

Boosting Job Resources in Times of Military Downsizing



Master's Thesis
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Abstract

In this study, associations of job demands and job resources with dimensions of burnout and work engagement were investigated in a military downsizing context. The central question was what leaders can do, within their sphere of influence, to alleviate the adverse consequences of downsizing when financial resources are limited. It was expected that aspects of social support and communication could compensate for the effects of workload and job insecurity. A conceptual model based on this notion was tested by means of structural equation modeling (SEM). Data gathered in a military sample ($N = 1234$) did partially support the expectations. The results of SEM suggested an acceptable model fit of the proposed conceptual model and an inadequate model fit of a model based on assumptions underlying the Job Demand-Resources model (JD-R). Co-worker support and recognition turned out to be the only job resources that were consistently associated with work engagement and burnout in the expected directions, but to a more limited extent than work overload and work underload. Work underload turned out to be a work stressor to be reckoned with. The results suggest that leaders can focus best on decreasing relevant job demands. Contrary to expectations the role of job insecurity was not noteworthy. For exploratory reasons, scores on different types of workload were compared for both the lowest and higher ranks. Implications of findings are discussed.

Keywords: downsizing, workload, job resources, burnout, engagement

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Boosting Job Resources in Times of Military Downsizing

This thesis will focus on specific consequences of downsizing and the options for leaders to do something about it. It has been widely acknowledged that the situation of downsizing puts additional demands on employees (Gandolfi & Hansson, 2011), which may cause adverse changes in work attitudes and health (Kivimäki et al., 2001). For ailing organizations high additional costs resulting from sickness absence and occupational disability could be the knock-out blow. However, when organizations are plagued by budget cuts and austerity, the room for manoeuvre for leaders is limited. To wait and see is not an option and it seems vital for leaders to create opportunities.

At the heart of the current study lies the notion that downsizing-related work stressors can be compensated for by budget neutral job resources. In this thesis the term “job demands” represents job related work stressors. The term “job resources” refers to “physical, psychological, social, or organizational aspects of the job that are: functional in achieving work goals; reduce job demands and the associated physiological and psychological costs; stimulate personal growth, learning, and development” (Bakker & Demerouti, 2007, p. 312). In the remainder, the abbreviated terms “demands” and “resources” will be used. The aim of the current study was to demonstrate how aspects of social support and communication as resources can compensate for the effects of workload demands and job insecurity in times of downsizing.

Based on the consulted literature, it seemed that the above mentioned notion had never been studied before. Confirmation of this notion could add value to theoretical insights concerning occupational health psychology. Besides, it could be of practical importance for leaders who may perceive a form of impotence in times of financial restrictions. The central question of this thesis is what leaders can do, within their sphere of influence, to alleviate the adverse consequences of downsizing when financial resources are limited.

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It was considered an interesting opportunity to have had access to a military sample, since little research has been conducted on the consequences of downsizing in the armed forces. With regard to participation in military missions, it is necessary for the armed forces to have fully trained, skilled and motivated soldiers available at all times. Leaders at all levels play an important role in this and have to take their responsibilities. In times of downsizing it might be even more important for them to protect their employees from adverse effects of work stressors and care about their well-being.

Burnout and Work Engagement

Until the start of this millennium, research concerning employee well-being mostly focused on negative outcomes of work and dysfunctional employees. The last decennium, however, is characterized by a shift towards attention for positive aspects of work and optimal functioning (Schaufeli & Bakker, 2004). Some scholars used both extremes to conceptualize people's psychological relationship to their job by means of the negative experience of burnout and the positive experience of work engagement. Both opposite ends of employee well-being can be positively influenced (Maslach, Leiter, & Jackson, 2012; Schaufeli & Bakker, 2004). Organizations would therefore benefit from knowledge about antecedents of both constructs. In the current study it was expected that the selected demands and resources were related to employee well-being. A considerable amount of research confirmed the importance of burnout and work engagement as indicators for behavioral, attitudinal and organizational consequences and even health (Demerouti & Bakker, 2011). It was therefore considered reasonable to link demands and resources with burnout and work engagement. Before further elaboration, the constructs of burnout and work engagement merit closer examination. In the remainder, the abbreviated term "engagement" will be used.

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Burnout

The traditional cognitive-transactional model by Lazarus assumes that stressors first must be perceived as stressful and that strain only occurs when demands exceed coping resources. A disturbed balance between demands and resources will have adverse effects and may finally lead to burnout, as manifestation of organizational strain (Sulsky & Smith, 2005).

Burnout originally consists of three specific types of stress responses or dimensions: exhaustion, depersonalization and decreased personal accomplishment (Sulsky & Smith, 2005). Exhaustion can be defined as “a consequence of intensive physical, affective and cognitive strain, for example as a long-term consequence of prolonged exposure to certain demands” (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001, p. 500). Cynicism or disengagement refers to distancing oneself from work and experiencing negative attitudes toward one’s work in general (Demerouti et al., 2001). Decreased personal accomplishment is related to feelings of not being able to meet former goals and expectations and to perceived helplessness and low self-esteem (Sulsky & Smith, 2005).

Engagement

Many employees seem to be energetically and effectively connected to their work and studies demonstrated that an appropriate match of demands and resources could lead to pleasure and high levels of activation (Gruman & Saks, 2010). The term “engagement” was coined, which was defined as “a positive, fulfilling, work-related state of mind that is characterized by the dimensions vigor, dedication and absorption” (Schaufeli & Bakker, 2004, p. 295).

Vigor is related to “high levels of energy and mental resilience while working, the willingness to invest effort in one’s work, and persistence even in the face of difficulties”. Dedication is defined as “being strongly involved in one’s work and experiencing a sense of significance, enthusiasm, inspiration, pride and challenge”. Absorption is characterized by

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“being fully concentrated and happily engrossed in one’s work, whereby time passes quickly and one has difficulties with detaching oneself from work” (Schaufeli & Salanova, 2007, p. 141).

Antecedents of burnout and engagement

Engagement, as the opposite of burnout, represents a goal for well-being improvement interventions (Maslach et al., 2012). In order to allow for interventions, antecedents of both constructs need to be inventoried. This might provide insights concerning factors, predicting burnout and engagement, which can be influenced. As already mentioned, demands and resources were found to have an effect on burnout and engagement.

