Emotional Job Resources and Emotional Support Seeking as Moderators of the Relation Between Emotional Job Demands and Emotional Exhaustion: A Two-Wave Panel Study

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In the present study, the relation between emotional job demands and emotional exhaustion was investigated, as was the moderating role of emotional job resources and emotional support seeking on this relation. We hypothesized a positive lagged effect of emotional job demands on emotional exhaustion, and proposed that this relation is weakened by the availability of emotional job resources. Furthermore, it was hypothesized that this stress-buffer effect of emotional job resources would be stronger for employees high on emotional support seeking (3-way interaction). A 2-wave survey study with a 1-year time lag was conducted among 711 employees in the technology sector. Results showed that emotional job demands are least likely to result in emotional exhaustion when employees are provided with high emotional job resources and score high on emotional support seeking.

Keywords: job demands, job resources, emotional support seeking, emotional exhaustion, technology sector

A large body of research, conducted in a variety of occupational sectors, has focused on two main work characteristics, job demands and job resources, in predicting and understanding job-related outcomes such as emotional exhaustion. Job demands refer to those physical, social, or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs (e.g., exhaustion; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Job resources can be broadly conceptualized as instrumental, psychosocial assets at work that can be used as strategic options for action (cf. Hobfoll, 1989, 2002). Both work characteristics can be deduced from job stress models such as the job demand-control model (Karasek, 1979), the effort–reward imbalance model (Siegrist, Siegrist, & Weber, 1986), the job demands–resources model (Demerouti Bakker, Nachreiner, & Schaufeli, 2001), and the demand-induced strain compensation model (de Jonge & Dormann, 2003, 2006). Most authors propose interactive effects of job demands and job resources, in which job resources are assumed to moderate the relation between job demands and outcomes (e.g., Cooper, Dewe, & O’Driscoll, 2001; de Jonge & Dormann, 2006).

Specifically with regard to emotional exhaustion as an important outcome variable in occupational health psychology, emotional job demands and emotional job resources have been shown to be related to emotional exhaustion (de Jonge, Le Blanc, Peeters, & Noordam, 2008). Emotional job demands are work-related tasks that require emotional effort (e.g., having to do a lot of emotionally draining work). This concept refers to the perceived level of emotional requirements in an occupation. It can be distinguished from the concept of employee-focused emotional labor, which refers to the process of regulating both feelings and emotional expressions at work in response to the display rules for the organization or job (Grantey, 2000). Naring, Vlerick, and Van de Ven (2012) recently found that teachers’ emotional exhaustion could be better explained by their perceived emotional job demands than the self-regulation perspective that was measured with emotional labor. Emotional job resources are sources of emotional support that can be employed to deal with job demands (e.g., a listening ear from colleagues or supervisors; cf. de Jonge et al., 2008). Several studies have investigated the relation between emotional job demands, emotional job resources, and emotional exhaustion. Although some studies have found empirical support for a moderating role of emotional job resources, meaning that the positive relation between emotional job demands and emotional exhaustions weakens when high emotional job resources are available (cf. de Jonge & Dormann, 2006), inconsistency in findings remains an issue (for an overview, see van den Tooren, de Jonge, & Dormann, 2011). One possible explanation for these mixed results is that personal characteristics, such as one’s tendency to seek emotional job resources, have been studied less in this literature. It is likely, however, that employees who actively seek emotional job re-
sources will benefit from these resources when they are available, and suffer when these resources are not provided in the work environment. In other words, emotional support seeking may moderate the relation between emotional job demands, emotional job resources, and emotional exhaustion.

Therefore, the aim of the current study was to test the main and interaction effects of emotional job demands and emotional job resources on emotional exhaustion and to investigate the moderating role of emotional support seeking. Previous research often has been characterized by cross-sectional designs and homogeneous samples from human service sectors (van den Tooren, de Jonge, & Dormann, 2011); however, the present study had a two-wave longitudinal design with a 1-year time lag and focused on a large and heterogeneous sample in the technology sector.

