | .74 |
| Mastery | |
| Item 13 | .89 |
| Item 14 | .84 |
| Item 15 | .71 |
| Item 16 | .74 |

*Notes: N = 353*

Table 4
*Measurement Invariance*

| | Model | $X^2$ | $\Delta X^2$ | df | Δdf | RMSEA | CFI | ΔCFI | TLI | ΔTLI |
|---|---|---|---|---|---|---|---|---|---|---|
| **Gender** | Configural | 351.581 | | 190 | | .049 | .92 | | .91 | |
| | Metric | 373.195 | 21.61 | 206 | 16 | .049 | .92 | .00 | .90 | .01 |
| | Scalar | 387.570 | 14.37 | 214 | 8 | .050 | .92 | .00 | .90 | .00 |
| **Age** | Configural | 343.324 | | 190 | | .050 | .93 | | .91 | |
| | Metric | 374.965 | 31.64* | 206 | 16 | .049 | .92 | .01 | .91 | .00 |
| | Scalar | 392.205 | 17.24 | 218 | 12 | .048 | .92 | .01 | .91 | .00 |
| **Type of occupation** | Configural | 553.302 | | 260 | | .06 | .91 | | .90 | |
| | Metric | 590.382 | 37.08* | 283 | 23 | .06 | .90 | .01 | .90 | .00 |
| | Scalar | 822.038 | 231.65*** | 324 | 41 | .07 | .85 | .05 | .83 | .07 |
| **Over time** | Configural | 554.921 | | 180 | | .05 | .92 | | .92 | |
| | Metric | 676.054 | 121.13* | 193 | 13 | .06 | .91 | .01 | .90 | .02 |
| | Scalar | 885.073 | 209.09*** | 211 | 18 | .07 | .89 | .02 | .88 | .02 |

*Notes: N = 353; p < .001***, p < .05*; $X^2$ = chi-square; df = degree of freedom; GFI = goodness-of-fit index; CFI = comparative fit index;*
*TLI = Tucker-Lewis index; RMSEA = root-mean-square-error-of-approximation; Delta changes refer to the present model compared with the previous model.*

## Results

Descriptive statistics comprising means, standard deviations, correlations, and reliability values were presented in Table 1.

### Confirmatory Factor Analysis (CFA)

To check on the empirical distinctiveness between the measurements of psychological detachment, relaxation, control, and mastery, confirmatory factor analysis (CFA) was conducted. As presented in Table 2, the results showed that the four-factor model (CFA: GFI =.92; CFI =.92; TLI =.91; RMSEA =.060; CMIN/df = 2.531) with psychological detachment, relaxation, control, and mastery as four correlated factors fitted better with our study's data than was the case with the one-factor model (CFA: GFI =.78; CFI =.70; TLI =.65; RMSEA =.130; CMIN/df = 6.428), the two-factor model (CFA: GFI =.83; CFI =.79; TLI =.75; RMSEA =.110; CMIN/df = 4.870), and the three-factor model (CFA: GFI =.91; CFI =.90; TLI =.88; RMSEA =.070; CMIN/df = 2.855). Thus, Hypothesis 1, that a four-factor model would better fit our data compared to the one-factor, two-factor, and three-factor models, was supported.

### Multiple Group Confirmatory Factor Analyses (MGCFAs)

To test the measurement invariance of the recovery experience across gender, age, type of occupation, and time, multiple group confirmatory factor analyses (MGCFAs) were conducted. We compared three levels of invariance models (configural, metric, and scalar) as presented in Table 4. We followed the model fit recommended by Cheung and Rensvold (2002), in which the values of ΔCFI equal to or less than .01 indicate that the hypothesis of invariance is supported. While Vandenberg and Lance (2000) argued that values of ΔTLI equal to or less than .02 indicate that the hypothesis of invariance should not be rejected.

First, we tested measurement invariance across genders (men and women). The results of analyses show that configural invariance was supported as reaching adequate fit (RMSEA =.049, CFI =.92, TLI =.91). Metric and scalar invariance could be assumed across gender groups, as ΔCFI and ΔTLI were ≤ .10.