It seems self-evident that demands and resources are not universal and depend on the occupational and situational context. Remarkably, many models of work stress, such as the Demands-Control model by Karasek, the Effort-Reward Imbalance model by Siegrist and the Areas of Worklife-approach by Maslach are restricted to a given and limited set of predictor variables that may not be relevant to all kind of jobs (Bakker & Demerouti, 2007). As will be described later, the specific situation of downsizing in the military is assumed to involve specific demands. The Job Demand-Resources (JD-R) model of burnout and engagement leaves room for context-specific factors that may enhance the dimensions of engagement and diminish effects associated with the burnout dimensions (Schaufeli & Bakker, 2004). It seemed an appropriate tool, in order to test the expected relationships between specific downsizing related predictor variables and the dimensions of burnout and engagement. The theoretical framework of the JD-R model served as a starting point, but not as a rigid mold, to put the notion that downsizing-related stressors can be compensated for by budget neutral resources to the test. The JD-R model can be used to predict the experience of burnout and engagement as indicators of important outcome variables (Demerouti & Bakker, 2011).

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Before explanation of empirical and theoretical data underpinning the relationships to be expected within the specific study context, the model will be briefly clarified.

Job Demand-Resources (JD-R) Model of Burnout and Engagement

The JD-R model of burnout and engagement is characterized by dual processes (see Figure 1). The health impairment process or erosion process of energy depletion helps to explain how demands and lacking resources are related to burnout and subsequently to health complaints and negative work attitudes. In the long term, chronic demands are expected to lead to exhaustion. The cross-link in the model (see Figure 1) represents the effect of job resources on burnout. Poor or lacking resources inhibit goal accomplishment, preclude coping with the negative influence of high demands and is expected to lead to cynicism (Schaufeli & Bakker, 2004). Burnout develops when certain demands are high and resources are limited, irrespective of the type of occupation or job (Demerouti et al., 2001). Effective reduction of burnout can be attained by reducing demands or by providing resources.

The other process is a motivational process in which resources are related to engagement (see Figure 1). Following the self-determination theory by Ryan and Deci (2000), resources are thought to fulfill basic human needs such as competence, relatedness and autonomy (Schaufeli & Bakker, 2004). Multiple studies have shown that resources are positively associated with both vigor and dedication (Cole, Walter, Bedeian, & O'Boyle, 2011). Besides the resulting motivational potential of resources, they are also necessary to deal with the effects of demands. Engagement is associated with positive work attitudes (Schaufeli & Salanova, 2007).

The JD-R model includes only two dimensions of burnout: exhaustion and cynicism (Schaufeli & Salanova, 2007). Empirical results have shown that exhaustion and cynicism are the core elements. Some authors argue that the component of reduced personal accomplishment might be a consequence of these core elements (Demerouti et al., 2001). The

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engagement dimension absorption is also not included in the JD-R model. It has been suggested that it might be the result of vigor and dedication and probably similar to engagement (Schaufeli & Salanova, 2007). These restrictions have been adopted in the proposed conceptual model underlying the current study (see Figure 2).

Study Hypotheses

Study hypotheses were built around specific demands and presumed potential resources associated with downsizing in the military. Downsizing can be defined as the planned elimination of jobs in an organization (Cascio, 1993). As already mentioned, downsizing usually puts additional demands on employees (Gandolfi & Hansson, 2011) and it tends to cause adverse changes in the work environment, work attitudes and health (Kivimäki et al., 2001).

The rationale used to arrive at the established hypotheses will be explained step by step. Specific demands were derived from the context of downsizing in the Dutch military and will be discussed one by one. It will be clarified why a specific demand was considered relevant for the specific situation. After a brief description, potential effects of each demand will be mentioned based on empirical studies. Finally, required deviations from the general JD-R model will be considered in order to arrive at the study hypotheses. Hypotheses refer to expected relationships between specific demands and dimensions of burnout and engagement. The demands at the centre of this study are work overload, work underload and job insecurity. The coexistence of work overload and work underload might seem paradoxical and this assumption will therefore be discussed first before the elaboration of the hypotheses.

The same progression will be applied in the process to hypotheses on the presumed potential counterbalancing resources. The selected resources are aspects of social support and communication. More specifically, it concerns co-worker support, supervisor support, information, communication quality and recognition.

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Two types of workload

It may seem paradoxical at first sight that both work overload and work underload are taken into account as potential downsizing-related demands. This apparent contradiction in the proposed conceptual model needs to be cleared up before the expected effects within the model will be elaborated. Indications for the existence of both opposite workload effects were reported in the annual report 2012 by the Inspector General (2013), the ombudsman for the Dutch armed forces. Additionally, a recent sample among employees within the Ministry of Defence showed that 24% reported their perceived work pressure to be too high and 5% much too high (Ministry of Defence, 2012). From the same quarterly employee work perception benchmark it could be derived that 10% of the employees reported that their perceived work pressure was too low and 2% much too low (Ministry of Defence, 2012). These results were regarded as indication that both workload issues might play a role as stressors in contemporary Dutch military units.

Work overload

In general, it is often suggested that downsizing results in doing more with less (Virick, Lilly, & Casper, 2007). This could be the result of a hiring freeze, participation in downsizing projects and organizational changes. When production or service levels in organizations are not reduced, the work load of individual employees can increase as a consequence of downsizing. This might be caused by additional responsibilities from co-workers that were laid off (Virick et al., 2007) or higher efficiency, demanded by the management (Hellgren & Sverke, 2001). Employees often have to carry out more and sometimes new tasks. When employees have too little time, capabilities and resources to accomplish their workload, they might experience work overload (Virick et al., 2007). It occurs when employees perceive that they have to do too much or too complicated work (Sonnentag & Frese, 2003).

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Work overload is a work stress factor (Hellgren & Sverke, 2001). It has been found to negatively affect job and life satisfaction (Virick et al., 2007). Hellgren and Sverke (2001) showed that overload as a consequence of downsizing was negatively related to employee well-being.

It was found that overload is most strongly related to the exhaustion dimension of burnout: "...too many demands exhaust an individual's energy to the extent that recovery becomes impossible" (Maslach, Leiter, & Jackson, 2001, p. 414). Some studies specifically confirmed the basic assumption underlying the JD-R model that work overload was related to exhaustion and unrelated to the distancing and engagement factors (Demerouti, Mostert, & Bakker, 2010; Rothmann & Pieterse, 2007).

H1: Work overload is positively related to the exhaustion dimension of burnout.

