

RESEARCH REPORT

Accumulative Job Demands and Support for Strength Use:
Fine-Tuning the Job Demands-Resources Model Using Conservation of Resources Theory

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Absenteeism associated with accumulated job demands is a ubiquitous problem. We build on prior research on the benefits of counteracting job demands with resources by focusing on a still untapped resource for buffering job demands—that of strengths use. We test the idea that employees who are actively encouraged to utilize their personal strengths on the job are better positioned to cope with job demands. Based on conservation of resources (COR) theory, we hypothesized that job demands can accumulate and together have an exacerbating effect on company registered absenteeism. In addition, using job demands-resources theory, we hypothesized that perceived organizational support for strengths use can buffer the impact of separate and combined job demands (workload and emotional demands) on absenteeism. Our sample consisted of 832 employees from 96 departments (response rate = 40.3%) of a Dutch mental health care organization. Results of multilevel analyses indicated that high levels of workload strengthen the positive relationship between emotional demands and absenteeism and that support for strength use interacted with workload and emotional job demands in the predicted way. Moreover, workload, emotional job demands, and strengths use interacted to predict absenteeism. Strengths use support reduced the level of absenteeism of employees who experienced both high workload and high emotional demands. We conclude that providing strengths use support to employees offers organizations a tool to reduce absenteeism, even when it is difficult to redesign job demands.

Keywords: strengths use support, JD-R model, job demands, job resources, absenteeism

Employee absenteeism is a major problem that costs U.S. organizations more than \$48 billion in lost employee productivity each year (Davis, Collins, Doty, Ho, & Holmgren, 2005). According to the job demands-resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), much of absenteeism can be explained by an overload of job demands—the physical, psychological, social, or organizational aspects of the job requiring constant physical and psychological effort—that exhaust employees' cognitive and physical resources and therefore cause health problems (Bakker, Demerouti, de Boer, & Schaufeli, 2003; Michie & Williams, 2003; Schaufeli, Bakker, & Van Rhenen, 2009). Although one might expect that employees may suffer from greater strain when exposed to a combination of different types of job demands, this has surprisingly not yet been examined. Conservation of resources (COR) theory (Hobfoll, 2001) suggests that the loss of energetic resources that is caused by dealing with one job demand may lessen one's ability to cope with another job demand, thereby leading to a loss spiral. This means that employees who experience high job demands in one domain may deplete their resources while trying to cope with these demands, thereby making them less effective at coping with another job demand.

According to the JD-R model, it is important to examine the negative impact of job demands within the context of existing job resources—the physical, psychological, social, or organizational aspects of the job that facilitate the achievement of work goals and stimulate personal growth, learning, and development (Bakker & Demerouti, 2007)—which can help to counteract the strain associated with job demands (Bakker, Demerouti, & Euwema, 2005; Xanthopoulou et al., 2007). Although the buffering of job resources has been found in a number of studies, the support for this effect is not overwhelming (Bakker et al., 2005; Bakker, Demerouti, & Verbeke, 2004; Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; De Lange, Taris, Kompier, Houtman, & Bongers, 2003; Hakanen, Bakker, & Demerouti, 2005). This may be because some job resources, especially those that focus on improving

employees' deficits such as through targeted social support (Fenlason & Beehr, 1994; Halbesleben, 2006), performance feedback (Venables & Fairclough, 2009), and employee training (Luthans, 2002), may not offer coping mechanisms that are consistently effective across work situations. Thus, research on alternative forms of job resources that may offer more consistent relief for employees faced with a multitude of job demands is sorely needed.

The first aim of this study is to introduce a new job resource that we expect to be well suited for facilitating enduring, intrinsic motivation that will weaken the positive relationship between job demands and absenteeism: perceived organizational support for strengths use, or employees' beliefs concerning the extent to which their employer actively supports them in applying their personal strengths at work (Keenan & Mostert, 2013; van Woerkom, Els, Mostert, Rothmann, & Bakker, 2013). Strengths use support differs from skill utilization (Leiter, 1990) in that it does not refer to the application of acquired skills, but to the use of personal strengths that are energizing to the user (Linley & Harrington, 2006) and allow people to perform at their personal best (Wood et al., 2011). Although strengths are trait-like (Peterson & Seligman, 2004), how strengths are used is dependent upon context, values, interests and other strengths (Biswas-Diener, Kashdan, & Minhas, 2011). This implies that an individual's ability to apply a particular strength depends on whether the context allows for it.

Past research shows that strengths use leads to reduced stress, greater self-esteem, and higher levels of well-being (Wood et al., 2011), and to higher levels of work engagement and well-being at work (Harzer & Ruch, 2012a, 2012b; Keenan & Mostert, 2013; van Woerkom & Meyers, 2015). However, it is still unknown how strengths use support is related to absenteeism and whether it is powerful enough to weaken the relationship between combined job demands and absenteeism. A second aim of this study is therefore to investigate to what extent strengths use support may act as a job resource that mitigates the relationship between absenteeism and (the combination of) workload and emotional demands.

This article makes three main contributions. First, we extend research on the JD-R model by drawing on COR theory to propose that a combination of job demands may be positively related to absenteeism. Although previous studies have addressed the main effects of various job demands on health-related outcomes and the interaction between job demands and resources, the interactive relationship between different types of job demands and health has, to our knowledge, never been studied. Second, we introduce strengths use support to the JD-R literature as a job resource that may offer more enduring benefits for employees. Earlier studies have provided some, but not overwhelming support for the buffering effect of job resources. Strengths use support might represent a new job resource that is better suited for diminishing the relationship between job demands and absenteeism by boosting feelings of self-esteem and authenticity. Third, we build on nascent research on strengths use. While previous studies have investigated the relationship of having strengths with well-being, few authors have studied the consequences of strengths use support in the context of work.

Theory and Hypotheses

Accumulating Job Demands and Absenteeism: COR Theory

The idea that job demands like workload, work pressure, and emotional demands are associated with negative outcomes such as absenteeism is well established (De Lange et al., 2003). Job demands can be of a quantitative nature (e.g., workload, referring to how much work there is to be done in given amount of time; van Veldhoven, De Jonge, Broersen, Kompier, & Meijman, 2002), or of a qualitative nature (e.g., emotional demands, referring to emotionally challenging situations, events, or circumstances at work; van Veldhoven et al., 2002). The prevalence of specific types of job demands depends on the occupational context (Bakker & Demerouti, 2007). To date, the norm in JD-R research