Second, measurement invariance was tested across age groups, which are divided into two subgroups: 20–39 and 40–59 years old. The results indicated that configural invariance was supported, with RMSEA =.050, CFI =.93, and TLI =.91 reaching the model fit. Both values of ΔCFI and ΔTLI were ≤ .10 for metric and scalar invariance, which supported the fact that they are invariant across age groups.

Third, we tested measurement invariance across types of occupations (public, private, and others). The analyses show that configural invariance was supported by adequate fit (RMSEA =.060, CFI =.91, TLI =.90). Metric invariance was also supported with ΔCFI and ΔTLI were ≤ .10, but not for scalar invariance.

Fourth, we tested for longitudinal invariance between Time 1 and Time 2 with a four-month interval. The results show that configural invariance was supported as reaching adequate fit (RMSEA =.050, CFI =.92, TLI =.92). Metric invariance was also supported with ΔCFI was ≤ .10 and ΔTLI was ≤ .20, but this was not the case with scalar invariance.

Thus, Hypothesis 2, that recovery experience is invariant, was partially supported as gender and age groups reached scalar invariance, but not for types of occupations or over time.

## Discussion

The current study tested the psychometric properties of the Recovery Experience scales in order to validate the questionnaire among Malaysian employees. Correlations between the four dimensions show that the constructs measure distinct dimensions, respectively. Subsequently, results of confirmatory factor analyses provided evidence for the four-dimensionality of recovery experience (i.e., psychological detachment, relaxation, control, and mastery) in the Malaysian context. Factorial invariance also supported the recovery experience across gender, age, type of occupation, and over time. Thus, the recovery experience is applicable in the Malaysian setting.

The poor fit of the one-factor, two-factor, and three-factor models indicated that individuals' perceptions on the four subscales were clearly identified. Participants are able to differentiate the four dimensions of the Recovery Experience questionnaire with the 16 items, which suggest that each characteristic provides a specific recovery process among employees. Consistent with the Effort-Recovery Theory (ERT; Meijmen & Mulder, 1998), the four dimensions of the recovery experience are clearly structured based on their specific use in order to restore energy depletion after effort investment in the workplace.

The factorial invariance test showed that the Recovery Experience instrument achieved construct stability across gender and age. This indicated the relevancy of the questionnaire used for youth and/or adults or senior adults. The types of occupations have, over time, however, reached moderate fit (i.e., metric invariance). Malaysia is known as a collectivist culture that differs from individualism cultures (i.e., Western or European countries), which might reflect the current findings. Yet, further investigation is necessary to estimate the construct's invariance across time and occupations, specifically from Malaysian perspectives.

## Theoretical and Practical Implications

First, our current study has provided empirical evidence for the Malaysian version of the Recovery Experience instrument, which is consistent with the results reported in South Africa (Mostert & Els, 2015), Germany (Sonnentag & Fritz, 2007), Japan (Shimazu et al., 2012), Holland (Bakker et al., 2015), and Argentina (Trologo et al., 2020). This study has added to the body of knowledge by validating the Recovery Experience questionnaire across cultures and countries. To the best of our knowledge, this is the first study to validate the Recovery Experience questionnaire in Southeast Asia, specifically for the Malaysian sample; thus, further investigation is needed to confirm the conclusions.

Second, this study could help organizations understand the concept of recovery for employee's health and wellbeing. The Recovery Experience scales provide a measurement of four recovery dimensions and show that a specific sub-dimension has its own functions in order to help individuals adapt to the stressor by practicing appropriate recovery experiences. For example, psychological detachment (i.e., not thinking about work) and control (i.e., arranging one's own work) provide a different perspective to comprehend the recovery process. Practitioners can use this Recovery Experience instrument to minimize the risk of stress-related issues such as burnout (see Muhamad Nasharudin et al., 2020) by supporting the recovery practice.

## Limitations and Future Directions

First, the study used various types of occupations. Although it can capture general veracity in its entirety, testing in a specific type of occupation may provide a specific pattern of findings.

