

The subjective experience of O*NET work experiences as demands and resources

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Abstract

5

6 O*NET work characteristics were rated in terms of relevance, perception of demand, and
7 perception as resource.

8 *Keywords:* keywords

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The job demands-resources model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) and later job demands-resources theory (Bakker & Demerouti, 2017) have inspired a plethora a study on the process and experience of job stress and employee motivation in recent decades. In the current project, we draw attention to a basic question regarding a key assumption we make regarding this process - that of the objective nature of job characteristics as either demands or resources. The major contribution of this project is to document whether job context and characteristics (pulled from O*Net) can simultaneously be classified as resources and as demands. We further present descriptive information regarding which job context and characteristics are rated the highest across jobs.

The Job demands-Resources Theory

The job demands-resources theory is an extension of the well-known job demands-resources model put forth by Demerouti and colleagues in 2001 (Demerouti et al., 2001). The job demands-resources model had been so heavily studied that a number of meta-analyses have been possible (e.g., (Crawford, LePine, & Rich, 2010); (Halbesleben, 2010); (Nahrgang, Morgeson, & Hofmann, 2011)). The theory generated by the model integrates both the job design and job stress literatures to help explain the conditions under which a job would result in employee stress vs. motivation (Bakker & Demerouti, 2014). Per the job demands-resources theory, both work environment and job characteristics can be modeled via job demands and resources. Demerouti et al. (2001) define job demands broadly as components of a job that require sustained effort, and as such, produce psychological or physiological strain (e.g., high work pressure is frequently cited as a common demand). Resources, on the other hand, are physical, psychological, social, or organizational aspects of the job that may help an employee achieve work goals, reduce job demands, or promote personal growth and development (Demerouti et al.,

2001). Experiencing an element of one's job as a resource or demand activates one of two distinct processes: either health impairment (demands) or motivation (resources; (Bakker & Demerouti, 2014). Job characteristics perceived to be demanding are effortful are frequently associated with negative outcomes such as exhaustion (e.g., Bakker, Demerouti, & Schaufeli, 2003). On the other hand, job characteristics perceived as resources (fulfil psychological needs) are associated with positive organizational outcomes like engagement and motivation (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007).

Objective vs. Subjective Nature of Demands and Resources: The Role of Appraisal

Searle and Auton (2015) note that the majority of the research on workplace demands is based on apriori classifications of demands. However, the stress experience, or process, described early on by Lazarus and Folkman (1984) is grounded in the assumption that individual appraisals of stressors/demands vary. Their transactional theory of stress and coping states that people continuously appraise stimuli in their environments. An appraisal is the cognitive process whereby meaning is assigned to a stimulus. If a stimulus is appraised as a stressor (threat, challenge, potentially harmful), emotional distress leads to coping of some kind. This action to cope is also associated with another appraisal about the outcome itself and the process continues if the outcomes is not appraised as favorable (Lazarus & Folkman, 1984). The stress appraisal process suggests that classifying a job characteristic or environmental condition as an objective demand or resource might be in error. We next consider the (limited) empirical evidence on this topic. First, some relatively recent research suggests that job demands and resources may not be universally appraised or assigned as such. Starting with job demands, Webster, Beehr, and Love (2011), for example, studied workload, role ambiguity, and role conflict demands, and found while that each could be appraised primarily as challenges or hindrances demands, they could also simultaneously be perceived as being both a challenge and hinderance to

different degrees. While their study did include resources, it nonetheless points to individual difference on how people perceive stressors at work. Although part of a much larger study on retirement, Sonnega, Helppie-McFall, Hudomiet, Willis, and Fisher (2018) compared self-reported (subjective) ratings of degree of physical demand, stress, and need for intense concentration from the Health and Retirement Study with objective ratings from O*Net. Correlations physical demand ($r = .52$), stress ($r = .10$), and need for intense concentration ($r = .14$), again suggesting perhaps that our objective ratings of job demands (and resources) may be subject to a greater level of individual difference than assumed. Next considering resources, Schmitz, McCluney, Sonnega, and Hicken (2019) captured subjective and objective resources in their study of retirement also. Correlations of composite variables for the resources of autonomy ($r = .12$), recognition of work ($r = .07$), decision freedom ($r = .08$), and advancement ($r = -.01$), while significant, certainly do not reflect high levels of overlap. We do acknowledge as well, that demands and resources are not necessarily consistent across days, or seasons, for many employees. Downes, Reeves, McCormick, Boswell, and Butts (2021) meta-analysis addresses this reality in depth, although it is beyond the scope of this project.

