Journal of Occupational Health Psychology
2014, Vol. 19, No. 1, 96–107

1076-8998/14/$12.00 DOI: 10.1037/a0035062

Burnout and Job Performance: The Moderating Role of Selection, Optimization, and Compensation Strategies

Evangelia Demerouti
Eindhoven University of Technology

Arnold B. Bakker
Erasmus University Rotterdam

Michael Leiter
Acadia University

The present study aims to explain why research thus far has found only low to moderate associations between burnout and performance. We argue that employees use adaptive strategies that help them to maintain their performance (i.e., task performance, adaptivity to change) at acceptable levels despite experiencing burnout (i.e., exhaustion, disengagement). We focus on the strategies included in the selective optimization with compensation model. Using a sample of 294 employees and their supervisors, we found that compensation is the most successful strategy in buffering the negative associations of disengagement with supervisor-rated task performance and both disengagement and exhaustion with supervisor-rated adaptivity to change. In contrast, selection exacerbates the negative relationship of exhaustion with supervisor-rated adaptivity to change. In total, 42% of the hypothesized interactions proved to be significant. Our study uncovers successful and unsuccessful strategies that people use to deal with their burnout symptoms in order to achieve satisfactory job performance.

Keywords: adaptivity to change, burnout, SOC model, task performance

Common sense and scientific research suggest that employees who are happy and engaged are also more productive, whereas employees lacking energy or other resources show performance decrements. Interestingly, recent meta-analyses suggest that the favorable impact of job satisfaction and work engagement on job performance is stronger than the unfavorable impact of burnout. More specifically, a meta-analysis on the relationship between job satisfaction and job performance resulted in a corrected correlation of .30 (Judge, Thoresen, Bono, & Patton, 2001), and a meta-analysis on the relationship between work engagement and task and contextual performance resulted in corrected correlations of .39 and .43, respectively (Christian, Garza, & Slaughter, 2011). In contrast, Taris (2006) found that the meta-analytical correlations between exhaustion and task and contextual performance were −.22 and −.19, respectively. The evidence for the relationship between the other two burnout dimensions (i.e., depersonalization and reduced personal accomplishment) and job performance was inconclusive in the latter meta-analysis. Why does burnout only have a limited impact on job performance? How do employees with feelings of burnout still manage to perform reasonably well?

The aim of the present study is to examine the relationship between burnout and supervisor-rated performance, that is, task performance and adaptivity to change, among employees from a wide range of occupational sectors. Our central argument is that employees use adaptive strategies that help them to maintain their performance at acceptable levels despite experiencing burnout. This compensatory process would explain the relatively weak correlations between burnout and performance. We will focus on the strategies included in Freund and Baltes's (1998, 2002) selective optimization with compensation (SOC) model. They demonstrated that strategic selection, optimization, and compensation help individuals address resource gaps associated with aging. Recent studies have generalized the model by suggesting that SOC strategies apply to a broader range of resource gap challenges (e.g., Bajor & Baltes, 2003). Burnout is "the end state of a long- term process of resource loss that gradually develops over time depleting energetic resources" (Gorgievski & Hobfoll, 2008, p. 10). Because burnout represents an experience of insufficient energetic resources (of energy and motivation; Bakker & Demerouti, 2007; Hobfoll, 2002), we propose that the SOC strategies are possible moderators of the relationship between burnout and performance.

Burnout and Performance

In this study, we focus particularly on the relationship between burnout and two dimensions of performance as rated by the supervisor: task performance and adaptivity to (organizational) change. Burnout has been defined as a long-term consequence of

Evangelia Demerouti, Department of Industrial Engineering & Innovation Sciences, Human Performance Management Group, Eindhoven University of Technology, Eindhoven, The Netherlands; Arnold B. Bakker, Department of Work and Organizational Psychology, Institute of Psychology, Erasmus University Rotterdam, Rotterdam, The Netherlands; Michael Leiter, Centre for Organizational Research & Development, Acadia University, Wolfville, Nova Scotia, Canada.

Correspondence concerning this article should be addressed to Evangelia Demerouti, Department of Industrial Engineering & Innovation Sciences, Human Performance Management Group, Eindhoven University of Technology, P.O. Box 513, 5600 MB Eindhoven, The Netherlands. E-mail: e.demerouti@tue.nl

aversive working conditions, characterized by the simultaneous experience of the symptoms of exhaustion and disengagement from one's job (Demerouti, Bakker, Nachreiner & Schaufeli, 2001; Demerouti, Mostert, & Bakker, 2010; Maslach, Schaufeli, & Leiter, 2001). Exhaustion is defined as a consequence of intensive physical, affective, and cognitive strain, that is, as a long-term consequence of prolonged exposure to certain job demands. Disengagement refers to distancing oneself from one's work object, work content, and work in general. Moreover, we focus on task performance as representing the officially required outcomes and behaviors that directly serve the goals of the organization (Motowidlo & Van Scotter, 1994). Task performance emphasizes the instrumentality of individual performance for organizational goals. Although this is certainly very important, it does not describe the whole range of human performance at work. Because of the economic turmoil and fast technological developments, nowadays, workers are required to show adaptivity to organizational change. Thus, although the global economic crisis beginning in 2008 has increased the pressure for efficiency and lowering costs, new ways of working (anywhere, anyplace, and using smartphones, laptops, or tablet PCs; ten Brummelhuis, Bakker, Hetland, & Keulemans, 2012) have enabled individuals' flexibility regarding when and where to work. These developments require individual employees to adapt their way of working. Adaptivity can be conceptualized as a positive attitude toward the introduction of organizational change or exhibiting the behaviors that are required by the change (van den Heuvel, Demerouti, Bakker & Schaufeli, 2013). How should burnout and both indicators of performance be related?

The happy-productive worker thesis assumes that happy workers demonstrate higher levels of job-related performance than unhappy workers (Wright & Cropanzano, 2000). The explanation for this relationship is that happy people are more sensitive to opportunities at work, more outgoing and helpful to others, and more confident and optimistic (Cropanzano & Wright, 2001). However, when individuals are confronted with high job demands or environmental stressors (e.g., noise, heat, high workload, time pressure), they use performance-protection strategies (Hockey, 1993). Performance protection is achieved through the mobilization of sympathetic activation (e.g., cardiovascular reactivity) and increased subjective effort (i.e., self-reports on having to mobilize many resources). The use of these strategies prevents overt decrements in primary task performance. Hockey calls these attempts of people to sustain their performance standards "resistance to degradation." However, these strategies are not always effective. According to Hockey, several patterns of indirect degradation may be identified, and it is these patterns that ultimately lead to diminished performance. Examples of the patterns of indirect degradation are strategy adjustments (narrowing of attention, redefinition of task requirements), and fatigue aftereffects (risky choices, high subjective fatigue). The long-term effect of such a compensatory strategy may be a draining of an individual's energy resources (Hockey, 1997), but also deterioration of performance on specific task dimensions.

Taris (2006) provides two possible explanations regarding why burnout should lead to diminished job performance. The first explanation involves the notion that job stressors or demands reduce individuals' capacity to exert control over their work environment, which further adversely affects their ability to function effectively (Bakker, Demerouti, & Verbeke, 2004; McGrath, 1976). Burnout, especially exhaustion, may mediate the relationship of stressors with performance, because exhaustion is the depletion of individual energy resources. Thus, high levels of burnout (exhaustion) signify that workers possess insufficient resources to deal effectively with the demands of their jobs, leading to impaired job performance (Taris, 2006).