**Emotional Exhaustion**

Emotional exhaustion, characterized by a lack of energy, negative affect, and a perception that one’s emotional resources have been depleted (Maslach & Jackson, 1986), is a core element of burnout in employees (Leiter & Maslach, 2004). Emotional exhaustion has important implications for both the quality of work life and optimal organizational functioning (Wright & Cropanzano, 1998). From an employee’s perspective, prior research has found relationships between emotional exhaustion and depression (Hart & Cooper, 2001); somatic difficulties such as colds, gastrointestinal problems, headaches, and sleep disturbances (Belcastro & Hays, 1984); cardiovascular diseases (Toppinen-Tanner, Oja, Jarvi, Vaananen, Kalimo, & Jappinen, 2005); and musculoskeletal diseases (Homkonen et al., 2006). Emotional exhaustion can even indirectly influence the partner’s health (Bakker, 2009). From the employers’ perspective, research has shown that emotional exhaustion can lead to an increase in absenteeism (Borritz, Rugulies, Christensen, Villadsen, & Kristensen, 2006), turnover intentions (Cropanzano, Rupp, & Byrne, 2003), and actual turnover (Wright & Cropanzano, 1998), and a decrease in organizational citizenship behavior (Cropanzano et al., 2003) and job performance (Janssen, Lam, & Huang, 2010).

In a wide range of occupations, emotional job demands have been found to have a positive relation with emotional exhaustion (cf. Zapf, 2002, for a review). However, some studies did not find any association between emotional job demands and stress reactions such as emotional exhaustion (e.g., Cordes, Dougherty, & Blum, 1997; Peeters & Le Blanc, 2001). Therefore, the first aim of the present study was to test the proposed main effect of emotional job demands on emotional exhaustion 1 year later.

**Hypothesis 1:** There is a lagged positive effect of emotional job demands on emotional exhaustion 1 year later, after controlling for baseline emotional exhaustion.

In addition to the positive association between job demands and job strain, previous research has demonstrated that job resources play an important role as moderators of the relation between job demands and job strain (Kahn & Byosiere, 1992; Karasek & Theorell, 1990; Siegrist, 1996). Based on the conservation of resources model (Hobfoll, 1989), Wright and Cropanzano (1998) state that prolonged strain or emotional exhaustion occurs when employees feel they no longer have sufficient emotional job resources to handle the stressors confronting them. More specifically, it has been shown that job resources can moderate the relation between job demands and employee outcomes, such that high job demands result in high job strain, unless employees have sufficient job resources to cope with their demanding job (cf. Demerouti, Bakker, de Jonge, et al., 2001; Karasek, 1979). de Jonge and Dormann (2003, 2006) suggested a theoretical refinement of the moderating role of job resources on the relation between job demands and health and well-being outcomes by introducing the so-called triple-match principle. This principle proposes that the strongest, interactive relationships between job demands and job resources are observed when job demands, job resources, and outcome variables are based on qualitatively identical dimensions (i.e., a cognitive, an emotional or a physical dimension; cf. Hockey, 2000). In other words, there should be both a match between job demands and job resources on the one hand (cf. Frese, 1999) and a match between job demands/resources and outcomes on the other hand. In line with the triple-match principle, we hypothesized that

**Hypothesis 2:** The lagged relationship between emotional job demands and emotional exhaustion will be moderated by emotional job resources, such that this relationship will be weaker for employees with high emotional job resources than employees with low emotional job resources (two-way interaction).

Apart from the above-mentioned work characteristics (i.e., emotional job demands and emotional job resources), personal difference variables may also play a moderating role in the prediction of emotional exhaustion (Cooper et al., 2001). More specifically, elaborating on the triple-match principle (de Jonge & Dormann, 2006), we hypothesized that matching personal characteristics (i.e., emotional support seeking) would moderate the stress-buffering effect of emotional job resources on the relation between emotional job demands and emotional exhaustion (cf. Daniels, Harris, & Briner, 2004; Frese, 1999). Emotional support seeking is a form of problem-focused coping and is aimed at evoking empathy and companionship from one’s social network to assist in the management of emotional stressors and the maintenance of one’s emotional equilibrium (Greenglass, Schwarz, Jakubiec, Fiksenbaum, & Taubert, 1999). As empathy and companionship from colleagues are what typically constitute emotional job resources (cf. Peeters & Le Blanc, 2001; Tuckey & Hayward, 2011), it follows that employees who score high on emotional support seeking are more likely to use emotional job resources and, as a result, to benefit from the stress-buffering effect of emotional job resources than employees who score low on emotional support seeking. One may argue that the mere perception that one has sufficient emotional job resources to cope with emotional job demands may already offset the impact of job demands (cf. Cohen & Wills, 1985). However, because employees high on emotional support seeking are keen on emotional job resources, it seems reasonable to assume that this will be first and foremost the case for these employees. Therefore, a three-way interaction effect between emotional job demands, emotional job resources, and emotional support seeking in the prediction of emotional exhaustion was hypothesized:
Hypothesis 3: The relationship between emotional job demands, emotional job resources, and emotional exhaustion will be moderated by emotional support seeking, such that the buffering effect of emotional job resources will be stronger for employees who score high on emotional support seeking than for employees who score low on emotional support seeking (three-way interaction).