has been to investigate the independent effects of various job demands on health-related outcomes, and/or the interaction between a specific job demand and some job resource. The notion that different types of job demands might interact with each other in ways that lead to more severe health impairment has, to our knowledge, never been studied. We see this as a significant oversight, because COR theory (Hobfoll, 2001) suggests that the energetic resource losses that result from high demands in one aspect of the job may lead to a weakening of resource reserves for confronting another type of job demand, thereby triggering a loss spiral. According to COR theory, people strive to build, protect, and retain the personal characteristics, conditions, and energies that enable them to cope with job demands. When individuals are unable to do so in the face of significant job demands, the depletion of their resources can lead to stress or emotional exhaustion (Hobfoll, 1989). To protect their psychological and physical well-being, individuals are thought to turn to other resources that serve as indispensable elements of their “stress resistance armamentarium” (Hobfoll, 2002, p. 312). Some of these resources are finite in their availability (e.g., time and physical or cognitive energy; Ten Brummelhuis & Bakker, 2012); when they are utilized to cope with one job demand, individuals may be left with fewer resource reserves to cope with another type of job demand, thereby exacerbating strain outcomes (Wright & Cropanzano, 1998), which may cause absenteeism. Indeed, psychophysiological research has shown that coping with one stressor requires effort that produces fatigue and depletes resources to deal effectively with additional sources of stress (Cohen, Stokols, Evans, & Krantz, 1986), as seen in physiological symptoms such as higher blood pressure (Evans, Allen, Tafalla, & O’Meara, 1996) higher levels of cortisol, adrenaline and noradrenaline (McEwen & Lasley, 2003), and cardiovascular reactivity (Pardine & Napoli, 1983). These symptoms are all suggestive of poorer health, and contribute to immune response suppression (McEwen & Lasley, 2003) and changes in health-related behaviors (Cohen & Wills, 1985) and therefore to a greater risk of sickness absenteeism. To illustrate the loss spiral, imagine a socio-therapist who uses her time and energy to deal with a conflict among the clients of her ward,

leading to stress and exhaustion. Her loss of resources will lead to even more stress if she simultaneously faces a deadline to hand in a report while her energetic resources are already exhausted.

The idea that the concurrent accumulation of demands increases the chances that a specific stressor will lead to negative outcomes is well established in the broader stress literature outside the work domain (Lavee, McCubbin, & Olson, 1987). In a similar vein, accumulated job demands might increase the likelihood that a particular demand will lead to strain. Because emotional demands and a high workload have been identified as major sources of stress in the mental health care sector (Dunn & Ritter, 1995; Edwards, Burnard, Coyle, Fothergill, & Hannigan, 2000; Mann & Cowburn, 2005), this reasoning implies that health care workers who are simultaneously confronted with both of these high job demands will be more likely to deplete their energetic resources, causing more strain and health problems, as manifested in a greater tendency to call in sick (Wright & Cropanzano, 1998). The fact that the interactive negative effect of concurrent job demands on strain outcomes has not been examined implies an underlying assumption that job demands are simply additive in their effects; however, we hypothesize that there is an exacerbation effect such that the simultaneous experience of multiple job demands is worse than a simple additive effect:

Hypothesis 1: High levels of workload will strengthen the positive relationship between emotional demands and absenteeism.

The Buffering Role of Strengths Use Support: Expanding JD-R Theory

Much of human resource management is focused on identifying and resolving employee deficits by providing training, feedback, and coaching (Buckingham, 2005; Buckingham & Clifton, 2001). Although this may help employees to improve their performance, positive psychology scholars

emphasize a more balanced approach: focusing not only on trying to correct weaknesses but also on building people's strengths (Luthans & Youssef, 2007). When organizations actively help employees to understand that they bring unique talents and strengths to bear on their work, and that the organization and its employees are better off when they can effectively capitalize on employee's unique strengths, employees will be more likely to apply their strengths to their work.

Organizations may provide strengths use support by enabling employees to engage in tasks in line with their individual strengths or by letting two or more colleagues with complementary strengths join forces, such that they can complement each other's unique strengths (van Woerkom & Meyers, 2015). For example, in the context of mental health care, socio-therapists may go about their task of managing the interpersonal interactions among patients in a ward by organizing group discussions or by engaging in physical activities with their clients (outdoor activities, sports, etc.). When the organization offers strengths use support, a therapist who has a strength in zest and bravery could choose to do outdoor activities with the patients as a strategy that plays to her strengths, and potentially allowing others to take care of other tasks better done by them. The idea of strengths use support is well aligned with the diversity and inclusion literature, which emphasizes the value of integrating employees' uniqueness into the way work is done (Nishii, 2013; Shore et al., 2011) and with the person-job fit literature, emphasizing the relevance of congruence between an employee's skills and the demands of a job (Cable & DeRue, 2002). Research shows that strengths use produces increases in individual well-being and lower perceived stress (Forest et al., 2012; Quinlan, Swain, & Vella-Brodrick, 2011; Senf & Liao, 2013; Wood, Linley, Maltby, Kashdan, & Hurling, 2011), and that strengths use support is related to higher levels of work engagement and lower levels of burnout (Keenan & Mostert, 2013).

Strengths use support will be affected by organizational-level cultural norms and by the managers who serve as the interpretive filters through which most of these norms get operationalized

(Bowen & Ostroff, 2004). The extent to which individual employees working for any manager experience support for strengths use is likely to depend on the nature of the relationship between the manager and employee, for example the level of understanding, liking, and trust (e.g., as assessed by Leader Member Exchange; Dienesch & Liden, 1986), making strengths use support an individual level concept (van Woerkom & Meyers, 2015).

Perceived organizational support for strengths use can be conceptualized as a new type of job resource in that it should help individuals to achieve their work-related goals and engage in activities that stimulate their personal growth and development (Bakker & Demerouti, 2007; Dollard & Bakker, 2010). When employees are supported to engage in tasks that capitalize on their strengths, they are more likely to be successful in achieving their work-related goals. Moreover, these goals or the way in which these goals are achieved will be more self-concordant, that is, consistent with the person's developing interests and core values (Sheldon & Elliot, 1999), making it more likely that people invest sustained effort in them, and hence attain these goals (Koestner, Lekes, Powers, & Chicoine, 2002). Strengths use support is also likely to stimulate growth and development because developing strengths comes much more easily to individuals than developing deficiencies (Peterson & Seligman, 2004). Finally, we expect that strengths use support diminishes the positive relationship between job demands like high emotional demands and a high workload on the one hand, and absenteeism on the other hand. Individuals who are supported to utilize their strengths experience higher levels of self-esteem as a result of feeling valued for their unique worth and experiences; in turn, boosts to one's self-esteem help counterbalance threats to self-esteem that occur as a response to stress appraisal (Cohen & Wills, 1985) resulting from high of job demands. This will make workers more effective in coping with high job demands and therefore less likely to call in sick. Also, employees who feel supported to use their strengths can act more in accordance with their authentic selves (Peterson & Seligman, 2004) leading to

lower levels of depression, anxiety, and stress (Donahue, Robins, Roberts, & John, 1993) and higher levels of energy, well-being and coping skills (Sheldon, Ryan, Rawsthorne, & Ilardi, 1997), making it less likely that the stress that is brought about by their job demands will lead to sickness absenteeism. Furthermore, emotionally upsetting situations will cause less strain when employees feel that they can approach these situations from their own strengths. In the previous example of the socio-therapist, difficult situations with demanding clients will be less stressful when one can choose to deal with these situations in line with individual strengths. Therefore, we hypothesize the following:

Hypothesis 2: Support for strengths use will weaken the positive relationship between emotional demands and absenteeism.