The second possible explanation goes back to the basic tenet of fatigue—that it represents the intolerance of any effort (Schaufeli & Taris, 2005). According to Thorndike (1914), fatigue is both the inability and the unwillingness to expend effort, reflecting its energetical (exhaustion) and motivational (disengagement/depersonalization) components. This explanation emphasizes that it is not only because of depleted energy resources but also because of the unwillingness to perform that performance is affected negatively. This manifests itself through psychological withdrawal, in the form of increased resistance toward future effort, and serves as a protective mechanism to prevent the individual worker from spending additional energy and thus entirely depleting his or her resources (Meijman & Mulder, 1998; Taris, 2006). This dynamic is also seen in the association of burnout with workplace injuries (Leiter & Maslach, 2009) as well as staff enthusiasm for organizational change (Leiter & Harvie, 1997). Burned-out workers are unable and unwilling to expend effort, leading to suboptimal functioning (e.g., Leiter & Maslach, 2005). Therefore, we offer the following hypothesis:

> *Hypothesis 1:* Burnout is negatively related to supervisor-rated task performance and adaptivity to change.

Adaptive Strategies to Maintain Performance

Several reviews on the relationship between burnout and other ratings of performance have concluded that burnout fails to impair job performance in a consistent and robust way (e.g., Demerouti & Bakker, 2006; Schaufeli & Enzmann, 1998; Taris, 2006). Demerouti, Verbeke, and Bakker (2005) explain this rather weak relationship between burnout and performance as reflecting the effectiveness of individuals' attempts to avoid performance decrements. Employees are motivated to avoid performance decrements because the effectiveness of role performance has consequences for one's self-evaluation (Thoits, 1991). Similarly, Halbesleben and Bowler (2007) noted the need to explore potential moderators of the relationship between burnout and performance. We address the research question of how individuals can manage insufficient resources effectively. To do so, we draw on Hobfoll's (2001, 2002) conservation of resources (COR) theory, and the SOC model (Baltes & Baltes, 1990).

COR Theory

COR theory states that individuals strive to obtain, retain, and protect their resources (i.e., free time, feeling that one is accomplishing one's goals and many more; for an overview, see Hobfoll, 2001). According to Hobfoll (2002), stress and burnout occur when individuals lose these resources, are threatened with their loss, or fail to gain new resources after substantial resource investment. Hobfoll (2001) describes burnout as a result of the lack of resource gain following significant resource investment of time and energy. Employees who have already invested a substantial

amount of time and energetical resources in their jobs may not be able to gain new resources that would help them to manage the demands of their work and maintain optimal functioning on the long run. Investing their resources differently, and maybe more effectively, may protect them against (further) resource loss, help them to recover from loss, and even gain new resources (i.e., a so-called gain cycle might develop; Hobfoll, 2002).

It is thus crucial to investigate strategies by which employees can develop strategies to avoid unfavorable effects of burnout on their performance. The experience of dwindling or constrained resources need not mean that people become ineffective. Instead, it can serve as a prompt for employees to create and to initiate tactics that assure their standing in the workgroup despite their resource shortfall. As a framework for this process, we draw on SOC theory (Baltes & Baltes, 1990).

Selective Optimization With Compensation Strategies

Baltes and Baltes's (1990; Baltes, 1987) SOC model focuses on the life span development of humans. Accordingly, people possess resources (mental, physical, social, and environmental) that are limited at any specific point in time. During the life span, people meet opportunities (e.g., education, promotion) and demands (e.g., illness and physical deterioration) that require choices about the allocation of these limited resources (Gorgievski, Halbesleben, & Bakker, 2011). To do so, we argue they apply management strategies of (a) selecting the goals to pursue, (b) optimizing and using goal-relevant means, and (c) using compensatory means to maintain goal attainment when previously employed resources are no longer available or blocked.

Specifically, selection involves setting goals and deciding on goal priorities. It can be guided by personal preferences, such that employees may focus more on those aspects of their work that they consider the most important (elective selection), or it may result from reconstruction of the goal hierarchy or a search for new goals in response to a decline of resources (loss-based selection). For instance, employees might abandon work-related goals that they cannot accomplish anymore because of a lack of time or health constraints (Zacher & Frese, 2011). Optimization is defined as the refinement of resources as a means of reaching higher levels of goal achievement. Optimization can take the form of learning and practicing new procedures, modeling successful colleagues, and investing more time into challenging work tasks. Finally, compensation refers to organizing substitute means to reach goals and to maintain a given level of functioning in response to actual or anticipated resource losses. Employees can compensate for increases in workload by using external aids or by drawing upon the help of colleagues (Schmitt, Zacher, & Frese, 2012).

Research over the past decade has shown that SOC strategies not only are effective for responding to diminishing resources due to aging but also have beneficial effects when applied in the work context. Specifically, SOC strategies have been found to be beneficial for job satisfaction (Wiese, Freund, & Baltes, 2000), for subjective and objective job performance (Bajor & Baltes, 2003; Yeung & Fung, 2009), for work ability (Weigl, Muller, Hornung, Zacher, & Angerer, 2013), and for a focus on opportunities at work (Zacher & Frese, 2011).

A central proposition of the SOC model is that when individuals use SOC strategies in a synchronized or coordinated way, they achieve adaptive mastery (Baltes & Baltes, 1990; Marsiske, Lang, Baltes, & Baltes, 1995). However, at the same time, the SOC strategies are viewed as three different processes with clear differences (Baltes & Carstensen, 1999). Whereas selection addresses the choice of goals and tasks, both compensation and optimization are concerned with the means to maintain or enhance chosen goals. Moreover, whereas selection can be proactive or reactive, optimization and compensation come into play when the means required for goal attainment are lacking (Baltes & Carstensen, 1999). Existing empirical research also suggests that specific strategies are more beneficial for task performance and adaptation than others. For instance, Yeung and Fung (2009) found that elective selection and compensation help older workers (sales persons) maintain a satisfactory sales productivity. Moreover, greater use of loss-based selection and compensation was found to enhance supervisors' assessment of overall performance among bank employees (Bajor & Baltes, 2003). Abraham and Hansson (1995) concluded from their study with 224 employees from different professions that especially elective selection and compensation helped employees to maintain satisfactory levels of functioning. In light of these differences, it seems relevant to examine the unique effect of each strategy separately, rather than to look at the combined effect of all SOC strategies.

We expect that when individuals experience elevated levels of exhaustion (i.e., a lack of energy) and disengagement (i.e., reduced willingness to invest effort in their job), they will choose to focus their attention on the tasks that are important for their official performance requirements, as performing well is an important determinant of an employee's self-concept. In line with Vroom's (1962) model, individuals choose to invest effort in tasks that are instrumental to achieve valued ends. Job performance is relevant to the maintenance of an individual's self-identity. As Kahneman (1970) points out, task performance is typically highly reliable and resistant to distraction. According to Hockey (1997), job performance is maintained because even when people lack energetic resources (as is the case with burnout), they will adopt "performance protection" strategies to maintain high priority task goals within acceptable limits. One of these strategies is to impair, on a selective basis, low-priority task components. They may neglect some secondary activities entirely. Thus, a selection strategy will have an impact on secondary aspects of performance but will not be relevant for primary, overt task performance. In line with the suggestions of Dewett and Denisi (2007), we consider change-related behavior as a form of citizenship behavior or extra-role performance. Extra-role performance is generally assumed to represent attempts of employees who are satisfied with their job to show their gratitude to the organization or to reciprocate their feeling of satisfaction (MacKenzie, Podsakoff, & Ahearne, 1998). Thus, a selection strategy is relevant for adaptivity to change but will not be implemented to core task performance. In line with this reasoning, Philipp and Kunter (2013) suggested that with increasing tenure and the accompanying constant exposure to high work demands, employees make use of selection strategies by keeping their focus on their core tasks and reducing some of the additional tasks, such as administrative work or taking part in innovative projects. Therefore, we suggest:

Hypothesis 2: Selection (elective and loss-based) will exacerbate the negative relationship of burnout with supervisor-rated adaptivity to change.