Work underload

At first sight, work underload might seem attractive to some people, but too little stress may also be harmful. Work underload happens when job demands are too low, so that they do not sufficiently challenge employees (Bolhari, Rezaeean, Bolhari, & Zare, 2012). This implicates that employees have too little to do or are "engaged in work which does not permit full utilization of skill and talent" (Frankenhaeuser & Gardell, 1976, p. 36). Work underload might lead to rustout, whereby employees become bored and apathetic as a consequence of understimulation (Leung, Chan, & Yu, 2012). Job boredom can be linked with counterproductive behaviors, like abuse of others and sabotage. It was also found to have an effect on withdrawal and failure to perform job tasks effectively (Bruursema, Kessler, & Spector, 2011).

Most prior studies on work stress seem to neglect work underload as a demand and did not use measures that were able to capture the condition of being under-challenged (Muse, Harris, & Feild, 2003). Although, as already mentioned, indications were found for the

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existence of work underload in times of downsizing, no empirical studies on that topic could be found. Research on the effect of work underload in times of downsizing can therefore be regarded as exploratory in nature. A basic assumption of the JD-R model is that high demands are associated with exhaustion. However, based on empirical findings concerning withdrawal reactions and adverse effects on task performance as a consequence of boredom, it was expected that work underload is positively related to cynicism and negatively to the engagement dimensions.

H2: Work underload is positively related to the cynicism dimension of burnout and negatively related to vigor and dedication.

Exploratory examination of workload

As will be described, some evidence was found that both work overload and underload apply to different categories of employees. Besides, a distinction can be made between quantitative and qualitative aspects of workload. For exploratory reasons and for the sake of completeness several types of workload will be examined.

Recently, it was suggested that concerns about high workload in the military were typically expressed by employees in higher ranks (Inspector General Dutch Armed Forces, 2013). In a prior study within the Royal Netherlands Army it was found that the perceived workload for troopers, soldiers and corporals, was lower than on average (Ministry of Defence, 2003). Based on these indications it will be examined whether work overload is indeed more common among employees in ranks higher than troopers and work underload among employees in the lowest ranks of soldiers and corporals.

A distinction can be made between quantitative and qualitative work overload. The first term refers to “the number of requirements within limited time space” and qualitative work overload is related to task complexity or difficulty (De Jonge, 1995, p. 65). A similar distinction can be made for quantitative and qualitative aspects of work underload. Lack of

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work can be labeled as quantitative work underload. Qualitative work underload is characterized by perceptions that tasks are too simple, not challenging and do not make use of employees' skills (Fisher, 1993). Both distinctions will be examined for the lowest and higher ranks in an exploratory way, which may lead to theoretical and practical implications.

Job insecurity

The downsizing operation in the Dutch military involves a reduction of 12,000 jobs (Hillen, 2011). A distinctive feature of this operation in the Dutch military is the enduring time span. The operation was announced in 2010 and will hang over the organization until 2016 (Hillen, 2011). As a consequence of the downsizing operation, military employees in designated redundancy categories are at risk of being discharged from the military when they cannot find another job after expiration of their job term or after their unit has been reorganized. Military employees may also be worried about forthcoming additional downsizing and potential future job loss (ANP, 2012). To conclude, Dutch military employees seem to have fair reasons to perceive job insecurity, now and in the near future.

The term job insecurity is used to reflect the perceived threat of potential unemployment and it may involve frustration of economic or social needs (Sverke, Hellgren, & Näswall, 2002, p. 243). Most researchers described job insecurity as “an overall concern about the continued existence of the job in the future” and it can be considered a classic work stressor (Sverke et al., 2002, p. 243). Job insecurity is a frequently mentioned consequence of downsizing (Hellgren & Sverke, 2001).

Several meta-analyses have reported that job insecurity is negatively associated with job satisfaction, organizational commitment, trust in management and turnover intention (De Witte, De Cuyper, Van der Elst, Vanbelle & Niesen, 2012). In general, job insecurity can lead to job and organizational withdrawal (Dekker & Schaufeli, 1995).

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According to the basic assumptions of the JD-R model, high demands lead to exhaustion. However, an additional relationship between the experience of job insecurity and cynicism was confirmed by empirical research (Bosman, Rothmann, & Buitendach, 2005; Tilakdharee, Ramidial, & Parumasur, 2010). Job insecurity, as a source of work stress, was found to have an effect on vigor (Coetzee & Villiers, 2010). Since some studies found that job insecurity can lead to disengagement (Bosman et al., 2005; Tilakdharee et al., 2010), it was expected that it is also negatively associated with the opposite: dedication. This hypothesized additional cross-link with the dimensions of engagement deviates from the basic JD-R model in a similar way than was expected for work underload (see Figure 1).

H3: The perception of job insecurity is positively related to exhaustion and cynicism and negatively related to vigor and dedication.

Counterbalancing Resources

The work environment of a downsizing organization puts limitations on the availability of budgets. It would be interesting to know what leaders can do, within their sphere of influence, to alleviate the adverse consequences of downsizing when financial resources are limited. Besides the option to relieve the downsizing-related stressors, for example by reallocating workload, one could also consider providing employees with budget neutral resources.

The focus will be on the influence of social support and aspects of communication. These resources were selected since they have proven their effect on employee well-being. Humane and supportive work environments and information sharing are important aspects of the social dimension of work, which seems to be particularly fragile in contemporary work environments (Cartwright & Holmes, 2006). Another reason for including these budget neutral resources is that both resources most likely can be influenced to some extent by practically every leader, regardless of his rank and financial resources.

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Social support

Social support can be defined as “a network of connections with other human beings that can provide assistance, support, and help for a person” (Lambert, Altheimer, & Hogan, 2010, p. 1219). A supportive work environment provides an opportunity for enhancing employees’ well-being. Social support was often found to have direct effects on stress symptoms (Melamed, Kushnir, & Meir, 1991). Two forms of social support will be taken into account: co-worker support and supervisor support.

Co-worker support

Co-worker support can provide instrumental assistance, emotional exchange, and reaffirms membership in a group (Maslach et al., 2001). First, instrumental assistance from co-workers can help to get the work done in time (Bakker, Demerouti, & Euwema, 2005). Co-workers can also help each other by sharing what works best and how to complete job duties. Besides, it allows employees to release steam following exposure to demands or conflicts. Finally, co-worker support can make the work environment more enjoyable and friendly (Lambert et al. 2010). Employees function best when they share comfort, happiness, praise and humor with people they respect and like (Maslach et al., 2001).