Hypothesis 3: Support for strengths use will weaken the positive relationship between workload and absenteeism.

Accumulating Job Demands and Strengths Use Support; Combining COR Theory and JD-R Theory

On the basis of COR theory (Hobfoll, 2001), we argue that the mitigating role of job resources will prevail even when individuals experience resource losses caused by multiple job demands. One of the assumptions of COR theory is that resources acquire saliency in the context of resource loss (Hobfoll, 2002); that is, their benefits become particularly evident when employees are in need of them. To illustrate, Seers, McGee, Serey, and Graen (1983) found that social support was associated with job satisfaction only for those employees who had to cope with high role conflict, but not for those who experienced low levels of role conflict. Also, Bakker, Hakanen, Demerouti, and Xanthopoulou (2007) showed that job resources are particularly impactful under highly stressful conditions. To date, a high level of job demand has always been operationalized in terms of a single type of job demand; in the

context of multiple job demands, however, we expect that opportunities to capitalize on any potential resource gains—like those that accrue from strengths use—will take on even greater importance. Based on both COR and JD-R theory, we reason that especially in situations where multiple types of job demands accumulate, and energetic resources are in greater danger of depletion (COR theory), workers will benefit when they can play to their strengths (JD-R theory). For example, imagine if the socio-therapist who is simultaneously faced with a looming deadline and a conflict among her clients is supported by the organization to resolve this conflict according to her own strengths (e.g., restoring the relationships among her clients by letting them cook a meal together), the conflict resolution will cost her less energy, leaving her with more time and energy to finish her report before the deadline. This will make her less vulnerable to strain and health problems, making her less likely to call in sick. Therefore, based on the combination of COR theory and JD-R theory, we hypothesize the following:

Hypothesis 4: The three-way interaction among emotional demands, workload and support for strengths use will be related to absenteeism. Specifically, support for strengths use will mitigate the positive relationship between job demands and absenteeism for people who are simultaneously confronted with a high workload and high emotional demands.

Method

Sample and Procedure

This study was conducted in a Dutch organization with approximately 2250 doctors, therapists, and nurses who provide mental health care for people with severe, multiple and long-term psychiatric problems. First, we informed managers about the study and asked for their participation. Second, all employees were informed about the study on the intranet and received a questionnaire by e-mail. In

total, 832 employees (response rate of 40.3%) working in 97 different departments (e.g., ambulant child psychiatry, youth forensic psychiatric services etc.) completed a questionnaire. The age of the employees ranged from 19 up to 65 years, with an average of 43.6 (comparable to 42 years in the overall Dutch mental health care population; Ott, Paardekooper, & Van der Windt, 2005). The sample consisted of 515 women and 317 men (38.1% were male, which is slightly higher than in the population where 32% of the employees is male; Ott et al., 2005). The number of respondents per department size varied from 4 to 53 with an average of 17.3 per department. Of all respondents, 32.6% completed postgraduate education, 50.8% completed a bachelor degree, and 16.6% had a lower vocational background.

Measures

Perceived organizational support for strengths use was measured with a scale developed by Keenan and Mostert (2013), including items such as “This organization allows me to use my talents” and “This organization ensures that my strengths are aligned with my job tasks.” Answers were provided on a 7-point frequency scale, ranging from 1 (almost never) to 7 (almost always).

Keenan and Mostert found that the items load on one single dimension ($\alpha = .97$), and that the scale is distinct from four other commonly studied job resources (e.g., supervisory support, autonomy, information and participation as measured with scales by van Veldhoven, Meijman, Broersen, & Fortuin, 1997). This factor structure was later confirmed in a validation study (van Woerkom et al., 2013) using exploratory factor analysis on a sample of 241 individuals working across different industries and confirmatory factor analysis on a separate sample of 699 respondents working across different

industries. Convergent validity was supported by medium-sized positive correlations with autonomy, participation, colleague support, supervisory support, and work engagement, as expected.

To reduce respondent burden, we selected five of the eight items with the highest factor loadings reported by Keenan and Mostert (2013). The internal consistency of the scale was good ($\alpha = .94$).

Workload was measured with seven items from the Dutch Questionnaire on the Experience and Assessment of Work (Vragenlijst Beleving en Beoordeling van de Arbeid Scale; van Veldhoven et al., 2002). This questionnaire was modeled after internationally well-known instruments like the Job Content Questionnaire (Karasek, 1985). The items refer to quantitative workload: pace and amount of work. Example items are “Do you have to work very fast?” and “Do you have a lot of work to do?” Cronbach’s alpha was .89.

Emotional job demands was measured with seven items from the Dutch Questionnaire on the Experience and Assessment of Work (“VBBA” scale; van Veldhoven et al., 2002). The items refer to emotionally challenging situations, events, or circumstances at work. Examples items are: “Do you have contact with difficult clients or patients in your work?” and “Does your work demand a lot from you emotionally?” Cronbach’s alpha was .81. All items on emotional job demands and workload were rated on a 4-point scale (1 = never, 4 = always). Both scales have shown good psychometric properties and validity in previous studies (Bakker et al., 2004; Bakker, van Veldhoven, & Xanthopoulou, 2010).

Confirmatory factor analyses showed that a three-factor model with workload, emotional demands, and perceived strengths use support loading on three separate factors ($\chi^2 = 505.426$, $df = 149$;

Comparative Fit Index [CFI] = .96, Tucker-Lewis Index [TLI] = .95, root mean square error of approximation [RMSEA] = .06, standardized root mean square residual [SRMR] .05) fits significantly better to the data than a two-factor model with workload and emotional demands loading on one factor and perceived strengths support loading on a second ($\Delta\chi^2 = 1333.136$, $df = 2$, $p < .001$; CFI = .80, TLI = .77, RMSEA = .12, SRMR = .12), as well as a model with all three constructs loading on one factor ($2\ 4732.896$, $df = 3$, $p < .001$; CFI = .39, TLI = .31, RMSEA = .21, SRMR = .20).

Absenteeism was measured with the official absenteeism figures that were recorded by the organization in the 2 months after the questionnaire had been distributed. At the 2-month mark, the organization launched several initiatives and projects related to strengths use support which we expected may interfere with our results. Absenteeism was measured by dividing the hours an individual reported sick in these 2 months by the hours the individual should have worked in this period according to his or her labor contract, multiplied by 100 (%). The average percentage of absenteeism was 4.84 (SD = 13.69).

Analyses

Because our respondents were nested in 97 departments, we conducted multilevel hierarchical regressions using Mplus5 (Muthén & Muthén, 1998-2007) such that the effects of the individual-level variables were examined while accounting for the non-interdependence of observations within groups (Diez-Roux, 2000)¹ We computed deviance scores (differences in the -2 log likelihood) to compare the different models and to test their significance (Bickel, 2007). Measures of model fit for all models were then obtained by comparing deviance scores using a chi-squared distribution table and by calculating the approximate R^2_1 values at level 1 (Bryk & Raudenbush, 1992). Model 1 contains just our control

variables. In Model 2, we added the main effects of our three independent variables. In Model 3, we included the interaction of workload and emotional demands to test Hypothesis 1. In Model 4, we included the interaction of emotional job demands and strengths use support to test Hypothesis 2. In Model 5, we included the interaction of workload and strengths use support to test Hypothesis 3. In Model 6, we included the three-way interaction term to test Hypothesis 4. We grand mean-centered our control variables and the variables that we used to compute our interaction terms before including them in the multilevel analysis. Following the methods of Aiken and West (1991), we calculated the simple slopes of the interaction effects one standard deviation below and above the mean to examine the nature of the significant interactions.