However, the choice to use compensation (by use of alternative means) and optimization (by improvement of goal-relevant means) will be beneficial for both performance dimensions, because by using these strategies, individuals are enhancing the available resources in order to attain their goals. COR theory (Hobfoll, 2001) states that reallocating resource investment (i.e., compensation) can protect individuals against further resource loss, and may help them to recover from loss and even gain new resources. Intensifying the efforts to manage the demands of their profession would be a beneficial compensation mechanism, especially for those employees who experience already lack of resources due to burnout. Moreover, as COR theory (Hobfoll, 2002) states, an essential requirement for maintaining optimal functioning, even after extensive resource investment, is to invest gained time resources in positive or rewarding tasks in order to gain new resources (i.e., optimization). Therefore, we assume that employees with burnout symptoms who employ the optimization strategy optimize the time spent on core tasks and invest the time resources gained in additional, peripheral tasks. Therefore, our final hypothesis is,

Hypothesis 3: Compensation and optimization will buffer the negative relationship of burnout with supervisor-rated task performance and adaptivity to change.

Method

Participants and Procedure

The participants in the present study were employed in different sectors and job positions in The Netherlands. Fifteen bachelor students recruited the participants as part of their bachelor's thesis requirements. Each student approached 25 employees (and their supervisors), which resulted in a sample with very heterogeneous jobs. Of the 375 packages of questionnaires that were distributed, 294 were completed and returned, resulting in a response rate of 78%. The students left two questionnaires—one for the employee and one for the supervisor. To provide anonymity, the questionnaires were code-numbered to match the employee and the supervisor. The employees were instructed to give the enclosed questionnaire to their direct supervisor, who represents the person who holds with them the yearly appraisal interview. The subordinate was informed that the supervisor would rate his or her behavior at work. Task performance and adaptivity were named as behavior at work to avoid socially desirable answers. The supervisor filled in the questionnaire with regard to the participant and returned the completed questionnaire to the participant in a closed envelope (that we provided) to avoid socially desirable answers. Each participant returned the questionnaire, along with the supervisor's questionnaire, directly to the student.

The sample includes 161 males (54%) and 133 females (46%). Their mean age was 36.48 years (SD = 13.08). The majority of the sample had higher vocational training (32.7%) or a college degree (25.2%). Organizational tenure was 9.12 years (SD = 9.87), and the sample worked on average 29.4 hr per week (SD = 12.04). Participants were employed in the public sector (13.6%), trade sector (14.3%), industry (10.9%), business services (9.9%), or the health sector (9.9%). As the Dutch working population has a mean age of 41 years, is 55% male, works on average 32.5 hr per week, and 32% is higher educated, our sample is slightly older and higher educated compared with the Dutch working population.

Measures

Burnout was assessed with the Oldenburg Burnout Inventory (OLBI; Demerouti, Bakker, Vardakou, & Kantas, 2003; Demerouti et al., 2010). The OLBI has two dimensions: exhaustion and disengagement from work. Each subscale consists of eight items, four positively worded and four negatively worded. Example items are, for exhaustion, "During my work, I often feel emotionally drained," and for disengagement, "With time, one loses the internal relationship with one's work." Each item had four response alternatives, ranging from 1 (*totally disagree*) to 4 (*totally agree*). The positive and negative exhaustion and disengagement items were presented in mixed order. Cronbach's alphas for exhaustion and disengagement, respectively, were .77 and .81.

SOC. We assessed the SOC strategies with the short instrument developed by Freund and Baltes (1998; Baltes, Baltes, Freund, & Lang, 1995). With this instrument, each strategy is assessed by three bipolar items. Each item consisted of two statements, one reflecting the target SOC strategy, and the other offering an alternative, non-SOC-related strategy. We used the original item format, because Freund and Baltes (1998) suggested that without the alternatives, the SOC-related items produced less variance than expected, possibly because the behaviors represented in the SOC-related items are generally judged to be functional and desirable. Example items are "I concentrate all my energy on a few things" versus "I divide my energy among many things" (elective selection); "When things don't go as well as before, I choose one or two important goals" versus "When things don't go as well as before, I still try to keep all my goals" (loss-based selection); "I make every effort to achieve a given goal" versus "I prefer to wait for a while and see if things will work out by themselves" (optimization); and "When things don't go as well as they used to, I keep trying other ways until I can achieve the same result I used to" versus "When things don't go as well as they used to, I accept it" (compensation). Scores were recoded such that higher scores indicated the use of the respective strategy. Because items were scored dichotomously, we used the Kuder–Richardson 20 formula to estimate reliability (Pedhazur & Schmelkin, 1991). The Kuder–Richardson 20 values for elective and loss-based selection were .49 and .75, and for optimization and compensation, these were .89 and .99.

Task performance. To assess task performance, we used the seven-item scale of Williams and Anderson (1991). The items were formulated such that they asked supervisors to rate the degree to which subordinates met the formal requirements of their job. Two of the items were negatively formulated and had to be recoded. An example item is "The employee performs the tasks that are expected from him/her." Response categories ranged from 1 (*not true at all*) to 5 (*totally true*). Cronbach's alpha was .82.

Adaptivity to change was assessed with Griffin, Neal, and Parker's (2007) scale of team member adaptivity. The scale

includes three items. An example item is "The employee responds constructively to changes in the way the team works." Response categories ranged from 1 (*not true at all*) to 5 (*totally true*). Cronbach's alpha was .63.

Results

Confirmatory Factor Analysis

Prior to hypotheses testing, we explored whether the four strategies could be distinguished empirically. To this end, we conducted confirmatory factor analyses (CFA) using the AMOS software package (Arbuckle, 2007) and the maximum likelihood method. The four-factor model included each strategy as latent factors, which were indicated by three items each. The latent factors were allowed to correlate. The four-factor model showed a suboptimal fit to the data, $\chi^2(48\ df) = 83.44$, $p < .001$, Goodness of Fit Index = .95, Tucker Lewis Index = .80, Comparative Fit Index = .86, Root Mean Square Error of Approximation = .050, LO90 = .031, HI90 = .068. However, all items loaded significantly on the intended latent factors. Modification indexes showed that no cross-loadings were suggested; some correlations between the disturbances were suggested. This model was compared with a three-factor model in which the elective and loss-based selection items were collapsed in one factor. The four-factor model did not fit significantly better to the data than the three-factor model, $\Delta\chi^2(3) = 3.01$, *ns*. However, the fit of the four-factor model was significantly and substantially better than a two-factor model in which elective and loss-based selection formed one factor, and optimization and compensation formed a second factor, $\Delta\chi^2(5) = 24.00$, $p < .001$, and a one-factor model, $\Delta\chi^2(6) = 81.60$, $p < .001$. Although the fit of the four-factor model to the data is suboptimal—probably due to the fact that the items represent binary variables (Schumacker & Beyerlein, 2000)—these findings indicate that selection, optimization, and compensation strategies can be discriminated, whereas the two forms of selection cannot be discriminated by the CFA. Because the correlation between elective and loss-based selection is low ($r = .32$, $p < .01$), and in order to align our empirical tests with our theory (i.e., the hypothesized structure of SOC), we decided to keep the two dimensions as separate dimensions.

Hypothesis Testing

Table 1 displays the mean scores, standard deviations, and correlations among the study variables. Of all sociodemographics, age and number of hours worked per week were significantly related to adaptivity to change and task performance, respectively. Therefore, we controlled for these sociodemographics in all subsequent analyses. As can be seen in Table 1, exhaustion is only negatively related to task performance, whereas disengagement is negatively but weakly related to both task performance and adaptivity to change (as rated by the supervisor).

Hypothesis 1 suggests that burnout is negatively related to supervisor-rated task performance and adaptivity to change. Results of regression analyses are displayed in Table 2. Regressing exhaustion and disengagement on task performance, we found that only exhaustion was negatively related to task performance ($\beta = -.20$, $p < .01$). Regressing both burnout dimensions on adaptivity to change, we found that only disengagement was negatively related to adaptivity to change ($\beta = -.14$, $p < .05$). These results provide partial support for Hypothesis 1.