Supervisor support

Supervisors, in general, can be helpful to reduce work stressors. They can also help employees to become more resilient to change and provide support to overcome workplace problems (Lambert et al., 2010). Supervisor support can put work stressors in another perspective and facilitate performance (Bakker et al., 2005). It can make the job more enjoyable and pleasant for employees and it has been associated with job retention (Eisenberger, Stingelhamber, Vandenberghe, Sucharski, & Rhoades, 2002).

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Hypothesis on social support

Based on the empirical results mentioned above, it was expected that social support, including co-worker and supervisor support, is related to both vigor and dedication. This is in line with the basic assumption underlying the JD-R model. In their study, Lambert et al. (2010) found that each dimension of burnout was negatively related to at least one type of social support. Several other studies found a negative relationship between social support and both cynicism and exhaustion (Bakker et al., 2005; Janssen, Schaufeli, & Houkes, 1999). A meta-analytic study by Cole et al. (2011) supports the notion that social support is negatively associated with all the dimensions of burnout. In addition to the basic JD-R assumption, it is expected that social support is related to both cynicism and exhaustion in times of downsizing.

H4: Co-worker and supervisor support are both positively related to vigor and dedication and negatively related to exhaustion and cynicism.

Communication

During downsizing, active communication seems to be an important factor for improvement of employee attitudes and behaviors (Tourish, Paulsen, Hobman, & Bordia, 2004). Organizations, however, may suffer from a deterioration of communication at many levels during downsizing (Amabile & Conti, 1999). It would be interesting to find out about the relative influence of different forms of communication and to find a way to take a turn for the better. The focus will be on three different aspects of communication: information, communication quality, and recognition.

Information

For employees, it is important to have enough and adequate information to do the job well. Specific and accurate information can be helpful to change or improve performance (Bakker et al., 2005).

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Communication quality

Better communication can lead to increased trust between leaders and employees and empowerment (Mishra, Mishra, & Spreitzer, 2009). This is especially important when employees are skeptical as a result of downsizing. High communication quality is characterized by open and honest communication (Parker, Axtell, & Turner, 2001). The process of creating trust between employees and management depends on meaningful exchanges and openness (Mishra et al., 2009). This could foster employees' perception and trust that they are well informed about important issues and are familiar with the communication structure of the organization.

Recognition

It can be supportive for employees to hear that they are valued and respected and their supervisor is satisfied with their performance or accomplishment (Lambert et al., 2010). This signals them to continue the right direction and maintain motivation (Bakker et al., 2005). It was found, for small firms, that recognition could lead to increased productivity and that a lack of recognition could be a major source of turnover and may even lead to sabotage (Appelbaum & Kamal, 2000).

Hypothesis on communication

Little research addressed the topic of employees' perceptions of communication aspects in association with burnout and engagement. In a study among teachers, Hakanen, Bakker, and Schaufeli (2006) found a positive relationship between access to information and the dimensions of engagement. Appelbaum and Kamal (2000) suggested that recognition may lead to greater inspiration and fulfillment in carrying out daily tasks. It is therefore expected, in line with the assumptions underlying the JD-R model, that aspects of communication are positively related to the dedication and vigor dimensions of engagement. It has also been suggested that communication dissatisfaction or a poor communication climate are important

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antecedents of burnout (Ter Hoeven, De Jong, & Peper, 2006). In the current study it was expected that this would apply to both dimensions of burnout: exhaustion and cynicism.

H5: Information, communication quality and recognition are all positively related to vigor and dedication and negatively related to exhaustion and cynicism.

Effects on Outcome Variable

As mentioned before, burnout and engagement are acknowledged as indicators for behavioral, attitudinal and organizational consequences and even health (Demerouti & Bakker, 2011). It was therefore regarded appropriate to add a relevant outcome variable to the proposed conceptual model. This could provide additional insights on the relevance of the selected variables within the proposed conceptual model. Organizational commitment was selected as outcome variable. In this thesis, the term “organizational commitment” refers to affective organizational commitment and it involves “emotional attachment to, identification with, and involvement in the organization” (Meyer, Allen, & Topolnytsky, 1991, p. 67).

Organizational commitment was selected, since it has proven to be an important predicting variable within work and organizational research. Meta-analyses have demonstrated that organizational commitment is associated with variables such as absenteeism and turnover, reflecting psychological withdrawal (Tremble, Payne, Finch, & Bullis, 2003). With regard to the military, the construct is considered to provide an explanation why military employees remain in the armed forces, despite the associated hardships of the military profession (Karrasch, 2003). For the armed forces, it seems of major importance to retain the right people in times of downsizing and to prevent that people who are attractive on the labor market leave the organization first. Trained, skilled and committed employees will be needed to make the downsized organization function. Since organizational commitment was found to be related to turnover (Tremble et al., 2003) it may be vital to give it special attention. The current study offers an opportunity to explore the relevance of

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burnout and engagement and their selected antecedents for this important outcome variable in times of downsizing.

Hypothesis on organizational commitment

It was found that organizational commitment is particularly related to the identification components of work engagement and burnout, namely dedication and cynicism, and weakly related to the energy components, vigor and exhaustion respectively (Demerouti, Mostert, & Bakker, 2010; Hakanen et al., 2006). Results from a meta-analytic regression by Cole et al. (2011) support the notion that only cynicism and dedication are significant predictors of organizational commitment.

H6: Cynicism is negatively related and dedication positively related to affective organizational commitment.

Method

Sample and Participants

Data were collected from military employees of a large military unit in the Royal Netherlands Army. The particular unit will not be disclosed for the sake of confidentiality. Six subunits were involved, consisting of combat, combat support, combat service support units and staff elements. A total of 1803 surveys were distributed among employees of the subunits. Completed surveys were received from 1379 employees. The mean response rate was 71% and varied for the six subunits from 71% to 86%. Data from civilian employees were removed, together with cases that could not be identified as military employees. Ultimately, analyzable data were available for a total of 1348 military respondents.

Employees in the current study were predominantly male (91%), with the majority aged 34 years or younger (77%). Approximately 37% of the sample reported having completed less than five years of service, with 15% having completed 15 years or longer. The

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proportion employees with indefinite term contracts was 21%. A large percentage of respondents were soldiers and corporals (61%), labeled as troopers in the current study, and approximately 10% were commissioned officers.

Procedure

The data for this study were obtained as part of a regular work experience scan called PICTURE. Questionnaires were composed by the Netherlands' Defence Services Centre Behavioral Sciences with the use of TeleForm software. In February 2013, questionnaires were distributed among the subunits in hard copy. Classroom sessions were planned by subunits in order to fill-in questionnaires collectively. Participants were informed that anonymity and confidentiality were assured and that answers would not be analyzed at the individual level. A staff element of the unit supported the process of distributing and collecting questionnaires.