Future research may use specific samples such as human service workers, teachers, the security and army workforce, and so forth to examine the validity of the Recovery Experience instrument across types of occupations. This is necessary to confirm the current findings in regards to the types of occupations.

Second, the current study used a four-month interval to test the stability of the questionnaire across time. Even though four-month gaps are reasonable (Hammer et al., 2005), it is recommended for future studies to test in different time frames, such as six-month or 12-month time intervals. This may clarify the current findings regarding the consistency of the recovery experience questionnaire across different time frames.

Third, future studies should test for concurrent validity by including indicators of health and well-being, such as burnout, depression, and job performance indicators (for example, see Shimazu et al., 2012). For instance, relationship analysis between the Recovery Experience instrument and job performance variable can extend the theoretical knowledge that the greater the individual's detachment from his or her work, the lower the stress level the individual would be, leading to high job performance.

## Conclusion

The current study has validated an advanced measurement of recovery experience from the Malaysian perspective based on an existing questionnaire developed in the work context. The results of the present study provide initial evidence that the Recovery Experience Questionnaire is a valid and reliable instrument to simultaneously measure psychological detachment, relaxation, control, and mastery among workers in Malaysia.

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## References

Almén, N., Lundberg, H., Sundin, Ö., & Jansson, B. (2018). The reliability and factorial validity of the Swedish version of the Recovery Experience Questionnaire. *Nordic Psychology*, *70*(4), 324–333. https://doi.10.1080/19012276.2018.1443280

Bakker, A. B., Sanz-Vergel, A. I., Rodríguez-Muñoz, A., & Oerlemans, W. G. M. (2015) The state version of the Recovery Experience Questionnaire: A multilevel confirmatory factor analysis. *European Journal of Work and Organizational Psychology*, *24*(3), 350–359. https://doi.10.1080/1359432X.2014.903242

Brown, T. A. (2014). *Confirmatory factor analysis for applied research*. New York

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating Goodness-of-Fit Indexes for Testing Measurement Invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 9*(2), 233-255. https://doi.10.1207/

De Bloom, J., Geurts, S. A. E., & Kompier, M. A. J. (2013). Vacation (after-) effects on employee health and well-being, and the role of vacation activities, experiences and sleep. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being, 14*(2), 613–633. https://doi.10.1007/s10902-012-9345-3

Geurts, S. A. E. (2014). Recovery from work during off-job time. In G. Bauer & O. Hämmig (Eds.) *Bridging occupational, organizational and public health* (pp. 193-208). Springer.

Geurts, S. A. E., & Sonnentag, S. (2006). Recovery as an explanatory mechanism in the relation between acute stress reactions and chronic health impairment. *Scandinavian Journal of Work, Environment and Health, 23*, 482–492. https://doi.10.5271/sjweh.1053

Hammer, L. B., Cullen, J. C., Neal, M. B., Sinclair, R. R., & Shafiro, M. V. (2005). The Longitudinal Effects of Work-Family Conflict and Positive Spillover on Depressive Symptoms Among Dual-Earner Couples. *Journal of Occupational Health Psychology, 10*(2), 138–154. https://doi.10.1037/1076-8998.10.2.138

Hobfoll, S. E. (2012). Conservation of resources and disaster in cultural context: the caravans and passageways for resources. *Psychiatry, 75*(3), 227-32. https://doi.10.1521/psyc.2012.75 .3.227.

Hobfoll, S. E., Halbesleben, J., Neveu, J-P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior, 5*, 103–128. https://doi.10.1146/annurev-orgpsych-032117-104640

Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural Equation Modelling: Guidelines for Determining Model Fit. *The Electronic Journal of Business Research Methods, 6*(1), 53-60.

Jakobsen, J. C., Gluud, C., Wetterslev, J., & Winkel, P. (2017). When and how should multiple imputation be used for handling missing data in randomised clinical trials - a practical guide with flowcharts. *BMC Med Res Methodology, 17*(1), 162. https://doi.10.1186/s12874-017-0442-1.