In sum, both from an employees’ perspective and from an employer’s perspective, emotional exhaustion is an important negative outcome with implications for both the quality of work life and optimal organizational functioning (Wright & Cropanzano, 1998). The present article adds to the existing literature by investigating the lagged relation between emotional job demands and emotional exhaustion as well as the moderating role of emotional job resources and emotional support seeking on this relation. The present study investigated these research questions in a large, heterogeneous occupational sample in the technology sector.

Method

Procedure and Participants

Data were gathered in a large Belgian organization in the technology sector using a two-wave panel survey with a 1-year time lag. This time lag was chosen to control for possible seasonal fluctuations and to give natural changes a fair chance to occur (cf. de Jonge et al., 2001; De Lange, Taris, Kompier, Houtman, & Bongers, 2004). Both at Time 1 (4,912 employees) and at Time 2 (4,622 employees), all participants received a paper-and-pencil questionnaire sent to their home address, with an accompanying letter that explained the purpose of the study. Voluntary participation was emphasized and confidentiality was guaranteed. Three weeks later, a reminder letter was sent to increase response rates. At Time 1, 1,533 employees returned a completed questionnaire (response rate of 31.2%) and at Time 2, 1,254 employees responded (response rate of 27.1%). Note that Time 2 questionnaires were sent to all employees, regardless of whether they had completed and returned a Time 1 questionnaire. The final panel sample (respondents to both panels) consisted of 711 respondents (46.4% of the initial Time 1 sample). This sample includes a heterogeneous mix of occupations of information technology professionals, as well as welders, electricians, cleaning staff, and so forth.

Potential effects of attrition in the longitudinal data were assessed by a multiple logistic regression analysis. More specifically, we determined whether participation at Time 2 was related to any of the Time 1 variables under study by comparing continuous participants with Time 2 dropouts (Goodman & Blum, 1996). Because neither the Time 1 variables (emotional job demands, emotional job resources, emotional support seeking, and emotional exhaustion) nor potential confounding variables (age, gender, language, and supervisory responsibilities) predicted participation at Time 2, we concluded that attrition was not systematically related to the study’s variables. Furthermore, management representatives in the organization indicated that the demographic characteristics of the sample were consistent with those of their organization population at the time of data collection.

In the final sample, 237 employees (33.3%) were French speakers versus 474 Dutch speakers (67.3%). A vast majority were men (94.5%) and the mean age at Time 1 was 44.49 years (SD = 9.39). Most respondents were married or lived with a partner (82.8%). Lower educated (primary and secondary school level) and higher educated (high school or college) employees comprised 66.8% and 33.2% of the sample, respectively. Mean seniority at Time 1 was 16.71 years (SD = 10.84). The sample consisted of 259 employees with supervisory responsibilities at Time 1 (36.5%).

Measures

Emotional job demands and emotional job resources were measured using the DlSC Questionnaire 2.0 (de Jonge et al., 2007). Earlier versions of this questionnaire have shown good psychometrical properties in previous studies (de Jonge & Peeters, 2009; Van de Ven, Vlerick, & de Jonge, 2008; van den Tooren & de Jonge, 2008). Respondents were asked to suppose someone else (“Employee X”) has the same job in the organization as they have and to indicate how often the selected emotional job demands and emotional job resources would be available for Employee X 1 year into his or her new job. Emotional job demands were measured with six items. An example item is “Employee X will have to do a lot of emotionally draining work.” Emotional job resources were measured with five items. An example item is “Employee X will get emotional support from others (e.g., clients, colleagues, or supervisors) when a threatening situation at work occurs.”

Emotional job demands and emotional job resources were measured by a multiple logistic regression analysis. More specifically, we determined whether participation at Time 2 was related to any of the Time 1 variables under study by comparing continuous participants with Time 2 dropouts (Goodman & Blum, 1996).

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the comparative fit index (CFI) as recommended by Hair, Black, Babin, and Anderson (2009). Although the chi-square was significant, $\chi^2(183) = 597.69, p < .01$, the remaining fit indices revealed that a four-factor model provided a good fit to the data (RMSEA = .06, NNFI = .95, CFI = .96).