By the end of April 2013 all the PICTURE-questionnaires were collected and scanned with TeleForm software. Analysis for the present study was conducted independently from the analysis of the work experience scan by the Netherlands' Defence Services Centre Behavioral Sciences.

Measures

The PICTURE-questionnaire consisted of a standard set with questions. Extra items were added in order to enable data collection for the present study. The work experience scan only allowed for a limited amount of extra items. As a consequence, some variables were measured with existing scales derived from the PICTURE-questionnaire. Unfortunately, the origins of those scales are largely unknown. Unless otherwise indicated, the origins of those scales will therefore not be mentioned. A complete overview of all the scales and corresponding items is included in the annex (see Appendix).

Demands

Work overload was assessed with eight items from De Jonge's (1995) questionnaire, with higher scores indicating greater work overload. Items were scored on a five-point Likert scale, ranging from (1) "never", (2) "rarely", (3) "sometimes", (4) "usually" and (5) "always." The Cronbach's alpha coefficient for the scale was .84. The first six items of the scale (see Appendix) refer to quantitative work overload and the last two items refer to qualitative work overload. Subscales for quantitative and qualitative work overload were used for exploratory reasons.

Work underload was measured with a self-developed scale, consisting of five items. High scores indicate greater work underload. Four items were constructed in line with suggestions by Muse et al. (2003). The other item was derived from Bolhari's et al. (2012) work underload scale. Items were scored on a five-point Likert scale with options ranging from (1) "never" to (5) "always." The Cronbach's alpha coefficient for the scale was .84. The first and fourth item represent a condition of quantitative work underload and the other items qualitative work underload (see Appendix). Subscales for quantitative and qualitative work underload were used for exploratory reasons.

Initially, two items were selected to measure job insecurity. However, the relationship between these items turned out to be only small ($r = .27$). Therefore, a new scale was created, consisting of one item from the original scale and two new items. All three items originated from the PICTURE-questionnaire. The reversed scores for the two additional items were used in order to construct the new job insecurity scale. The items were scored on a five-point Likert scale, with the options (1) "totally disagree", (2) "disagree", (3) "neither agree or disagree", (4) "agree" and (5) "totally agree." The Cronbach's alpha coefficient for the scale was .64.

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Resources.

Co-worker support was initially measured with a composite three-item scale, including two items from the PICTURE-questionnaire. The third item was taken from Karasek's Job Content Questionnaire (Karasek et al., 1998) and is more related to instrumental assistance. Since the Cronbach's alpha for this scale was only .59, one item from the PICTURE-questionnaire was removed. Three additional items were selected from the PICTURE-questionnaire, based on face validity, in order to construct a reliable scale for co-worker support. Items were scored on a five-point Likert scale, ranging from (1) "totally disagree" to (5) "totally agree." Higher scores indicate more support. The Cronbach's alpha coefficient for the eventual five-item scale was .83.

Supervisor support was assessed with five items from the PICTURE-questionnaire concerning leadership, with higher scores indicating more support. The questions were chosen on basis of the assumption that they might reflect aspects of supervisor support. The items were scored on a five-point Likert scale, ranging from (1) "never" to (5) "always." The Cronbach's alpha coefficient for the scale was .87.

Information was measured with three items from the PICTURE-questionnaire, with higher scores indicating greater provision of information. The items were scored on a five-point Likert scale, ranging from (1) "totally disagree" to (5) "totally agree." The Cronbach's alpha coefficient for the scale was .78.

Communication quality was assessed with four items from the VBBA-questionnaire on experience and evaluation of work (Moors, 2000). The items were scored on a five-point Likert scale, ranging from (1) "totally disagree" to (5) "totally agree", with higher scores indicating better communication quality. The Cronbach's alpha coefficient for the scale was .81.

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Recognition was measured with two items, including one item from the PICTURE-questionnaire concerning leadership. The other item was taken from Appelbaum and Kamal's (2000) scale for recognition of employee accomplishments. The two items were scored on a five-point Likert scale, ranging from (1) "never" to (5) "always", with higher scores indicating more recognition. A strong correlation appeared between the two items ($r = .68$).

Burnout and engagement

Two dimensions of burnout, exhaustion and cynicism, were measured with items from the PICTURE-questionnaire. These items had been adopted from the general version of the Utrecht Burnout Scale UBOS-A (Schaufeli & Van Dierendonck, 2000). The UBOS-A is a Dutch version of the Maslach Burnout Inventory-General Survey MBI-GS, which was developed by Schaufeli, Leiter, Maslach, and Jackson in 1996.

Exhaustion was measured with four items of the exhaustion scale from the UBOS-A. The items were scored on a seven-point rating scale, ranging from (0) "never" to (6) "always." The Cronbach's alpha coefficient for the scale was .90.

Cynicism was assessed with the four items from the cynicism scale of the UBOS-A. These items were also scored on a seven-point scale (0 = never, 6 = always). The Cronbach's alpha coefficient for the scale was .87.

The items from the PICTURE-questionnaire concerning the dimensions of engagement, vigor and dedication, had been adopted from the UBES. This is a Dutch version of the Utrecht Work Engagement Scale (Schaufeli & Bakker, 2004).

Vigor was measured with the five items from the vigor scale of the UBES (Schaufeli & Bakker, 2004). The items were scored on a seven-point rating scale, ranging from (0) "never" to (6) "always." The Cronbach's alpha coefficient for the scale was .89.

Dedication was measured with five items from the PICTURE-questionnaire, which contains four of the five original UBES-items on dedication. The fifth UBES-item on

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inspiration had been replaced in the PICTURE-questionnaire by a question on pleasure in the job. The items were also scored on a seven-point scale (0 = never, 6 = always). The Cronbach's alpha coefficient for the scale was .93.

Affective organizational commitment

Affective organizational commitment was assessed with a five-item scale, developed by Jak and Evers (2010). It concerns a Dutch version of the well-known scale that was developed by Meyer, Allen, and Smith in 1993. The items were scored on a five-point Likert scale, ranging from (1) "totally disagree" to (5) "totally agree", with higher scores indicating greater commitment. The Cronbach's alpha coefficient for the scale was .87.