Results

Table 1 reports the means, SD s, and correlations between the study variables. Correlations were as expected with all job demands being positively and perceived strengths support being negatively correlated with absenteeism. Table 2 reports the results of multilevel regression analyses that were conducted to test the hypotheses. As can be seen in Model 3, the interaction term for workload and emotional demands was positively related to absenteeism ($B = 4.54, p < .01; \Delta x^2 = 7.61, df = 1, p < .01$). Simple slope tests indicated that the simple slope for employees with a high workload was significant ($B = 6.49, SE = 1.04, p < .001$), while the slope for employees with a low workload was not ($B = 1.50, SE = 1.05, ns$; cf. Figure 1), confirming our first hypothesis that high levels of workload strengthen the positive relationship between emotional demands and absenteeism.

In support of Hypothesis 2, Model 4 was significant.² The interaction of strengths use support and emotional demands was negatively related to absenteeism ($B = -1.19, p < .05; \Delta x^2 = 5.20, df = 1, p$

<.05). Simple slope tests indicated that the simple slope for employees with low levels of strengths use support was significant ($B = 5.98, SE = 1.29, p < .001$), while the slope for employees with high levels of strengths use support was not ($B = 1.91, SE = 1.40, ns$; cf. Figure 2), indicating that a high level of strengths use support makes the relationship between emotional demands and absenteeism nonsignificant. In support of Hypothesis 3, the interaction term of workload and strengths use support was negatively related to absenteeism ($B = -.87, p < .05; \Delta x^2 = 3.97, df = 1, p < .05$) in Model 5. Simple slope tests indicated that the simple slope for employees with low levels of strengths use support was significant ($B = 2.34, SE = 1.09, p < .05$), while the slope for the employees with high levels of strengths use support was not ($B = -.62, SE = 1.20, ns$; cf. Figure 3). This means that workload is only positively related to absenteeism under conditions of low strengths use support.

Finally, we hypothesized that support for strengths use would buffer the relationship between combined job demands (emotional demands and workload) and absenteeism (Hypothesis 4). As can be seen in Model 6, the three-way interaction term was significant ($B = -2.60, p < .01; \Delta x^2 = 27.74, df = 4, p < .001$). Simple slope tests indicated that the simple slope for employees with high workload and high emotional demands was significant ($B = -2.14, SE = 1.70, p < .001$), while the slopes for employees in the

INSERT TABLE 1 HERE

other conditions were nonsignificant (respectively $B = -.21, SE = .25, ns$; $B = -.06, SE = .04, ns$; $B = .39, SE = .65, ns$; cf. Figure 4). This indicates that strengths use support can buffer the positive relationship between combined job demands and absenteeism.

Discussion

The present study provides initial evidence that simultaneous experience of multiple job demands is positively related to company registered absenteeism. This is an important contribution to the JD-R theory which has been criticized for a lack of specificity in explaining how or why certain job demands exert their effects on occupational health (De Jonge, Demerouti, & Dormann, 2013). The JD-R literature has either been concerned with main effects of various job demands on health, or with the interaction between a particular job demand and resource. By uncovering some of the complex interactions among types of job demands, we answer the call for improving our understanding of how constellations of different job demands may lead to health-related outcomes (Zapf, Semmer, & Johnson, 2013). The positive relationship between combined job demands and health-related outcomes is consistent with role conflict theory (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964), which suggests that different job demands are sometimes contradictory, such that compliance with one job demand (e.g., workload) makes adherence to another job demand (e.g., emotional demands) difficult, exacerbating problems for employees. However, the implications of contradictory job demands for health-related outcomes have, to our knowledge, not been investigated. Future studies should investigate whether the

INSERT TABLE 2 HERE

INSERT FIGURE 1 HERE

accumulative effect of job demands is worse the more they are fundamentally in conflict with each other.

INSERT FIGURE 3 HERE

By building on COR theory concerning the notion of loss spirals, we reasoned that high demands in one aspect of the job may be related to losses of one's finite personal energetic resources (Ten Brummelhuis & Bakker, 2012), resulting in a weakening of resource reserves for confronting another type of job demand, thereby bringing about a loss spiral. While the JD-R model has in recent years been expanded to consider the buffering benefits of personal resources in addition to job resources (Xanthopoulou, Bakker, Heuven, Demerouti, & Schaufeli, 2008), the former have predominantly been conceptualized as individual difference constructs such as optimism and self-esteem. Although this research suggests that some individuals have greater personal resources to cope with job demands than others, such conclusions provide little in the way of actionable strategies for organizations seeking to help employees cope better with their job demands. Our findings suggest that organizations can play an important role in reducing strain-induced absenteeism by actively promoting the use of personal strengths by employees. While it is true that other organizationally provided job resources have been examined within JD-R research, such as the impact of increased social support, autonomy, and performance feedback (Bakker et al., 2005, 2007; 2010), we expect that strengths use support offers more universal benefits across jobs and types of job demands than these other, more narrowly defined job resources. This is because more narrowly defined job resources may be effective only when they are specifically aligned with the particular job demands faced by an employee (De Jonge & Dormann, 2006), but may actually produce a reverse buffering effect in others. For instance, even though social support may be a matching resource for a nurse who has just experienced an incident with an aggressive patient, previous studies have indicated that when the content of the social support focuses on the negative rather than positive aspects of the work (e.g., how difficult the patients are) it might be hurtful rather than helpful (Fenlason & Beehr, 1994). Because the use of one's strengths at work is intrinsically energizing (Peterson & Seligman, 2004; Wood et al., 2011), we expect strengths use support to be a

more universal job resource. Future research in different organizational contexts is needed to provide further support for this argument.

INSERT FIGURE 2 HERE

Our results also contribute to the literature on strengths use that previously focused on more general relationships between strengths use and well-being (Harzer & Ruch, 2012a, 2012b), by showing that strengths use helps people to cope with job demands. Our results suggest that providing strengths use support is not just negatively related to absenteeism, but may even reduce the positive relationship between multiple job demands and absenteeism.

Limitations and Future Research

Some limitations should be considered when interpreting our results. One is that we only included the absenteeism figures in the two months after the questionnaire was distributed.