Hypothesis 2 states that elective and loss-based selection will exacerbate the negative effect of burnout on supervisor-rated adaptivity to change. As Table 3 displays, the interaction between exhaustion and both elective and loss-based selection significantly predicted adaptivity to change. Inspection of the graphical display of the interactions (see Figures 1 and 2) indicates that the use of either selection strategy exacerbates the negative effect of exhaustion on supervisor-rated adaptivity to change. The simple slope of the regression of adaptivity to change on exhaustion for individuals with one standard deviation above the average on elective selection or on loss-based selection was significant (simple slope = −.13, $t[279] = -2.88$, $p < .01$; simple slope = −.23, $t[279] = -3.28$, $p < .01$, respectively). For individuals with one standard deviation below the average on elective selection and loss-based selection, the relationship between exhaustion and adaptivity to change was not significant. Thus, the use of elective and loss-based selection worsened the detrimental effects of lack of energy on a specific aspect of performance that is not formally included in one's job description. Note that the interaction between selection and exhaustion was significant for adaptivity. A similar

Table 1
Means, Standard Deviations, and Bivariate Correlations for the Study Variables (N = 294)

	Mean	*SD*	1	2	3	4	5	6	7	8	9
1. Age	36.48	13.08									
2. Hours/week	29.40	12.03	.40**								
3. Exhaustion	1.94	.46	−.05	.14*							
4. Disengagement	2.10	.51	−.14*	−.12*	.49**						
5. Elective selection	1.46	.34	−.03	.12*	.11	.07					
6. Loss-based selection	1.63	.30	−.02	.05	.07	.04	.32**				
7. Optimization	1.83	.26	.11*	.09	−.11	−.10	−.02	.08			
8. Compensation	1.58	.31	−.26**	−.03	.01	−.16**	.04	.09	.17**		
9. Task performance	4.19	.53	−.05	−.24**	−.27**	−.15*	−.14*	−.07	.06	.06	
10. Adaptivity to change	3.74	.61	−.13*	−.10	−.08	−.12*	−.07	.05	.04	.10	.43**

* $p < .05$. ** $p < .01$.

Table 2
Results of Regression of Burnout on Task Performance and Adaptivity to Change

Variable	Task performance			Adaptivity		
	B	*SE*	ΔR^2	*B*	*SE*	ΔR^2
Step 1: Sociodemographics			.07***			.02*
Employee age	.00	.02		−.01	.00	
Hours per week	−.01***	.00		−.00	.00	
Step 2: Burnout			.06***			.02*
Exhaustion	−.23**	.08		−.02	.09	
Disengagement	−.08	.07		−.17*	.08	
Total R^2			.13***			.04*
Adjusted R^2			.11***			.03*

Note. $N = 294$.
* $p < .05$. ** $p < .01$. *** $p < .001$.

pattern was also evident when we used the total score for both selection strategies. Therefore, Hypothesis 2 is partially supported, as we found no moderating effect of selection on the relationship between disengagement and adaptivity.

Finally, Hypothesis 3 stated that compensation and optimization would buffer the negative impact of burnout on task performance and adaptivity to change. The interaction between the burnout dimensions and optimization failed to predict performance. Therefore, the findings are not presented in a table and are available by the first author upon request. As Table 4 shows, the interaction between disengagement and compensation significantly predicted both performance dimensions. The simple slope of the regression of task performance and adaptivity on disengagement within individuals with one standard deviation below the average on compensation was significant (simple slope = −.18, $t[279] = -4.00$, $p < .01$; simple slope = −.19, $t[279] = -4.32$, $p < .001$, respectively). As Figures 3 and 4 graphically display, for individuals with one standard deviation above the average on compensation, the relationship between disengagement and task performance as well as adaptivity was not significant. Thus, employees who used compensation strategies were able to keep their performance unaffected by high levels of disengagement, whereas for those who did not use a compensation strategy, there was a negative relationship between disengagement and task performance as well as adaptivity.

Additionally, the compensation strategy was found to buffer the negative effects of exhaustion on adaptivity but not on task performance. The significant interaction is displayed in Figure 5. The simple slope of the regression of adaptivity onto exhaustion within individuals with one standard deviation below the

Table 3
Results of Regression of Exhaustion and Selection on Adaptivity to Change

Variable	Elective			Loss-based		
	B	*SE*	ΔR^2	*B*	*SE*	ΔR^2
Step 1: Sociodemographics			.02*			.02*
Employee age	−.01	.00		−.01	.00	
Hours per week	−.01	.00		.00	.00	
Step 2: Main effects			.01			.01
Exhaustion	−.13	.08		−.13	.08	
Selection	−.10	.11		.13	.12	
Step 3: Interaction			.02*			.02**
Exhaustion × Selection	−.08*	.04		−.09**	.04	
Total R^2			.05*			.05*
Adjusted R^2			.03*			.04*

Note. $N = 294$.
* $p < .05$. ** $p < .01$. *** $p < .001$.

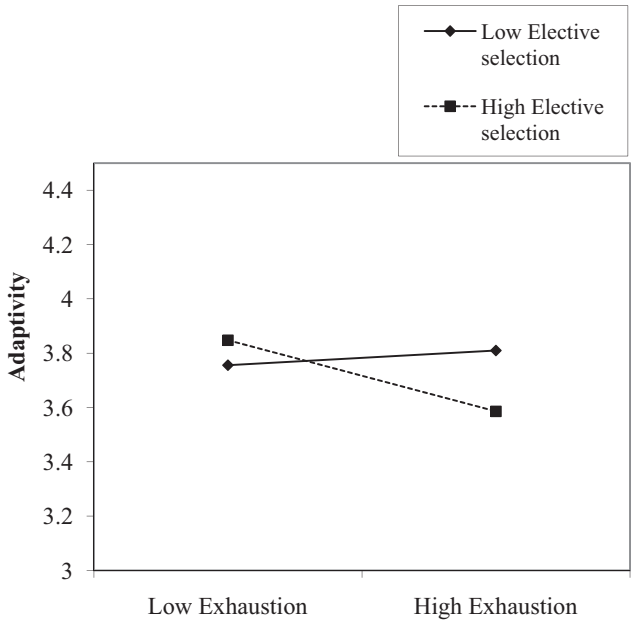

Figure 1. Two-way interaction between exhaustion and elective selection in predicting adaptivity to change.

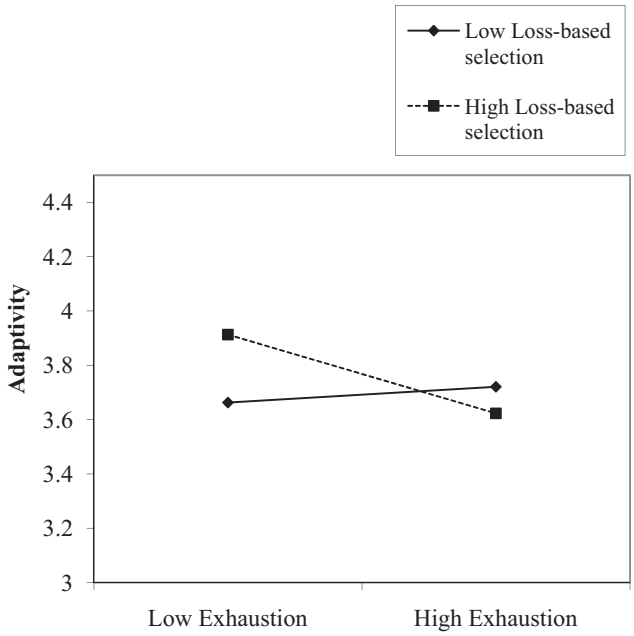

Figure 2. Two-way interaction between exhaustion and loss-based selection in predicting adaptivity to change.