**Statistical Analyses**

To explore the main and interactive effects of emotional job demands, emotional job resources, and emotional support seeking on emotional exhaustion 1 year later, we conducted a hierarchical regression with emotional exhaustion as the criterion following procedures outlined by Aiken and West (1991). Prior to conducting the analysis, we calculated interaction terms by creating product terms from the standardized main effects (i.e., emotional job demands, emotional job resources, and emotional support seeking) to avoid multicollinearity (Aiken & West, 1991; Dawson & Richter, 2006). In the first step of the analysis, Time 1 emotional exhaustion was entered into the model. The standardized main effects of emotional job demands and resources and emotional support seeking were entered in the second step, and all possible two-way interaction terms between emotional job demands, emotional job resources, and emotional support seeking were entered in the third step. Finally, the three-way interaction between emotional job demands, emotional job resources, and emotional support seeking was added in the fourth and final step. In our initial analyses, demographic characteristics such as age, gender, language, and supervisory responsibilities were included. However, including these covariates did not affect the pattern of significant findings, so we omitted them from the analyses for reasons of parsimony.

**Results**

Descriptive statistics and Pearson product–moment correlations of all variables are displayed in Table 1. In general, the employees in our sample had moderate levels of emotional job demands ($M = 2.87, SD = 0.71$), emotional job resources ($M = 2.96, SD = 0.74$), and emotional support seeking ($M = 2.19, SD = 0.62$) at Time 1. In addition, they experienced rather high levels of emotional exhaustion (cf. Schaufeli & Van Dierendonck, 2000), both at Time 1 ($M = 2.90, SD = 1.19$) and at Time 2 ($M = 2.88, SD = 1.21$).

Table 2 displays the results of the hierarchical regression analysis (in line with recommendations of Jaccard and Turrisi, 2003, for analyzing interactions, unstandardized regression coefficients are displayed). It was shown that the fourth model, including the three-way interaction, was the best model compared with the model with only main effects and the model with main effects and two-way interactions, according to the incremental $F$ test procedure, $F_{inc}(1, 694) = 6.42, p < .05$. In this model, emotional job demands were positively related to emotional exhaustion ($B = .10, p < .01$), confirming our first hypothesis. Contrary to our expectations in Hypothesis 2, the interaction between emotional job demands and emotional job resources did not reach statistical significance. The nonhypothesized interaction between emotional job demands and emotional support seeking was significant ($B = .08, p < .05$).

As far as Hypothesis 3 is concerned, results revealed that emotional support seeking moderated the relation between emotional job demands, emotional job resources, and emotional exhaustion ($B = -.07, p < .05$). This is in line with our predictions. To find out whether emotional support seeking moderated the stress-buffering effect of emotional job resources in the predicted direction, we plotted the four regression lines in Figure 1 following recommendations by Aiken and West (1991). The two regression lines for low emotional support seeking are plotted on the left side of Figure 1 and the two regression lines for high emotional support seeking are plotted on the right side of Figure 1. Next, slope difference tests were conducted to analyze which of the slopes in Figure 1 significantly differed from each other (Dawson & Richter, 2006). As can be inferred from the parallel lines on the left side of Figure 1, results revealed that at low levels of emotional support seeking, the slopes of low and high emotional job resources did not differ significantly from each other (slope difference test): $t(702) = 0.17, ns$. In contrast, at high levels of emotional support seeking, the slopes of low and high emotional job resources did differ significantly from each other. More specifically, emotional job resources buffered the relation between emotional job demands and emotional exhaustion (slope difference test): $t(702) = -2.92, p < .01$. Because the stress-buffering effect of emotional job resources seems to apply only to employees who score high on emotional support seeking, the proposed moderating effect of emotional support seeking (cf. Hypothesis 3) was supported.

**Discussion**

The goals of the present study were to investigate the main effect of emotional job demands on emotional exhaustion 1 year after the initial measurement.
later, as well as the moderating roles of emotional job resources and emotional support seeking on this relation. The first hypothesis, which stated that emotional job demands would be positively related to emotional exhaustion 1 year later, was confirmed by our analysis. This finding is in line with previous studies (Zapf & Holz, 2006; Zapf, Seifert, Schmutte, Mertini, & Holz, 2001) and shows that emotional job demands do also deserve careful attention in the technology sector because they can result in emotional exhaustion.