Statistical Analysis

Amos software was used to conduct a structural equation modeling (SEM) analysis and to test the conceptual model (see Figure 2) and associated hypotheses as a whole. Standardized regression weights and *p*-values from the Amos output were used to test the hypotheses H1 to H6 for the proposed conceptual model. Although separate simultaneous multiple regression analyses could have been used, it was considered informative to compare the model fit of the proposed conceptual model with alternative models. Therefore, Amos was used as statistical tool.

First, the SEM-analysis in Amos was used to estimate how well the proposed conceptual model (M1) fit the data and to get modification indices. These indices report the improvement in fit that results from adding additional paths to the model (Keith, 2006). Since modification indices can only be computed with complete data sets, all the analyses were conducted ($N = 1234$) after missing values had been removed. The three most relevant suggested additional paths were added to Amos Graphics for the first alternative model (M_{mod}).

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A second alternative model, based on assumptions underlying the JD-R model, was included in the SEM-analysis (M_{jdr}). The purpose was to evaluate the consequences of diverging from the basic assumptions of the JD-R model, as had been done in the current study. In this alternative model, each job demand was expected to be only associated with exhaustion and each job resource was expected to be related to cynicism and both dimensions of engagement.

Two absolute fit indices were used to compare each of the three models to the observed data: the chi-square goodness-of-fit test (χ^2 -test) and the Root Mean Square Error of Approximation (RMSEA). Three incremental fit indices were used to compare the identified models with a baseline or null model: the Tucker Lewis Index (TLI), the Normed Fit Index (NFI) and the Comparative Fit Index (CFI). It was considered interesting to make a comparison between the proportions of explained variance in outcome variables for the three models. Finally, the standardized regression weights were compared in order to find indications for differences between the three models.

Independent samples *t*-tests were used to examine eventual differences in quantitative and qualitative aspects of work overload and work underload between troopers and higher ranks. Since these analyses were purely for exploratory purposes, it was regarded appropriate to conduct the *t*-tests in SPSS with the complete data set ($N = 1348$).

Results

The complete data set ($N = 1348$) was checked for normal distributions of items, outliers and missing values. Skewness values did not exceed the value of 1.7 for any of the items and kurtosis values did not exceed the value of 3.2. Values of two and seven can be regarded as thresholds, respectively for skewness and kurtosis (Fabrigar, Wegener, MacCallum, & Strahan, 1999). With regard to missing values, the first recognition item on

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noticing accomplishments and not only mistakes showed the highest missing value score with 10.2%.

The means and standard deviations of all study variables are presented in Table 1. It is remarkable that, in absolute terms, the means for demands are all below the neutral scale score (3) and that the means for resources are above this score. Correlations are reported in Table 2. Correlations lower than $r = .30$ can be interpreted as small and correlations of $r = .50$ and higher can be regarded as large correlations (Pallant, 2007). None of the correlations were extreme (see Table 2), which was confirmed when the independent variables were checked for multicollinearity. All the relationships between the variables were in the expected directions. Intercorrelations between job demands turned out to be small.

Standardized regression weights and p -values (see Table 3) from the Amos output were used to test the hypotheses H1 to H6 for the proposed conceptual model (see Figure 2). Testing hypothesis 1, results in Table 3 showed that work overload was indeed positively related to exhaustion ($\beta = .24$). As a result of testing hypothesis 2, work underload was found to be positively associated with cynicism ($\beta = .33$) and negatively with vigor ($\beta = -.17$) and dedication ($\beta = -.36$). Standardized regression weights indicate that job insecurity was hardly positively related to the dimensions of burnout and negatively to vigor, with betas smaller than .10, but unrelated to dedication. The results do not support hypothesis 3. In relation to hypothesis 4, co-worker support was the only social support variable that was significantly associated, in the expected directions, with all the dimensions of burnout and engagement (see Table 3). Supervisor support turned out to be only positively significantly related to dedication ($\beta = .09$). Testing hypothesis 5, the results indicated that information was only significantly and negatively related to cynicism ($\beta = -.14$) and positively related to dedication ($\beta = .09$). Communication quality was only positively significantly associated with vigor ($\beta = .17$) and dedication ($\beta = .11$). Recognition turned out to be the only variable, concerning

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aspects of communication, that was significantly associated, in the expected directions, with all the dimensions of burnout and engagement (see Table 3). As a result of testing hypothesis 6, it can be concluded from Table 8 (Model M1) that cynicism was negatively related ($\beta = -.09$) and dedication positively related ($\beta = .46$) to organizational commitment.

To sum up, the analysis of standardized regression weights for the proposed conceptual model (see Figure 2) showed that work overload was positively associated with exhaustion and work underload particularly with cynicism (positively) and dedication (negatively). Relationships between job insecurity and the dimensions of burnout and engagement were not noteworthy. Co-worker support and recognition were the only resources that were consistently significantly associated with the dimensions of burnout and engagement in the expected directions, but to a more limited extent than the most relevant demands. Finally, organizational commitment was particularly positively associated with dedication.

In order to get modification indices in Amos, the hypothesized model was fitted to the data set without missing values ($N = 1234$). In Table 4, the model fit indices are reported for the proposed conceptual model (M1). The Chi-square (χ^2) test was significant, indicating that the proposed model with less than the maximum amount of coefficients fit the data worse than the saturated model. The value for RMSEA was .093, indicating a questionable fit. RMSEA values, as a primary index of fit for the model, of .08 or less suggest an adequate fit. Values below .05 suggest a good fit and values above .10 represent a poor fit (Keith, 2006). The incremental fit indices NFI, TLI, and CFI, which measure the fit by comparing the identified models with a baseline or null model, are thought to suggest a good fit with values above .95 and an adequate fit with values above .90 (Keith, 2006). In the context of the proposed model, the value for TLI was .879 and for NFI and CFI above .95, which for the most part is good.

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Although the fit of the proposed model (M1) was not poor, there seemed room for improvement.

The modification indices in the Amos-output showed potential ways to improve these results. These values indicate the potential decrease in χ^2 after freeing the specific path in the model (Keith, 2006). The three highest modification index values for regression weights in the output were taken as basis for the first alternative model (M_{mod}). The additional paths in M_{mod} concerned the paths between work overload and cynicism, between work underload and exhaustion and a direct effect from communication quality on organizational commitment. It should be noted that several suggested additional direct relationships between demands and resources on the one hand and organizational commitment on the other. After the SEM-analysis had been rerun with three additional paths, the Chi-square (χ^2) test was still significant. However, the modified model (M_{mod}) with three additional paths typically moved towards a good fit (see Table 4) with regard to RMSEA (RMSEA = .056) and had a good fit value for TLI (TLI = .957).