Meijman, T. F., & Mulder, G. (1998). Psychological aspects of workload. In P. J. D Drenth, H. K. Thierry & C. J. De Wolff (Eds.) *Handbook of work and organizational psychology* (pp. 5-33). Psychology Press.

Mojza, E. J., Sonnentag, S., & Bornemann, C. (2011). Volunteer work as a valuable leisure-time activity: A day-level study on volunteer work, non-work experiences, and well-being at work. *Journal of Occupational and Organizational Psychology, 84*, 123–152. https://doi.10.1348/096317910X485737

Mostert, K., & Els, C. (2015). The psychometric properties of the Recovery Experiences Questionnaire of employees in a higher education institution. *Journal of Psychology in Africa, 25,* 37 - 43. https://doi.10.1080/14330237.2014.997006

Muhamad Nasharudin, N. A., Idris, M. A., Loh, M. Y., & Tuckey, M. (2020). The role of psychological detachment in burnout and depression: A longitudinal study of Malaysian workers. *Scandinavian Journal of Psychology, 61*(3), 423-435. https://doi.10.1111/sjop.12622s15328007sem0902_5

Shimazu, A., Sonnentag, S., Kubota, K., & Kawakami, N. (2012). Validation of the Japanese version of the recovery experience questionnaire. *Journal of occupational health, 54*(3), 196–205. https://doi.10.1539/joh.11-0220-oa

Sonnentag, S. (2011). Recovery from fatigue: The role of psychological detachment. In P. L. Ackerman (Eds.) *Cognitive fatigue: Multidisciplinary perspectives on current research and future applications* (pp. 253-272). American Psychological Association. https://doi.10.1037/12343-012

Sonnentag, S., & Fritz, C. (2007). The Recovery Experience Questionnaire: Development and validation of a measure for assessing recuperation and unwinding from work. *Journal of Occupational Health Psychology, 12*, 204–221. https://doi.10.1037/1076-8998.12.3.204

Sonnentag, S., & Fritz, C. (2015). Recovery from job stress: The stressor-detachment model as an integrative framework. *Journal of Organizational Behavior, 36*(1), 72-103. https://doi.org/10.1002/job.1924

Sonnentag, S., & Geurts, S. A. (2009). Methodological issues in recovery research. In S. Sonnentag, P. Perrewe & D. Ganster (Eds.) *Current Perspectives on job-stress recovery, Emerald Group* (pp.1-36). Bingley.

Sonnentag. S., & Schiffner, C. (2019). Psychological Detachment from Work during Nonwork Time and Employee Well-Being: The Role of Leader's Detachment. *The Spanish Journal of Psychology, 22*, E3. https://doi.10.1017/sjp.2019.2

Sonnentag, S., Kuttler, I., & Fritz, C. (2010). Job stressors, emotional exhaustion, and need for recovery: A multi-source study on the benefits of psychological detachment. *Journal of Vocational Behavior, 76*(3), 355–365. https://doi.org/10.1016/j.jvb.2009.06.005

Trógolo, M., Morera, L., Castellano, E., Sponton, C., Medrano, L. (2020). Psychometric properties of the Recovery Experience Questionnaire at Argentine workers. *Anales De Psicologia, 36:* 181-188. https://doi.org/10.6018/ANALESPS.352761

Vandenberg, R. J., & Lance, C. E. (2000). A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational Research Methods, 3*(1), 4-69. https://doi.org/10.1177/1094428 10031002.

Van Veldhoven, M. (2008). Need for recovery after work: An overview of construct, measurement and research. In J. Houdmont & S. Leka (Eds*.) Occupational health psychology: European perspectives on research, education and practice* (pp. 1-25). Nottingham University Press.

Wentz, K., Gyllensten, K., Sluiter, J. K., & Hagberg, M. (2020). Need for recovery in relation to effort from work and health in four occupations. *International archives of occupational and environmental health, 93*(2), 243–259. https://doi.10.1007/s00420-019-01476-7