Current Study and Hypotheses

The current study aims to explore the degree to which job context and job characteristic items from O*Net are considered demands and resources. Given theoretical and empirical findings, it seems quite plausible that our apriori assignment of job elements to a “demand” or “resource” category may be too simplistic. We aim to document a list of the highest rated demands and resources, as well as information on overlap of job characteristics as demands and resources, in addition to addressing the following predictions.

Hypothesis 1: There is

Current Study and Research Questions for other studyies + notes

Study 1 (1/2 page) Study 2 (1/2 page) Study 3 (1/2 page)

Bakker and Demerouti (2017) state that, "...research has shown that challenge demands may be experienced as hindrance demands (and vice versa) depending on the context" (p. 278). We extend this acknowledgement by investigating whether some characteristics of work may also vacillate between demand and *resource*.

Methods

Study 1

top 15 demands and resources, divided by skilled versus knowledge workers,

Study 2

burnout and stress components (correlations),

Study 3

integration of JDR with O*Net categories (morphs into descriptives).

We report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in the study.

Participants

Material

Procedure

104 **Data analysis**

105 We used R (Version 4.0.3; R Core Team, 2020) and the R-package *papaja* (Version
106 0.1.0.9997; Aust & Barth, 2020) for all our analyses.

107 **Results**

108 **Discussion**

References

- Aust, F., & Barth, M. (2020). *papaja: Create APA manuscripts with R Markdown*. Retrieved from <https://github.com/crsh/papaja>
- Bakker, A. B., & Demerouti, E. (2014). Job demands–resources theory. *Wellbeing: A Complete Reference Guide*, 1–28.
- Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273.
- Bakker, A. B., Hakanen, J. J., Demerouti, E., & Xanthopoulou, D. (2007). Job resources boost work engagement, particularly when job demands are high. *Journal of Educational Psychology*, 99(2), 274.
- Bakker, A., Demerouti, E., & Schaufeli, W. (2003). Dual processes at work in a call centre: An application of the job demands–resources model. *European Journal of Work and Organizational Psychology*, 12(4), 393–417.
- Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test. *Journal of Applied Psychology*, 95(5), 834.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499.
- Downes, P. E., Reeves, C. J., McCormick, B. W., Boswell, W. R., & Butts, M. M. (2021). Incorporating job demand variability into job demands theory: A meta-analysis. *Journal of Management*, 47(6), 1630–1656.
- Halbesleben, J. R. (2010). A meta-analysis of work engagement: Relationships with burnout, demands, resources, and consequences. *Work Engagement: A Handbook of Essential Theory and Research*, 8(1), 102–117.

- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer publishing company.
- Nahrgang, J. D., Morgeson, F. P., & Hofmann, D. A. (2011). Safety at work: A meta-analytic investigation of the link between job demands, job resources, burnout, engagement, and safety outcomes. *Journal of Applied Psychology*, 96(1), 71.
- R Core Team. (2020). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from <https://www.R-project.org/>
- Schmitz, L. L., McCluney, C. L., Sonnega, A., & Hicken, M. T. (2019). Interpreting Subjective and Objective Measures of Job Resources: The Importance of Sociodemographic Context. *International Journal of Environmental Research and Public Health*, 16(17), 3058. <https://doi.org/10.3390/ijerph16173058>
- Searle, B. J., & Auton, J. C. (2015). The merits of measuring challenge and hindrance appraisals. *Anxiety, Stress, & Coping*, 28(2), 121–143.
- Sonnega, A., Helppie-McFall, B., Hudomiet, P., Willis, R. J., & Fisher, G. G. (2018). A Comparison of Subjective and Objective Job Demands and Fit With Personal Resources as Predictors of Retirement Timing in a National U.S. Sample. *Work, Aging and Retirement*, 4(1), 37–51. <https://doi.org/10.1093/workar/wax016>
- Webster, J. R., Beehr, T. A., & Love, K. (2011). Extending the challenge-hindrance model of occupational stress: The role of appraisal. *Journal of Vocational Behavior*, 79(2), 505–516.