Table 4
Results of Regression of Burnout and Compensation on Task Performance and Adaptivity to Change

Variable	Task performance			Adaptivity		
	B	*SE*	ΔR^2	*B*	*SE*	ΔR^2
Step 1: Sociodemographics			.07***			.02*
Employee age	.00	.00		−.01	.00	
Hours per week	−.01	.00		−.00	.00	
Step 2: Main effects			.06***			.01
Exhaustion	−.26***	.07		−.10	.08	
Compensation	−.06	.10		−.07	.12	
Step 3: Interaction			.00			.01*
Exhaustion × Compensation	.05	.03		.07*	.03	
Total R^2			.13***			.05*
Adjusted R^2			.12***			.03*
Step 1: Sociodemographics			.07***			.02*
Employee age	.00	.00		−.01	.00	
Hours per week	−.01***	.00		.00	.00	
Step 2: Main effects			.03**			.02*
Disengagement	−.18**	.06		−.18**	.07	
SOC	−.01	.10		−.01	.12	
Step 3: Interaction			.03**			.03**
Disengagement × Compensation	.09**	.03		.10**	.03	
Total R^2			.13***			.07***
Adjusted R^2			.11***			.06***

Note. $N = 294$. SOC = Selective Optimization with Compensation.
* $p < .05$. ** $p < .01$. *** $p < .001$.

average on compensation was significant (simple slope = −.12, $t[279] = -2.66$, $p < .01$). For individuals with one standard deviation above the average on compensation, the relationship between exhaustion and adaptivity to change was not significant. Taken together, results partly support Hypothesis 3, as three out of four interactions were significant for compensation and none of the interactions was significant for optimization. In total, 41.7% of the hypothesized interactions were significant.

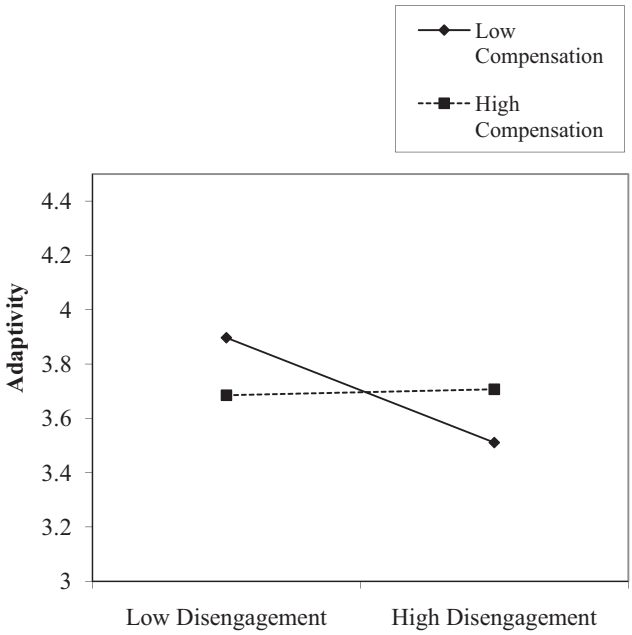

Figure 4. Two-way interaction between disengagement from work and compensation in predicting adaptivity to change.

Additional Analysis

A central proposition of the SOC model is that the use of any one SOC strategy together with the application of the other strat-

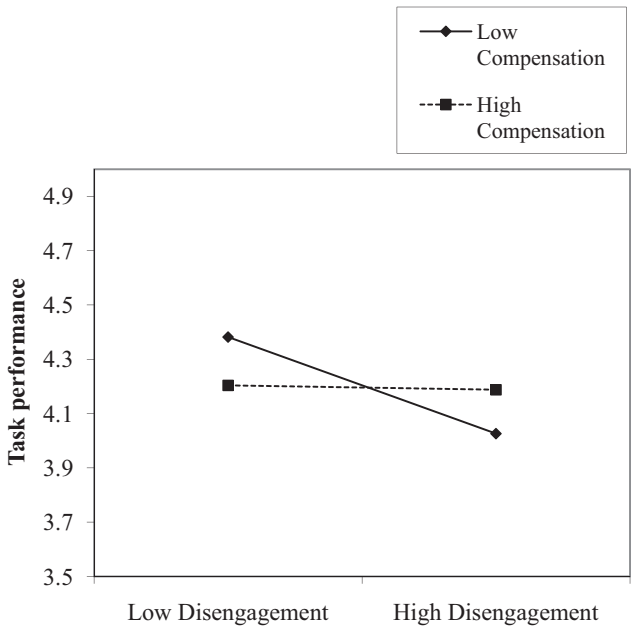

Figure 3. Two-way interaction between disengagement from work and compensation in predicting task performance.

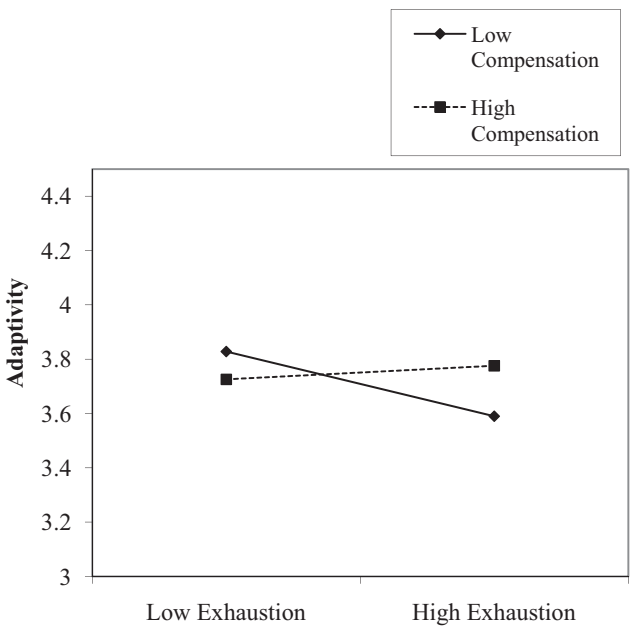

Figure 5. Two-way interaction between exhaustion and compensation in predicting adaptivity to change.

egies promotes successful behavior and adaptive mastery of older individuals (Baltes & Baltes, 1990; Marsiske et al., 1995; Zacher & Frese, 2011). In other words, it is suggested that the SOC strategies have an additive dynamic, which means that using multiple strategies may have a larger effect than using only one of the strategies. Therefore, we tested whether the combined SOC strategies buffers the negative effect of burnout on task performance and adaptivity to change. The results of hierarchical regression analyses showed that the overall SOC only buffered the relationship between disengagement and task performance. The simple slope of the regression of task performance onto disengagement within individuals with one standard deviation below the average on SOC was significant (simple slope = −.16, $t[279] = -3.70$, $p < .01$), whereas for individuals with one standard deviation above the average on SOC, there was no significant relationship. Thus, overall SOC failed to buffer the effect of exhaustion on task performance and adaptivity as well as of disengagement on adaptivity.

Discussion

The present study shows that it is promising to examine possible strategies that individuals use to manage diminished functioning in their work due to burnout symptoms. The findings suggest that the strategies that employees use to deal with diminished energetic resources may alter the degree to which these burnout experiences are linked to decrements in task performance and adaptivity to change. More specifically, this study showed that of all strategies, compensation was the most successful strategy in buffering the negative effects of burnout on both task performance and adaptivity to change. In contrast, selection was the strategy that exacerbated the negative effect of the exhaustion dimension of burnout on adaptivity to change. In this way, the main contribution of the study is that it uncovers successful and unsuccessful strategies that people use in order to deal with their burnout symptoms in order to achieve sufficient performance at work. Additional analyses further showed that the combined use of selection, optimization, and compensation strategies buffered only the unfavorable effects of disengagement on task performance.

Theoretical Contributions

Similar to earlier research that suggests unfavorable effects of burnout on performance (Bakker et al., 2004), we found that only exhaustion was negatively related to task performance, whereas of both burnout dimensions, only disengagement was negatively related to adaptivity to change. Bakker et al. also found that task performance was an outcome of a health-related process initiating from job demands and influencing task performance through exhaustion. Moreover, they found that extra-role behaviors, of which adaptivity can be considered an indicator, is the outcome of the motivational process that departs from job resources and is mediated through disengagement from work. This finding confirms the difficulty of burned-out employees to maintain optimal functioning and avoid losses (Hobfoll, 2001), and highlights the conclusion by Demerouti and Cropanzano (2010) that performance is not a uniform construct but that there are different underlying psychological processes linking burnout, or its hypothetical opposite—that is, work engagement—to different performance dimensions. Although exhaustion and disengagement represent two symptoms of burnout, their differential relationships with performance and adaptivity agree with earlier research suggesting that ability (i.e., exhaustion) is more relevant for task performance, whereas motivation (i.e., disengagement) is more relevant for extra-role performance (i.e., adaptivity) (e.g., Bakker et al., 2004; Motowidlo, Borman, & Schmit, 1997). Alternatively, this finding might be explained by the fact that the mean scores of both burnout dimensions were rather low. This restriction in range, due to participation of relative healthy employees, is also known in burnout research when using other burnout instruments (e.g., the Maslach Burnout Inventory; Bakker, Van Emmerik, & Van Riet, 2008). This may have limited the statistical possibility of finding stronger relationships between burnout and performance.