INSERT FIGURE 4 HERE

Unfortunately, including absenteeism figures over a longer period of time was impossible, since the organization decided to implement various strengths-based practices after our data collection, which would have distorted our analysis. A second limitation is that although we collected our survey data before the absence data, this methodology cannot rule out a reverse causality. However, the causal relation between job demands and absenteeism is firmly established in the literature (De Lange et al., 2003). A third limitation is that even though our results suggest that the depletion of transient personal resources may explain the relationship between combined job demands and health-related outcomes,

we did not actually measure volatile personal resources. Longitudinal research, including measures for structural and volatile personal resources and the duration of one's exposure to different job demands is needed to further investigate the interactions among different types of demands and the possibility of reverse causation between health and the evaluation of job demands. A fourth limitation is that we conducted our study among a specific group of employees, namely mental health care workers. Future studies are needed to investigate whether our results can be generalized to different sectors in which different types of job demands might be salient.

Although this research is grounded within prior work on the JD-R model, our specific focus on strengths use support as a job resource provides a theoretical link between JD-R research and burgeoning work on inclusion in organizations. The premise underlying work on inclusion is that when organizations and their leaders cultivate climates within which employees are valued for their unique perspectives and strengths, and their unique perspectives and strengths are leveraged to improve decision making, diverse employees who may have previously suffered from lower levels of voice, inclusion, and engagement are likely to experience increased well-being and performance (Nishii, 2013; Shore et al., 2011). We expect that one of the mechanisms through which the positive benefits of inclusive climates emerge is through enhanced support for individual strengths use and urge future research to examine the interrelationships among inclusive leadership and strengths use support on the one hand, and well-being, turnover, and performance on the other.

Practical Implications

By providing evidence for the buffering role of organizational strengths support this paper offers organizations a clear tool for competitive advantage, because it implies that absenteeism can be

reduced, even when it is difficult to reduce job demands (Bakker et al., 2005). Whereas many practices aiming to reduce absenteeism run the risk of causing sickness presenteeism (Claes, 2014), strengths use support does not seem to entail that danger. Our analysis indicates that strengths use support can reduce the absenteeism of employees who experience both high workload and high emotional demands from 11.36% to 4.07%, indicating that a large amount of the costs related to absenteeism can be saved. Strengths use support can be offered by making sure that training, development, appraisal and reward are not only based on the employees' deficits but also on their strengths. A next step could be to allow employees to maximize the use of their strengths, for instance, through task allocation or complementary partnering (Linley & Harrington, 2006). Our findings indicate that such an approach may pay itself back in the form of more healthy employees who will be more often present at work.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. London, England: Sage.
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22, 309–328. <http://dx.doi.org/10.1108/02683940710733115>
- Bakker, A. B., Demerouti, E., de Boer, E., & Schaufeli, W. B. (2003). Job demands and job resources as predictors of absence duration and frequency. *Journal of Vocational Behavior*, 62, 341–356. [http://dx.doi.org/10.1016/S0001-8791\(02\)00030-1](http://dx.doi.org/10.1016/S0001-8791(02)00030-1)
- Bakker, A. B., Demerouti, E., & Euwema, M. C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of Occupational Health Psychology*, 10, 170–180. <http://dx.doi.org/10.1037/1076-8998.10.2.170>

- 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.
<http://dx.doi.org/10.1002/hrm.20004>
- Bakker, A. B., Hakanen, J. J., Demerouti, E., & Xanthopoulou, D. (2007). Job resources boost work engagement, particularly when job demands are high. *Journal of Educational Psychology*, 99, 274–284. <http://dx.doi.org/10.1037/0022-0663.99.2.274>
- Bakker, A. B., van Veldhoven, M., & Xanthopoulou, D. (2010). Beyond the demand-control model: Thriving on high job demands and resources. *Journal of Personnel Psychology*, 9, 3–16.
<http://dx.doi.org/10.1027/1866-5888/a000006>
- Bickel, R. (2007). *Multilevel analysis for applied research: It's just regression*. New York, NY: Guilford Press.
- Biswas-Diener, R., Kashdan, T. B., & Minhas, G. (2011). A dynamic approach to psychological strength development and intervention. *The Journal of Positive Psychology*, 6, 106–118.
<http://dx.doi.org/10.1080/17439760.2010.545429>
- Bliese, P. D. (Ed.), (2000). *Within-group agreement, non-independence, and reliability: Implications for data aggregation and analyses*. San Francisco, CA: Jossey-Bass.
- Bowen, D. E., & Ostroff, C. (2004). Understanding HRM-firm performance linkages: The role of the “strength” of the HRM system. *The Academy of Management Review*, 29, 203–221.
- Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models for social and behavioural research: Applications and data analysis methods*. Newbury Park, CA: Sage.
- Buckingham, M. (2005). What great managers do. *Harvard Business Review*, 83, 70–79, 148.

- Buckingham, M., & Clifton, D. O. (2001). *Now, discover your strengths*. New York, NY: Free Press.
- Cable, D. M., & DeRue, D. S. (2002). The convergent and discriminant validity of subjective fit perceptions. *Journal of Applied Psychology*, 87, 875–884. <http://dx.doi.org/10.1037/0021-9010.87.5.875>
- Claes, R. (2014). Sickness absence and sickness presence. In M. C. W. Peeters, J. De Jonge, & T. W. Taris (Eds.), *An introduction to contemporary work psychology* (pp. 367–390). Chichester, United Kingdom: Wiley.
- Cohen, S., Stokols, D., Evans, G. W., & Krantz, D. S. (1986). *Behavior, health, and environmental stress*. New York, NY: Plenum Press. <http://dx.doi.org/10.1007/978-1-4757-9380-2>
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98, 310–357. <http://dx.doi.org/10.1037/0033-2909.98.2.310>
- Davis, K., Collins, S. R., Doty, M. M., Ho, A., & Holmgren, A. L. (2005). *Health and productivity among U.S. workers*. New York, NY: Commonwealth Fund.
- De Jonge, J., Demerouti, E., & Dormann, C. (2013). Current theoretical perspectives in work psychology. In M. C. W. Peeters, J. De Jonge, & T. W. Taris (Eds.), *An introduction to contemporary work psychology* (pp. 89–114). Chichester, United Kingdom: Wiley.
- De Jonge, J., & Dormann, C. (2006). Stressors, resources, and strain at work: A longitudinal test of the triple-match principle. *Journal of Applied Psychology*, 91, 1359–1374. <http://dx.doi.org/10.1037/0021-9010.91.5.1359>

- De Lange, A. H., Taris, T. W., Kompier, M. A. J., Houtman, I. L. D., & Bongers, P. M. (2003). "The very best of the millennium": Longitudinal research and the demand-control-(support) model. *Journal of Occupational Health Psychology, 8*, 282–305. <http://dx.doi.org/10.1037/1076-8998.8.4.282>
- 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. <http://dx.doi.org/10.1037/0021-9010.86.3.499>
- Dienesch, R. M., & Liden, R. C. (1986). Leader-member exchange model of leadership: A critique and further development. *The Academy of Management Review, 11*, 618–634.
- Diez-Roux, A. V. (2000). Multilevel analysis in public health research. *Annual Review of Public Health, 21*, 171–192. <http://dx.doi.org/10.1146/annurev.publhealth.21.1.171>
- Dollard, M. F., & Bakker, A. B. (2010). Psychosocial safety climate as a precursor to conducive work environments, psychological health problems, and employee engagement. *Journal of Occupational and Organizational Psychology, 83*, 579–599. <http://dx.doi.org/10.1348/096317909X470690>
- Donahue, E. M., Robins, R. W., Roberts, B. W., & John, O. P. (1993). The divided self: Concurrent and longitudinal effects of psychological adjustment and social roles on self-concept differentiation. *Journal of Personality and Social Psychology, 64*, 834–846. <http://dx.doi.org/10.1037/0022-3514.64.5.834>
- Dunn, L. A., & Ritter, S. A. (1995). Stress in mental health nursing: A review of the literature. In J. Carson, L. Fagin, & S. A. Ritter (Eds.), *Stress and coping in mental health Nursing* (pp. 29–45). London, United Kingdom: Chapman & Hall.