Finally, fit indices were estimated for a second alternative model (M_{jdr}), representing the underlying basic assumptions of the JD-R model (see Table 4). Although M_{jdr} reported the highest amount for degrees of freedom, the values for RMSEA and TLI represented a poor and inadequate fit.

Estimates for the total variance explained in the dimensions of burnout and engagement and in organizational commitment are listed in Table 5. The contrast in explained variance in the dimensions of burnout and engagement between the models M1 and M_{mod} on the one hand and the model M_{jdr} on the other should be noted. An analysis of standardized regression weights for the three models (see Table 6 and 7) also showed some interesting differences. When compared with the proposed conceptual model M1 (see Table 3), the model M_{jdr} , in absolute terms, showed larger standardized regression weights for the effects

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of workload on exhaustion and for the effects of resources, with the exception of recognition (see Table 6). However, the best fitting model M_{mod} reported the smallest standardized regression weights for the effects of resources, with the exception of recognition, and the largest weights for additional effects of workload that were ignored in the model M_{Jdr} (see Table 7).

The results from the SEM-analysis showed that three additional paths did improve the model fit of the proposed conceptual model. However, when a model is improved based on modification indices, there is a risk of capitalization on chance and it “can even lead to erroneous models (Keith, 2006, p. 325).” The modifications may be driven by characteristics of the specific sample and therefore the current results should be interpreted with care. Moreover, a model based on assumptions underlying the JD-R model turned out to fit poorly to the data and to explain a smaller proportion of variance in the dimensions of burnout and engagement.

For exploratory reasons, the distinction between quantitative and qualitative aspects of work overload and work underload for both troopers and higher ranks was examined. First, an independent-samples t -test indicated that scores on work overload were higher for higher ranks ($M = 2.81$, $SD = .57$) than for troopers ($M = 2.58$, $SD = .50$), $t(874) = 7.17$, $p < .001$ (one-tailed), $d = .42$, indicating a medium effect size (Pallant, 2007, p. 208). Besides, an independent-samples t -test indicated that scores on work underload were higher for troopers ($M = 2.81$, $SD = .70$) than for higher ranks ($M = 2.24$, $SD = .62$), $t(1064) = 15.00$, $p < .001$ (one-tailed), $d = .86$, indicating a large effect size (Pallant, 2007).

The mean scores for quantitative and qualitative aspects of work overload and work underload are listed in Table 9. Several independent t -tests were conducted to examine differences in mean scores between troopers and higher ranks for these aspects (see Table 10). Higher ranks scored significantly higher on quantitative work overload ($M = 2.89$, $SD = .61$)

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and qualitative work overload ($M = 2.52, SD = .66$). Troopers were found to have higher means on quantitative work underload ($M = 2.45, SD = .79$) and qualitative work underload ($M = 3.06, SD = .76$).

Discussion

The aim of this study was to demonstrate how aspects of social support and communication as resources can compensate for the effects of work load and job insecurity in times of downsizing. This was analyzed by linking specific demands and resources to dimensions of burnout and engagement. The results of the SEM-analysis in Amos helped to gain insights into the issue.

Analysis of standardized regression weights showed that work overload was indeed typically positively related to the exhaustion dimension of burnout (hypothesis 1). Work underload was indeed positively related to the cynicism dimension of burnout and negatively related to vigor and dedication (hypothesis 2). Hypothesis 3, concerning job insecurity, could not be fully supported and the regression weights were not noteworthy. Contrary to hypothesis 4 and 5, aspects of social support and communication were only partly related to the dimensions of burnout and engagement. Only co-worker support and recognition turned out to be consistently but very modestly related to these four dimensions in the expected directions. Finally, cynicism was indeed negatively associated and dedication positively associated with organizational commitment (hypothesis 6).

Relationships between work underload and exhaustion and between work overload and cynicism were not expected. However, modification indices from Amos (SEM) suggested that improvements in model fit could be made by adding these paths to the proposed conceptual model (see Figure 2). It might be that work underload contributes to exhaustion and that work overload has an effect on cynicism. Modification indices also drew attention to the possibility of direct associations of demands and resources with organizational

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commitment. The proposed conceptual model presumes complete mediation and ignores such direct effects.

Two key findings can be derived from the current study. First, the results suggest that social support and aspects of communication can hardly compensate for the effects of workload demands. Workload demands seem to be more closely associated with the dimensions of both burnout and engagement than most resources. Co-worker support and recognition turned out to be the only resources that were consistently associated with the four dimensions of burnout and engagement. Second, work underload turned out to be a work stressor to be reckoned with in a military downsizing context. This variable was positively associated with cynicism and negatively related to vigor and dedication.

An explanation for the disappointing compensating effect of resources might be related to the question whether the selected resources are the most relevant to the current sample. For example, the role of supervisor support was not noteworthy in the current study. Leadership studies have suggested that development and growth of employees are more important for the supervisor to focus on (Yukl, 1999). Bakker, Albrecht, and Leiter (2011) argued that transformational and empowering leaders will have a positive influence on engagement of employees in general. This goes beyond mere supervisor support and might also be relevant in relation to workload demands. Another explanation might be found in the ignorance of moderation effects. It was found that there is a need for challenge, like high job demands, in order for job resources to have a positive effect (Demerouti & Bakker, 2011). In the current study, the means of all the demands were below the neutral scale score (3). In the absence of high job demands the effects of the selected resources might have been limited as a result.

Two possible explanations for the negligible role of job insecurity seem plausible. Before the questionnaires were distributed, most of the subunits had just been reorganized and

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as a result most employees were assured of a new job term. Second, the announcement of large scale downsizing took place in 2010. As a result, military employees might have been facing job insecurity for an extended period. Allen, Freeman, Russell, Reizenstein, and Rentz (2001) suggested that after a period of time employees begin to feel reasonably secure in their job following downsizing. Although, the downsizing operation will hang over the military study sample until 2016, employees might perceive that the threat of job loss will simply pass by.

Limitations

Several limitations of the current study should be acknowledged. First, the findings in this thesis are based on cross-sectional data and therefore causality between the variables of interest cannot be assumed. Conclusions are therefore restricted to associations between the variables. Besides, as a consequence of the cross-sectional design, it was not possible to demonstrate that perceived workload had changed as a result of downsizing. Therefore, the values of the variable means are hard to interpret.