Our second hypothesis stated that the lagged positive relationship between emotional job demands and emotional exhaustion would be weakened by the availability of emotional job resources. This hypothesized interaction between emotional job demands and emotional job resources did not reach statistical significance and therefore could not be confirmed. A possible explanation for why we did not find support for the stress-buffering effect of emotional job resources was already proposed in Hypothesis 3: Emotional support seeking moderates the relation between emotional job demands, emotional job resources, and emotional exhaustion. Possibly, the stress-buffering effect of emotional job resources was suppressed because of individual differences in emotional support seeking. Results for Hypothesis 3 indeed showed a rather small but statistically significant three-way interaction effect between emotional job demands, emotional job resources, and emotional support seeking on emotional exhaustion. Slope difference tests revealed that the buffering effect of emotional job resources applies only to employees who score high on emotional support seeking. As such, the moderating effect of emotional support seeking suggests that the lack of support for Hypothesis 2 could indeed be explained by individual differences in emotional support seeking. Given our conservative way of testing (i.e., including Time 1 emotional exhaustion as the control variable), this finding emphasizes the strength of the moderating effect of emotional job resources and emotional support seeking on the relation between emotional job demands and emotional exhaustion. However, one should be careful interpreting these results, as our finding contradicts previous research by van den Tooren, de Jonge, Vlerick, Daniels, and Van de Ven (2011). In their study, no evidence was found for the moderating effect of emotional active coping style on the longitudinal relation between emotional job demands, emo-

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Note. The B values in the table are unstandardized regression weights.

* p < .10. ** p < .05. *** p < .01.
tional job resources, and emotional exhaustion. One possible explanation for these mixed results is that the present study differs from that of van den Tooren, de Jonge, Vlerick, et al. in using a more heterogeneous sample of technology employees. Furthermore, in contrast to the study by van den Tooren, de Jonge, Vlerick, et al., in the present study, the moderator variables were all continuous (rather than dichotomous), resulting in fewer statistical power problems.

Limitations and Directions for Future Research

There are some limitations in this study that need to be acknowledged. An important limitation of the present study is its reliance on self-report measures. As a result, common method variance might have affected our results. However, in line with recommendations of Brannick, Chan, Conway, Lance, and Spector (2010), we took precautions to reduce possible sources of common method variance (e.g., protecting participants’ anonymity, using different response scales and anchors, using valid scales from previous research). A second limitation of the current study is that there could have been a sampling bias. To determine the possible influence of attrition effects, we investigated whether participation at Time 2 was related to the Time 1 variables under study (Goodman & Blum, 1996). Although results revealed that there were no attrition effects, we cannot rule out with certainty that high stressor levels may have influenced participation in our study at Time 1 (Barr, Spitzmuller, & Stuebing, 2008).

An important avenue for further research refers to the examination of effects of stability and changes in employees’ exposure to job demands and job resources in relation to changes or stability in employees’ emotional exhaustion. For instance, which type of history or trajectory in job characteristics over time is associated with stable versus substantial improvement or deterioration of employees’ emotional exhaustion is still unclear and could not be answered by the current study.

A second avenue for further research is to measure job characteristics in an occupation-specific manner as opposed to a global measurement. In a recent study by Tuckey and Hayward (2011), for instance, global (general) emotional resources and an occupation-specific emotional resource (camaraderie) were tested as potential buffers against the negative effects of emotional demands on volunteer firefighters. Results revealed that the occupation-specific resource had the most consistent protective effects against poor psychological health, whereas the effects of global emotional resources were not as consistent. Possibly, our results would have supported Hypothesis 2 if more occupation-specific job resources (e.g., team-based solving of technological problems) were included in the study.

Practical Implications and Conclusion

The current findings have some practical implications for employees in the technology sector. Employees who are often confronted with high emotional job demands and who have low job resources seem to be at risk for emotional exhaustion. This seems, however, first and foremost the case for those employees who score high on emotional support seeking. As decreasing emotional job demands is often difficult or even impossible, organizations could focus on increasing emotional job resources. One way to accomplish this would be to enable employees to talk to colleagues and supervisors about client interactions, for instance, during (spatially arranged) work meetings. One should keep in mind, however, that employees high on emotional support seeking will probably use this opportunity more often and more effectively than employees low on emotional support seeking. On the other hand, meetings that promote interactions among colleagues may allow employees high on emotional support seeking to serve as role models for employees low on emotional support seeking.

To conclude, the current study shows that employees in the technology sector are faced with emotional job demands, and that these demands may have deleterious effects on their emotional well-being. To prevent emotional exhaustion among technology employees, the availability of emotional job resources is of great importance. However, this study also revealed that mainly employees who score high on emotional support seeking are likely to benefit from these resources. Therefore, job redesign interventions should not merely evolve around the availability of emotional job resources in the work environment, but also around ways to stimulate employees to evoke empathy and companionship from their social network at work (i.e., colleagues and supervisors). Particularly with respect to this latter issue, an important role seems to be reserved for future research.

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