- Edwards, D., Burnard, P., Coyle, D., Fothergill, A., & Hannigan, B. (2000). Stress and burnout in community mental health nursing: A review of the literature. *Journal of Psychiatric and Mental Health Nursing, 7*, 7–14. <http://dx.doi.org/10.1046/j.1365-2850.2000.00258.x>
- Evans, G. W., Allen, K., Tafalla, R., & O'Meara, T. (1996). Multiple stressors: Performance, psychophysiological and affective responses. *Journal of Environmental Psychology, 16*, 147–154. <http://dx.doi.org/10.1006/jevp.1996.0012>
- Fenlason, K. J., & Beehr, T. A. (1994). Social support and occupational stress: Effects of talking to others. *Journal of Organizational Behavior, 15*, 157–175. <http://dx.doi.org/10.1002/job.4030150205>
- Forest, J., Mageau, G. A., Crevier-Braud, L., Bergeron, É., Dubreuil, P., & Lavigne, G. L. (2012). Harmonious passion as an explanation of the relation between signature strengths' use and well-being at work: Test of an intervention program. *Human Relations, 65*, 1233–1252. <http://dx.doi.org/10.1177/0018726711433134>
- Hakanen, J. J., Bakker, A. B., & Demerouti, E. (2005). How dentists cope with their job demands and stay engaged: The moderating role of job resources. *European Journal of Oral Sciences, 113*, 479–487. <http://dx.doi.org/10.1111/j.1600-0722.2005.00250.x>
- Halbesleben, J. R. B. (2006). Sources of social support and burnout: A meta-analytic test of the conservation of resources model. *Journal of Applied Psychology, 91*, 1134–1145. <http://dx.doi.org/10.1037/0021-9010.91.5.1134>
- Harzer, C., & Ruch, W. (2012). When the job is a calling: The role of applying one's signature strengths at work. *The Journal of Positive Psychology, 7*, 362–371. <http://dx.doi.org/10.1080/17439760.2012.702784>

- Harzer, C., & Ruch, W. (2013). The application of signature character strengths and positive experiences at work. *Journal of Happiness Studies*, 14, 965–983. <http://dx.doi.org/10.1007/s10902-012-9364-0>
- Hobfoll, S. E. (1989). Conservation of resources. A new attempt at conceptualizing stress. *American Psychologist*, 44, 513–524. <http://dx.doi.org/10.1037/0003-066X.44.3.513>
- Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology: An International Review*, 50, 337–421. <http://dx.doi.org/10.1111/1464-0597.00062>
- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, 6, 307–324. <http://dx.doi.org/10.1037/1089-2680.6.4.307>
- Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. (1964). *Organizational stress: Studies in role conflict and ambiguity*. Oxford, England: Wiley.
- Karasek, R. A. (1985). *Job Content Instrument: Questionnaire and user's guide* (Rev. 1.1). Los Angeles, CA: University of South California.
- Keenan, E. M., & Mostert, K. (2013). Perceived organisational support for strengths use: The factorial validity and reliability of a new scale in the banking industry. *South African Journal of Industrial Psychology*, 39, 1–12.
- Koestner, R., Lekes, N., Powers, T. A., & Chicoine, E. (2002). Attaining personal goals: Self-concordance plus implementation intentions equals success. *Journal of Personality and Social Psychology*, 83, 231–244. <http://dx.doi.org/10.1037/0022-3514.83.1.231>

Lavee, Y., McCubbin, H. I., & Olson, D. H. (1987). The effect of stressful life events and transitions on family functioning and well-being. *Journal of Marriage and the Family*, 49, 857–873.

<http://dx.doi.org/10.2307/351979>

Leiter, M. P. (1990). The impact of family resources, control coping, and skill utilization on the development of burnout: A longitudinal study. *Human Relations*, 43, 1067–1083.

<http://dx.doi.org/10.1177/001872679004301102>

Linley, P. A., & Harrington, S. (2006). Playing to your strengths. *The Psychologist*, 19, 86–89.

Luthans, F. (2002). Positive organizational behavior: Developing and managing psychological strengths.

Academy of Management Executive, 16(1), 57–72.

<http://dx.doi.org/10.5465/AME.2002.6640181>

Luthans, F., & Youssef, C. M. (2007). Emerging positive organizational behavior. *Journal of Management*, 33, 321–349. <http://dx.doi.org/10.1177/0149206307300814>

Mann, S., & Cowburn, J. (2005). Emotional labour and stress within mental health nursing. *Journal of Psychiatric and Mental Health Nursing*, 12, 154–162.

<http://dx.doi.org/10.1111/j.13652850.2004.00807.x>

McEwen, B., & Lasley, E. N. (2003). Allostatic load: When protection gives way to damage. *Advances in Mind-Body Medicine*, 19, 28–33.

Michie, S., & Williams, S. (2003). Reducing work related psychological ill health and sickness absence: A systematic literature review. *Occupational and Environmental Medicine*, 60, 3–9.

<http://dx.doi.org/10.1136/oem.60.1.3>

- Muthén, L. K., & Muthén, B. O. (1998–2007). *Mplus user's guide* (5th ed.). Los Angeles, CA: Muthén & Muthén.
- Nishii, L. H. (2013). The benefits of climate for inclusion for genderdiverse groups. *Academy of Management Journal*, 56, 1754–1774. <http://dx.doi.org/10.5465/amj.2009.0823>
- Ott, M., Paardekooper, P., & Van der Windt, W. (2005). *Arbeid in Zorg en Welzijn* [Labour in care and social welfare]. Utrecht, Netherlands: Prismant.
- Pardine, P., & Napoli, A. (1983). Physiological reactivity and recent life-stress experience. *Journal of Consulting and Clinical Psychology*, 51, 467–469. <http://dx.doi.org/10.1037/0022-006X.51.3.467>
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. New York, NY: Oxford University Press.
- Quinlan, D., Swain, N., & Vella-Brodrick, D. (2012). Character strengths interventions: Building on what we know for improved outcomes. *Journal of Happiness Studies*, 13, 1145–1163. <http://dx.doi.org/10.1007/s10902-011-9311-5>
- Schaufeli, W. B., Bakker, A. B., & Van Rhenen, W. (2009). How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism. *Journal of Organizational Behavior*, 30, 893–917. <http://dx.doi.org/10.1002/job.595>
- Seers, A., McGee, G. W., Serey, T. T., & Graen, G. B. (1983). The interaction of job stress and social support: A strong inference investigation. *Academy of management Journal*, 26, 273–284. <http://dx.doi.org/10.2307/255975>