Perhaps the unique contribution of this study is that it uncovered strategies that individuals use to reduce the unfavorable effects of their burnout experiences on performance at work. Results supported that, of the three strategies, compensation seems to work better in counteracting the unfavorable effects of burnout. Although optimization and compensation are both targeted at enhancing resources, there is a substantial difference between these strategies. Optimization is the process that is directed at acquiring the needed resources: developing new skills, modeling other successful ones, using one's energy to pursue personal goals. When individual resources decline or are lost (as with burnout), compensation strategies become necessary to avoid a reduction in self-regulation regarding goals (Freund & Baltes, 2000, 2002; Freund & Riediger, 2001) and to avoid resource loss (Hobfoll, 2001). An individual may compensate by using different external resources, such as the help of others or of technology, but also by increasing his or her efforts or by learning new skills (Ouwehand, de Ridder, & Bensing, 2007).

The role of compensation is consistent with recent research showing that employees who proactively engage in job-crafting behaviors in order to increase their job resources show higher levels of work engagement and performance (Bakker, Tims, & Derks, 2012). Such a strategy is also in line with COR theory's claim that individuals strive to obtain, retain, protect, and foster things that they value (Hobfoll, 2001). In this sense, compensation plays a more instrumental role in dealing with loss or decline of goal-relevant means than optimization. As individuals lack resources when they experience elevated levels of burnout, investment in optimizing resources—like learning new skills—is, for them, difficult to realize and therefore a rather ineffective strategy. Another explanation is that compensation together with loss-based selection was found to explain partly why highly conscientious individuals achieve high levels of performance. Namely, Bajor and Baltes (2003) found that loss-based selection and compensation assist individuals in allocating their limited individual resources to attain higher levels of performance. However, a critical note has to be made, as we have limited knowledge on the long-term effects of the utilization of compensation. From the literature on fatigue, it is known that when individuals invest more effort, they might become more exhausted, particularly when recovery possibilities are insufficient (e.g., Meijman & Mulder, 1998). Future research needs to clarify whether compensation is beneficial for individuals in the short term as well as the long term. Compensation was not effective in buffering the detrimental effect of exhaustion on task performance, suggesting that inability to perform due to exhaus-

tion is so detrimental that organizing substitute means cannot always prevent losses.

Contrary to the study of Bajor and Baltes (2003), who found that loss-based selection was beneficial for overall performance, in the present study, elective and loss-based selection were unrelated to task performance but were found to enhance the unfavorable effect of exhaustion on adaptivity to change. Although these results might seem contradictory, they are in line with Hockey's (1997) claim that performance protection strategies—like narrowing of attention—protect task performance. However, performance decrements on secondary performance are evident. Thus, when people select between alternatives or make a new goal hierarchy, they manage to avoid performance decrements (e.g., by setting performance goals high on the hierarchy and ignoring other goals), which is in line with the SOC model. However, they fail to keep their optimal functioning on discretional behaviors like adaptivity to change, which is more in line with the reasoning of Hockey (1997). Selection worsened the impact of exhaustion on adaptivity but not of disengagement, perhaps because it represents a means of creating defensive cognitive distance (Cartwright & Holmes, 2006). Selection is, in this respect, irrelevant when a person is cognitively distancing from work, because it reduces the range of activities into which employees invest their energy.

Although Baltes and colleagues (Baltes & Baltes, 1990; Marsiske et al., 1995) suggest that the simultaneous application of the SOC strategies promotes successful behavior, we found weak support for this suggestion. First, the findings of the CFA suggested that discriminating between the four SOC strategies was better than collapsing these in one factor. Second, we found differential effects of the different SOC dimensions on the relationship between burnout (exhaustion and disengagement) and performance. Although optimization had no effects, elective and loss-based selection enhanced the unfavorable effects, and compensation buffered the favorable effects of burnout on performance indicators. In addition, Bal, Kooij, and De Jong (2013) found that the provision of human resources management practices decreases work engagement for employees low on selection and compensation, whereas it enhances commitment only for people endorsing selection and compensation strategies. Finally, we found that individuals who combined selection, optimization, and compensation strategies received positive task performance ratings from their supervisors, regardless of their level of engagement with their work. On the contrary, those who failed to combine selection, optimization, and compensation strategies received lower performance ratings from their supervisors to the extent they felt disengaged from their work. SOC strategies failed to moderate the impact of exhaustion on task performance and adaptivity to change, which again underscores the differential nature of the specific burnout dimensions. By applying the SOC model to the work domain, researchers should be alert to the possibility that the specific SOC strategies might have differential role in the examined processes, whereas this does not seem to be necessary when SOC is applied to dealing with aging.

We think that the SOC strategies were a successful moderator compared with coping because they are specific in dealing with gaps in individual resources (which are an essential characteristic of burnout) rather than dealing with stress (which is a broad experience). Freund and Baltes (2002) suggest that SOC is a powerful construct because the focus is on proactive and agentic strategies of life management. Specifically, while SOC strategies focus on an

> adaptive way to set clear goals, acquire and invest means into the pursuit of these goals, and do so persistently even in the face of setbacks and losses, models of coping stress the importance of the ability to sit back and wait and see what life has to offer, take advantage of what presents itself, and to let go of things when confronted with losses. (Freund & Baltes, 2002, p. 426)

Similarly, Brandtstädter and Renner (1990) suggest that one of the central coping processes, flexible goal adjustment or reframing, refers to seeing positive aspects or a meaning in failing to achieve one's goals or lowering one's level of aspiration. In contrast, the SOC model views compensatory efforts, such as acquiring substitute means to maintain one's level of functioning, as adaptive responses to losses in goal-relevant means.

Limitations

A first limitation of this study is that the study applied a cross-sectional design to examine presumed causal relationships between the variables. Therefore, the present findings are tentative until replicated in studies with longitudinal designs. For example, one may argue that better performance can also be an antecedent of lower levels of burnout and of the use of more successful strategies, because employees who perform well come in a positive spiral in which they feel more efficacious and supported by their organization (see Salanova, Schaufeli, Xanthopoulou, & Bakker, 2010).

A second limitation is that our participants were not randomly selected from the entire Dutch working population. Thus, selection biases may have influenced the results. Our findings can be generalized to somewhat older, higher educated employees rather than to the Dutch working population. Future studies should try to replicate the findings in more representative samples. A related limitation concerns the possibility that the subordinates refrained from giving the questionnaire to their supervisor and rather filled in both parts themselves. Although we cannot exclude this possibility, the correlations between supervisor ratings and self-ratings (not used in this manuscript) are weak, that is, $r = .27$, $p < .001$, and $r = .20$, $p < .001$, for task performance and adaptivity to change, respectively, while the mean scores were similar. This suggests that, most probably, the participants complied with the instructions of the research assistants, whom they generally knew and could trust.

A third limitation concerns the fact that elective selection had a low reliability coefficient. Bajor and Baltes (2003) also reported low reliabilities for the SOC scale (ranging between .25 and .66). They suggest that this might be the case because the items measuring each SOC component were designed to tap into different facets of each component (i.e., form a heterogeneous scale), and thus test–retest is a better estimate of reliability. Previous research has shown satisfactory test–retest stability (.70 to .80) for each of the SOC strategies (Wiese et al., 2000). Furthermore, other studies (Freund & Baltes, 1998, 2002) have found support for the factor structure of the items in this scale by means of CFA.