- Senf, K., & Liau, A. K. (2013). The effects of positive interventions on happiness and depressive symptoms, with an examination of personality as a moderator. *Journal of Happiness Studies*, 14, 591–612. <http://dx.doi.org/10.1007/s10902-012-9344-4>
- Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology*, 76, 482–497. <http://dx.doi.org/10.1037/0022-3514.76.3.482>
- Sheldon, K. M., Ryan, R. M., Rawsthorne, L. J., & Ilardi, B. (1997). Trait self and true self: Cross-role variation in the Big-Five personality traits and its relations with psychological authenticity and subjective wellbeing. *Journal of Personality and Social Psychology*, 73, 1380–1393. <http://dx.doi.org/10.1037/0022-3514.73.6.1380>
- Shore, L. M., Randel, A. E., Chung, B. G., Dean, M., Holcombe Ehrhart, K., & Singh, G. (2011). Inclusion and diversity in work groups: A review and model for future research. *Journal of Management*, 37, 1262–1289. <http://dx.doi.org/10.1177/0149206310385943>
- Ten Brummelhuis, L. L., & Bakker, A. B. (2012). A resource perspective on the work-home interface: The work-home resources model. *American Psychologist*, 67, 545–556. <http://dx.doi.org/10.1037/a0027974>
- van Veldhoven, M., De Jonge, J., Broersen, S., Kompier, M., & Meijman, T. F. (2002). Specific relationships between psychosocial job conditions and job-related stress: A three-level analytic approach. *Work & Stress*, 16, 207–228. <http://dx.doi.org/10.1080/02678370210166399>
- van Veldhoven, M., Meijman, T. F., Broersen, J. P. J., & Fortuin, R. J. (1997). *Handleiding VBBA: Onderzoek naar de beleving van psychosopsychosociale arbeidsbelasting en werkstress met behulp van de vragenlijst beleving en beoordeling van de arbeid* [Manual VBBA: Research on the

experience of psychosocial workload and job stress by means of the Questionnaire on the Experience and Evaluation of Work]. Amsterdam, Netherlands: SKB.

van Woerkom, M., Els, C., Mostert, K., Rothmann, I., & Bakker, A. B. (2013, May). *Organizational and individual orientation towards strengths use and deficit improvement: Development and validation of a new questionnaire*. Paper presented at the EAWOP Congress Münster, Muenster, Germany.

van Woerkom, M., & Meyers, M. C. (2015). My strengths count! Effects of a strengths-based psychological climate on positive affect and job performance. *Human Resource Management*, 54, 81–103. <http://dx.doi.org/10.1002/hrm.21623>

Venables, L., & Fairclough, S. H. (2009). The influence of performance feedback on goal-setting and mental effort regulation. *Motivation and Emotion*, 33, 63–74. <http://dx.doi.org/10.1007/s11031-008-9116-y>

Wood, A. M., Linley, P. A., Maltby, J., Kashdan, T. B., & Hurling, R. (2011). Using personal and psychological strengths leads to increases in well-being over time: A longitudinal study and the development of the strengths use questionnaire. *Personality and Individual Differences*, 50, 15–19. <http://dx.doi.org/10.1016/j.paid.2010.08.004>

Wright, T. A., & Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of Applied Psychology*, 83, 486–493. <http://dx.doi.org/10.1037/00219010.83.3.486>

Xanthopoulou, D., Bakker, A. B. B., Dollard, M. F., Demerouti, E., Schaufeli, W. B., Taris, T. W., & Schreurs, P. J. G. (2007). When do job demands particularly predict burnout? The moderating

role of job resources. *Journal of Managerial Psychology*, 22, 766–786.

<http://dx.doi.org/10.1108/02683940710837714>

Xanthopoulou, D., Bakker, A. B., Heuven, E., Demerouti, E., & Schaufeli, W. B. (2008). Working in the sky:

A diary study on work engagement among flight attendants. *Journal of Occupational Health*

Psychology, 13, 345–356. <http://dx.doi.org/10.1037/1076-8998.13.4.345>

Zapf, D., Semmer, N. K., & Johnson, S. (2013). Qualitative demands at work. In M. C. Peeters, J. De Jonge,

& T. W. Taris (Eds.), *An introduction to contemporary work psychology* (pp. 144–168).

Chichester, United Kingdom: Wiley.

Table 1
Means, SDs, and Correlations Between the Study Variables

	M	SD	1	2	3	4	5	6
1. Gender (1 = male, 2 = female)	—	—						
2. Age (years)	42.61	10.97	-.17**					
3. Educational level	—	—	.03	-.03				
4. Workload	2.46	.55	-.05	.13**	.21**			
5. Emotional demands	2.28	.47	-.14**	.04	.10**	.21**		
6. Strengths use support	4.83	1.71	-.09	.08*	.05	.04	-.06	
7. Absenteeism	4.84	13.69	-.01	.04	.02	.08**	.15**	-.10**

Table 2
Multilevel Regression Analyses Predicting Employee Absenteeism From the Interactions Among Workload, Emotional Demands, and Strengths Use Support

Variable	Absenteeism											
	1		2		3		4		5		6	
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Constant	4.94***	.54	4.72***	.49	4.47***	.46	4.66***	.49	4.75***	.49	4.40***	.49
Gender	.66	1.08	1.15	.96	1.13	.96	1.13	.96	1.04	.96	1.16	.95
Age	.06	.05	.08	.04	.07	.04	.07	.04	.07	.04	.06	.04
Educational level	.33	.79	-.11	.67	-.12	.66	-.07	.66	.04	.67	.01	.66
Workload			1.03	.87	1.01	.86	1.03	.87	.86	.87	.92	.86
Emotional demands			4.12***	1.01	3.99***	1.01	3.94***	1.01	4.09***	1.01	4.16***	1.01
Strengths use support			-.67*	.27	-.66*	.27	-.69*	.27	-.72**	.27	-.50	.27
Workload × Emotional Demands					4.54**	1.66					4.51**	1.66
Emotional Demands × Strengths Use Support							-1.19*	.52			-1.26*	.54
Workload × Strengths Use Support									-.87*	.44	-.67	.48
Workload × Emotional Demands × Strengths Use Support											-2.60**	.80
Group level												
Variance random intercept	5.52	5.27	2.17	4.05	1.80	3.86	2.15	3.97	2.18	4.06	1.53	3.64
-2log likelihood	6,711.35 ^a		6,427.47		6,419.86		6,422.27		6,423.50		6,399.73	
Deviance change ($\Delta\chi^2$) ^a	2.17		283.88***		7.61**		5.20*		3.97*		27.74***	
R^2 (approx.)	.01		.11		.12		.12		.12		.14	

Note. $N = 832$, 97 departments. Reported values for each model are estimates of the effect, comparable to unstandardized regression coefficients in standard multiple regression. Results of analyses without the control variables age, gender and educational level were not substantially different. The R^2 (approx.) was calculated by subtracting the residual variance of the complex model from the residual variance in the empty model, divided by the residual variance in the empty model.

^a To calculate the deviance change the first model is compared to an empty model, with department as only predictor ($df = 3$). Comparison between Model 1 and Model 2: $df = 3$, comparison between Model 2 and Model 3: $df = 1$, comparison between Models 2 and 4: $df = 1$, comparison between Models 2 and 5: $df = 1$, comparison between Models 2 and 6: $df = 4$.

* $p < .05$. ** $p < .01$. *** $p < .001$.

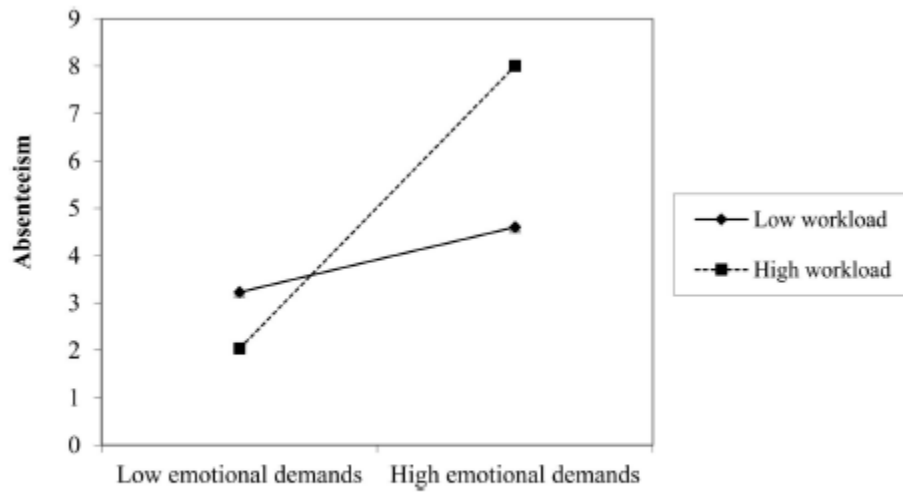


Figure 1. Plot of the two-way interaction effect of workload and emotional demands on absenteeism.

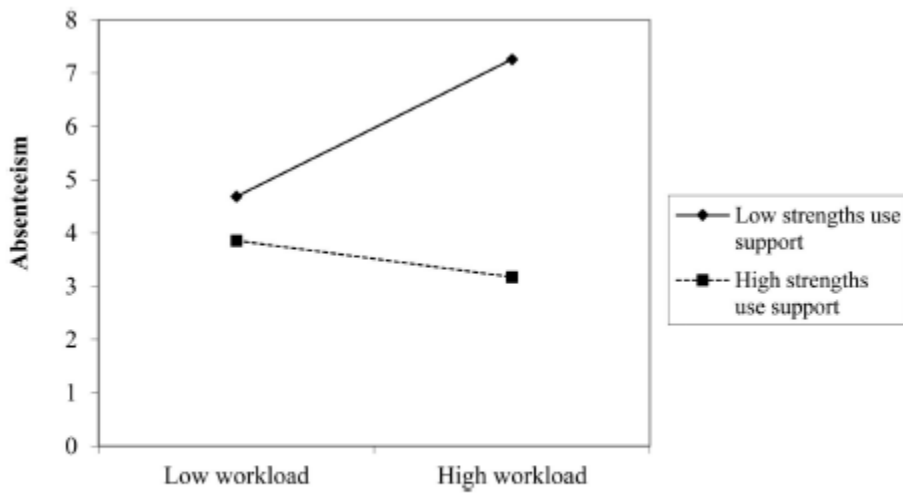


Figure 3. Plot of the two-way interaction effect of strengths use support and workload on absenteeism.

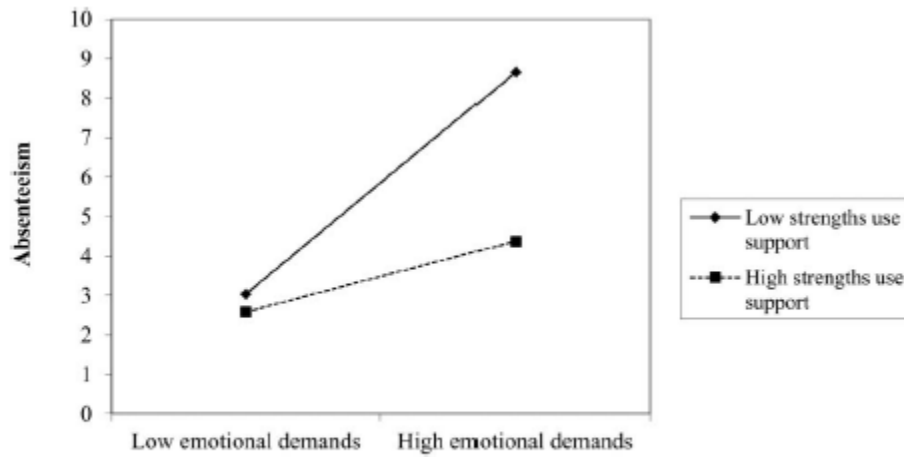


Figure 2. Plot of the two-way interaction effect of strengths use support and emotional demands on absenteeism.

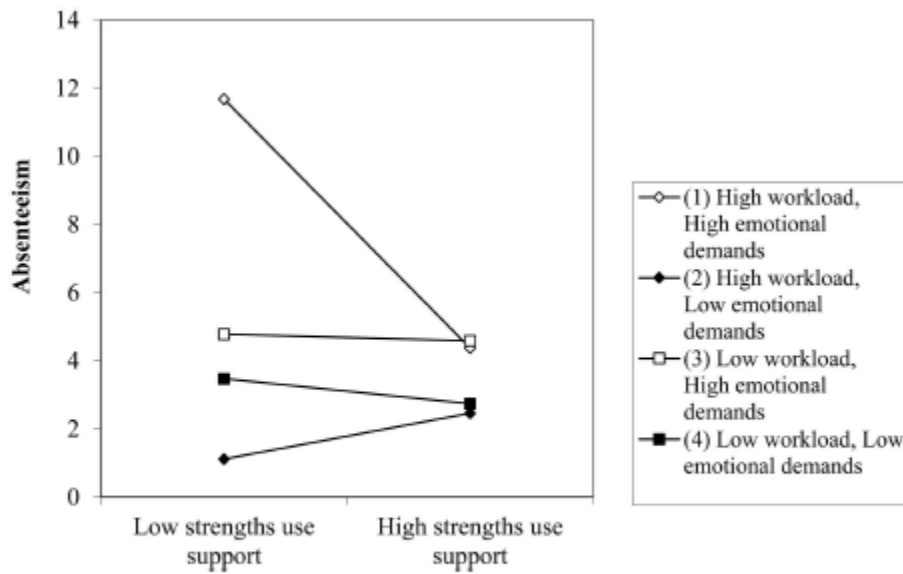


Figure 4. Plot of the three-way interaction effect between strengths use support, workload, and emotional demands on absenteeism.