Implications and Conclusions

In sum, the results of this study indicate that the use of SOC strategies to deal with feelings of burnout may buffer (in the case of the combined use of SOC strategies and of compensation) or enhance (in the case of elective and loss-based selection) the negative impact of burnout on performance as rated by supervisors. However, while compensation was found to be an effective strategy, selection proved to be less effective. Organizations may use these insights not only to uncover the real impact of burnout on performance (as this is currently underestimated to a large extent) but also to train individuals to use more effective strategies to deal with diminished resources. For instance, organizations could train their employees to craft their jobs in a way that they find motivating, but also in a way that is feasible to execute without negative consequences. As we still have no insights into the long-term implications of SOC strategies, the improvement of work characteristics such that the risk of burnout is reduced seems a saver choice. This can occur though top-down, job redesign approaches, in which job demands are optimized and job resources increased, or bottom-up approaches such as individual job crafting. van den Heuvel et al. (2012) found that when employees learned to influence the demands and resources of their work through job-crafting exercises, they experienced more positive and less negative emotions as well as higher levels of self-efficacy. Our study showed that it is promising for research and practice to zoom in on more specific strategies used by employees in order to deal with burnout and sustain job performance. By doing this, we were able to uncover the true impact of burnout on job performance, and thus to highlight the importance of applying interventions aimed at reducing burnout symptoms.

References

Abraham, J. D., & Hansson, R. O. (1995). Successful aging at work: An applied study of selection, optimization, and compensation through impression management. *The Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 50,* P94–P103. doi:10.1093/geronb/50B.2.P94

Arbuckle, J. L. (2007). *Amos 16.0 User's Guide*. Chicago, IL: SPSS.

Bajor, J. K., & Baltes, B. B. (2003). The relationship between selection optimization with compensation, conscientiousness, motivation, and performance. *Journal of Vocational Behavior, 63,* 347–367. doi:10.1016/S0001-8791(02)00035-0

Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology, 22,* 309–328. doi:10.1108/02683940710733115

Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management, 43,* 83–104. doi:10.1002/hrm.20004

Bakker, A. B., Tims, M., & Derks, D. (2012). Proactive personality and job performance: The role of job crafting and work engagement. *Human Relations, 65,* 1359–1378. doi:10.1177/0018726712453471

Bakker, A. B., Van Emmerik, H., & Van Riet, P. (2008). How job demands, resources, and burnout predict objective performance: A constructive replication. *Anxiety, Stress & Coping, 21,* 309–324. doi:10.1080/10615800801958637

Bal, P. M., Kooij, D. T., & De Jong, S. B. (2013). How do developmental and accommodative HRM enhance employee engagement and commitment? The role of psychological contract and SOC strategies. *Journal of Management Studies, 50,* 545–572. doi:10.1111/joms.12028

Baltes, M. M. (1987). Erfolgreiches Altern als Ausdruck von Verhaltenskompetenz und Umweltqualität [Successful aging as a function of behavioral competence and environmental quality]. In C. Niemitz (Ed.), *Der Mensch im Zusammenspiel von Anlage und Umwel* (pp. 353–376). Frankfurt, West Germany: Suhrkamp.

Baltes, M. M., & Carstensen, L. L. (1999). Social psychological theories and their applications to aging: From individual to collective social psychology. In V. L. Bengtson & K. W. Schaie (Eds.), *Handbook of theories of aging* (pp. 209–226). New York, NY: Springer.

Baltes, P. B., & Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P. B. Baltes & M. M. Baltes (Eds.), *Successful aging: Perspectives from the behavioral sciences* (pp. 1–34). New York: Cambridge University Press.

Baltes, P. B., Baltes, M. M., Freund, A. M., & Lang, F. R. (1995). *Measurement of selective optimization with compensation by questionnaire*. Berlin, Germany: Max Planck Institute for Human Development.

Brandtstädter, J., & Renner, G. (1990). Tenacious goal pursuit and flexible adjustment: Explication and age-related analysis of assimilative and accommodative strategies of coping. *Psychology and Aging, 5,* 58–67. doi:10.1037/0882-7974.5.1.58

Cartwright, S., & Holmes, N. (2006). The meaning of work: The challenge of regaining employee engagement and reducing cynicism. *Human Resource Management Review, 16,* 199–208. doi:10.1016/j.hrmr.2006.03.012

Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology, 64,* 89–136. doi:10.1111/j.1744-6570.2010.01203.x

Cropanzano, R., & Wright, T. A. (2001). When a "happy" worker is really a "productive" worker: A review and further refinements of the happy-productive worker thesis. *Consulting Psychology Journal, 53,* 182–199.

Demerouti, E., & Bakker, A. B. (2006). Employee well-being and job performance: Where we stand and where we should go. In S. McIntyre & J. Houdmont (Eds.), *Occupational health psychology: European perspectives on research, education and practice* (Vol. 1, pp. 83–111). Maia, Portugal: ISMAI Publications.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology, 86,* 499–512. doi:10.1037/0021-9010.86.3.499

Demerouti, E., Bakker, A. B., Vardakou, I., & Kantas, A. (2003). The convergent validity of two burnout instruments: A multitrait-multimethod analysis. *European Journal of Psychological Assessment, 19,* 12–23. doi:10.1027//1015-5759.19.1.12

Demerouti, E., & Cropanzano, R. (2010). From thought to action: Employee work engagement and job performance. In A. B. Bakker & M. P. Leiter (Eds.), *Work engagement: A handbook of essential theory and research* (pp. 147–163). Hove, UK: Psychology Press.

Demerouti, E., Mostert, K., & Bakker, A. B. (2010). Burnout and work engagement: A thorough investigation of the independency of both constructs. *Journal of Occupational Health Psychology, 15,* 209–222. doi:10.1037/a0019408

Demerouti, E., Verbeke, W., & Bakker, A. B. (2005). Exploring the relationship between a multidimensional and multifaceted burnout concept and self-rated performance. *Journal of Management, 31,* 186–209. doi:10.1177/0149206304271602

Dewett, T., & Denisi, A. S. (2007). What motivates organizational citizenship behaviors? Exploring the role of regulatory focus theory. *European Journal of Work and Organizational Psychology, 16,* 241–260. doi:10.1080/13594320701273606

Freund, A. M., & Baltes, P. B. (1998). Selection, optimization, and compensation as strategies of life management: Correlations with subjective indicators of successful aging. *Psychology and Aging, 13,* 531–543. doi:10.1037/0882-7974.13.4.531

Freund, A. M., & Baltes, P. B. (2000). The orchestration of selection, optimization and compensation: An action-theoretical conceptualization of a theory of developmental regulation. In W. J. Perrig & A. Grob (Eds.), *Control of human behavior, mental processes, and consciousness: Essays in honor of the 60th birthday of August Flammer* (pp. 35–58). Mahwah, NJ: Lawrence Erlbaum.

Freund, A. M., & Baltes, P. B. (2002). Life-management strategies of selection, optimization, and compensation: Measurement by self-report and construct validity. *Journal of Personality and Social Psychology, 82,* 642–662. doi:10.1037/0022-3514.82.4.642

Freund, A. M., & Riediger, M. (2001). What I have and what I do: The role of resource loss and gain throughout life. *Applied Psychology: An International Review, 50,* 370–380.

Gorgievski, M. J., Halbesleben, J. B., & Bakker, A. B. (2011). Expanding the boundaries of psychological resource theories. *Journal of Occupational and Organizational Psychology, 84,* 1–7. doi:10.1111/j.2044-8325.2010.02015.x

Gorgievski, M. J., & Hobfoll, S. E. (2008). Work can burn us out and fire us up: Conservation of resources in burnout and engagement. In J. R. B. Halbesleben (Ed.), *Handbook of stress and burnout in health care* (pp. 7–22). Hauppage, NY: Nova.

Griffin, M. A., Neal, A., & Parker, S. K. (2007). The new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal, 50,* 327–347. doi:10.5465/AMJ.2007.24634438

Halbesleben, J. R., & Bowler, W. M. (2007). Emotional exhaustion and job performance: The mediating role of motivation. *Journal of Applied Psychology, 92,* 93–106. doi:10.1037/0021-9010.92.1.93

Hobfoll, S. E. (2001). The influence of culture, community and the nested-self in the stress process: Advancing conservation of resources theory. *Journal of Applied Psychology, 50,* 337–396.

Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology, 6,* 307–324. doi:10.1037/1089-2680.6.4.307

Hockey, G. R. J. (1993). Cognitive-energetical control mechanisms in the management of work demands and psychological health. In A. Baddely & L. Weiskrantz (Eds.), *Attention: Selection, awareness, and control* (pp. 328–345). Oxford, UK: Clarendon Press.

Hockey, G. R. J. (1997). Compensatory control in the regulation of human performance under stress and high workload: A cognitive-energetical framework. *Biological Psychology, 45,* 73–93. doi:10.1016/S0301-0511(96)05223-4

Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin, 127,* 376–407. doi:10.1037/0033-2909.127.3.376

Kahneman, D. (1970). Remarks on attention control. *Acta Psychologica, 33,* 118–131. doi:10.1016/0001-6918(70)90127-7

Leiter, M. P., & Harvie, P. (1997). The correspondence of supervisor and subordinate perspectives on major organizational change. *Journal of Occupational Health Psychology, 2,* 343–352. doi:10.1037/1076-8998.2.4.343

Leiter, M. P., & Maslach, C. (2005). A mediation model of job burnout. In A. S. Antoniou & C. L. Cooper (Eds.), *Research companion to organizational health psychology* (pp. 544–564). Cheltenham, UK: Edward Elgar. doi:10.4337/9781845423308.00046

Leiter, M. P., & Maslach, C. (2009). Burnout and workplace injuries: A longitudinal analysis. In A. M. Rossi, J. C. Quick, & P. L. Perrewé (Eds.), *Stress and quality of working life: The positive and the negative* (pp. 3–18). Greenwich, CT: Information Age.

MacKenzie, S. B., Podsakoff, P. M., & Ahearne, M. (1998). Some possible antecedents and consequences of in-role and extra-role salesperson performance. *Journal of Marketing, 62,* 87–98. doi:10.2307/1251745

Marsiske, M., Lang, F. L., Baltes, P. B., & Baltes, M. M. (1995). Selective optimization with compensation: Life span perspectives on successful human development. In R. A. Dixon & L. Bäckman (Eds.), *Compensation for psychological deficits and declines: Managing losses and promoting gains* (pp. 35–79). Hillsdale, NJ: Erlbaum.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology, 52,* 397–422. doi:10.1146/annurev.psych.52.1.397

McGrath, J. E. (1976). Stress and behavior in organizations. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1351–1396). Chicago, IL: Rand-McNally.

Meijman, T. F., & Mulder, G. (1998). Psychological aspects of workload. In P. J. D. Drenth & H. Thierry (Eds.), *Handbook of work and organizational psychology. Vol. 2*: *Work psychology* (pp. 5–33). Hove, UK: Psychology Press.

Motowidlo, S. J., Borman, W. C., & Schmit, M. J. (1997). A theory of individual differences in task and contextual performance. *Human Performance, 10,* 71–83. doi:10.1207/s15327043hup1002_1

Motowidlo, S. J., & Van Scotter, J. R. (1994). Evidence that task performance should be distinguished from contextual performance. *Journal of Applied Psychology, 79,* 475–480. doi:10.1037/0021-9010.79.4.475

Ouwehand, C., de Ridder, D., & Bensing, J. (2007). A review of successful aging models: Proposing proactive coping as an important additional strategy. *Clinical Psychology Review, 27,* 873–884. doi:10.1016/j.cpr.2006.11.003

Pedhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, design, and analysis: An integrated approach*. Hillsdale, NJ: Erlbaum.

Philipp, A., & Kunter, M. (2013). How do teachers spend their time? A study on teachers' strategies of selection, optimisation, and compensation over their career cycle. *Teaching and Teacher Education, 35,* 1–12. doi:10.1016/j.tate.2013.04.014

Salanova, M., Schaufeli, W. B., Xanthopoulou, D., & Bakker, A. B. (2010). Gain spirals of resources and work engagement. In A. B. Bakker & M. P. Leiter (Eds.), *Work engagement: A handbook of essential theory and research* (pp. 118–131). New York, NY: Psychology Press.

Schaufeli, W. B., & Enzmann, D. (1998). *The burnout companion for research and practice: A critical analysis of theory, assessment, research, and interventions*. London, UK: Taylor & Francis.

Schaufeli, W. B., & Taris, T. W. (2005). The conceptualization and measurement of burnout: Common ground and worlds apart. *Work & Stress, 19,* 256–262. doi:10.1080/02678370500385913

Schmitt, A., Zacher, H., & Frese, M. (2012). The buffering effect of selection, optimization, and compensation strategy use on the relationship between problem solving demands and occupational well-being: A daily diary study. *Journal of Occupational Health Psychology, 17,* 139–149. doi:10.1037/a0027054

Schumacker, R. E., & Beyerlein, S. T. (2000). Confirmatory factor analysis with different correlation types and estimation methods. *Structural Equation Modeling, 7,* 629–636. doi:10.1207/S15328007SEM0704_6

Taris, T. W. (2006). Is there a relationship between burnout and objective performance? A critical review of 16 studies. *Work & Stress, 20,* 316–334. doi:10.1080/02678370601065893

ten Brummelhuis, L. L., Bakker, A. B., Hetland, J., & Keulemans, L. (2012). Do new ways of working foster work engagement? *Psicothema, 24,* 113–120.

Thoits, P. A. (1991). On merging identity theory and stress research. *Social Psychology Quarterly, 54,* 101–112. doi:10.2307/2786929

Thorndike, E. L. (1914). *Educational psychology. Vol. III: Mental work and fatigue, individual differences and their causes*. New York, NY: Columbia University. doi:10.1037/13824-000

van den Heuvel, M., Demerouti, E., Bakker, A. B., & Schaufeli, W. B. (2013). Adapting to change: The value of change information and meaning-making. *Journal of Vocational Behavior, 83,* 11–21.

van den Heuvel, M., Demerouti, E., & Peeters, M. C. W. (2012). Succesvol job craften door middel van een groepstraining [Successful job crafting through group training]. In J. de Jonge, M. Peeters, S. Sjollema, & H. de Zeeuw (Eds.), *Scherp in werk: 5 routes naar optimale inzetbaarheid* (pp. 27–49). Assen, The Netherlands: Koninklijke van Gorcum BV.

Vroom, V. H. (1962). Ego-involvement, job satisfaction and job performance. *Personnel Psychology, 15,* 159–177. doi:10.1111/j.1744-6570.1962.tb01858.x

Weigl, M., Muller, A., Hornung, S., Zacher, H., & Angerer, P. (2013). The moderating effects of job control and selection, optimization, and compensation strategies on the age–work ability relationship. *Journal of Organizational Behavior, 34,* 607–628.

Wiese, B. S., Freund, A. M., & Baltes, P. B. (2000). Selection, optimization, and compensation: An action-related approach to work and partnership. *Journal of Vocational Behavior, 57,* 273–300. doi:10.1006/jvbe.2000.1752

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management, 17,* 601–617. doi:10.1177/014920639101700305

Wright, T. A., & Cropanzano, R. (2000). Psychological well-being and job satisfaction as predictors of job performance. *Journal of Occupational Health Psychology, 5,* 84–94. doi:10.1037/1076-8998.5.1.84

Yeung, D. Y., & Fung, H. H. (2009). Aging and work: How do SOC Strategies contribute to job performance across adulthood? *Psychology and Aging, 24,* 927–940. doi:10.1037/a0017531

Zacher, H., & Frese, M. (2011). Maintaining a focus on opportunities at work: The interplay between age, job complexity, and the use of selection, optimization, and compensation strategies. *Journal of Organizational Behavior, 32,* 291–318. doi:10.1002/job.683

Received February 7, 2013
Revision received October 7, 2013
Accepted October 7, 2013 ■