Data were gathered by means of self-report questionnaires, which are likely to be affected by biases, such as social desirability effects, common method bias and employees' implicit theories. For example, employees' own perceptions of work overload can deviate from objective workload measures.

Another limitation applies to the scales that were used. There was little room for additional items in the PICTURE work experience scan. Some scales were composed from several sources or in full or in part from PICTURE-items. It turned out impracticable to use validated scales only. An additional limitation is in the use of indicative and positively framed items only. Such items are more sensitive to an answering tendency and could have psychometric disadvantages (Demerouti et al., 2010). Yet, for practical reasons, the items for

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the current study had to be brought in line with the regular PICTURE-items. Therefore, the reported results should be treated with some reservations.

As already mentioned, it is questionable whether the selected resources are the most relevant to the current sample. This also applies to the selected demands. The PICTURE work experience scan left little room for adding other job demands that have proved their relevance in previous studies. Role conflict and role ambiguity, for example, might have been relevant to the military downsizing context.

The results from the SEM-analysis may not do fully justice to more recent versions of the JD-R model, which incorporated latent variables in the conceptual model. Inclusion of latent variables makes it possible to examine the effects of demands and resources on burnout and engagement as latent variables (Bakker & Demerouti, 2007). It was suggested that a model that takes this higher-order structure into consideration would fit best to the data (Schaufeli et al., 2002). Conducting a SEM-analysis in Amos including latent variables turned out to be problematic for the current study. It seems plausible that estimation of the model was impractical because correlations between the selected demands were not high enough to form a proper latent variable (see Table 2).

Generalizability might be limited because the characteristics of the study sample are pretty specific, such as the unique aspects of a military organization in general and specifically a situation of work underload in times of downsizing. Even within the Dutch military, the diversity of units within the four military branches and the multiplicity of job specialisms make it hard to generalize findings. For example, numerous units are still subject to reorganization and job insecurity might be a relevant demand for the people involved.

Recommendations for future research

In order to generate knowledge about the most relevant job demands and job resources for a study sample, it has been suggested to incorporate a preliminary qualitative phase in

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research on burnout and engagement. Interviews with employees and supervisors could serve as starting point in that phase. This should prevent that important demands and resources are overlooked by a standardized approach (Bakker & Demerouti, 2007). This was practically impossible in the current study, but is recommendable for future research.

More nuances could have been implemented in the current study. For example, personal resources, like optimism, self-efficacy, resilience and self-esteem, could have been taken into account (Bakker & Demerouti, 2008). Besides, the relevance of specific aspects of demands and resources could depend on demographic variables, such as age, gender, tenure, contract type, or differences in subunit and job specialism. Finally, moderation effects were ignored in the current study. Prior research demonstrated that job demands particularly influenced burnout when job resources were low and that job resources particularly influenced work engagement when job demands were high (Demerouti & Bakker, 2011). Additional studies are needed to reveal which particular resources may buffer the impact of specific demands on burnout and which demands strengthen the impact of resources on engagement in specific occupations (Bakker et al, 2005). Future research could benefit from considering the nuances mentioned above.

Theoretical Implications

In general, the results suggest that social support and aspects of communication can hardly compensate for the negative effects of workload demands. This could implicate that the health impairment process is predominantly associated with relevant demands for the study sample. On the other hand, not all the selected resources turned out to play a role in the motivational process, while work underload as demand was negatively related to this motivational process. It could be tempting to use an acknowledged model of work stress as mold for empirical studies, but the current study demonstrates the need to be reluctant to assume that the assumptions underlying a model can be applied regardless of the context.

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Results from the SEM-analysis showed that the model based on assumptions underlying the JD-R model fit poorly to the sample data and explained a smaller proportion of variance than the other two models. Additionally, these results also seem to suggest that a JD-R based model may overestimate the effect of resources and underestimate the effect of relevant demands. The current study might help to gain insights in the limits of the applicability of conceptual stress models like the JD-R model. The basic assumptions underlying the JD-R model, concerning the relationships with the dimensions of burnout and engagement, served as a starting point for specific hypotheses. Empirical results were used as justification to make the hypotheses compatible with the specific context. This approach seems promising for future research based on the JD-R model.

To encompass the richness of work load as demand, it seems particularly important to distinguish between different types of workload. The results suggest that work overload and work underload are differently associated with the dimensions of burnout and engagement. The relationship between work overload and exhaustion that had been found in prior studies was confirmed. This corresponds with the basic assumption of the JD-R model which states that job demands are primarily related to exhaustion. However, the current study showed that work underload was typically related to cynicism, vigor and dedication. This suggests that work underload can be regarded as serious work stressor with specific consequences. This is consistent with a recent study which reported that work underload was observed to have a negative impact on the quality of work life (Bolhari et al., 2012). The JD-R model assumes that every occupation has its own specific demands and resources, but the current study suggests that specific demands may also have specific effects on dimensions of burnout and engagement.

Organizational commitment turned out to be a relevant outcome variable in the context of a model with job aspects and dimensions of burnout and engagement. It turned out that

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organizational commitment was most strongly related to dedication, but also significantly to cynicism. Contrary to the assumptions underlying the JD-R model, work underload was most strongly associated with dedication in turn and to cynicism to a lesser extent. By adding organizational commitment to the model it became clear how both the health impairment process and motivational process are related to an important outcome variable.

Practical Implications

The combination of social support and aspects of communication did not appear to be the universal panacea at which this study was aiming. Effects of work overload and work underload appeared to be much more influential within the context of the conceptual model. The current study therefore supports the notion that “from a preventive point of view, decreasing job demands is to be preferred above increasing job resources” (Schaufeli & Bakker, 2004, p. 311). In order to keep people engaged and committed it might also be vital for leaders to foster a climate of co-worker support and recognition. The distinction between qualitative and quantitative aspects of work overload and work underload provides directions for interventions in the specific sample context. It is recommendable that leaders try to prevent quantitative and qualitative work underload for troopers on the one hand and quantitative and qualitative work overload for higher ranks. Situations of work overload and work underload are both issues worth considering in times of military downsizing.

Work underload turned out to be a work stressor to be reckoned with for the study sample. Leaders and their employees, to whom it concerns, could benefit from reducing work underload. In order to prevent qualitative underload and to promote engagement, leaders could consider ways to enhance the motivational potential of a job. For example, Hackman and Oldman (1975) distinguished between five dimensions of jobs to focus on: skill variety (use different skills and talents), task identity (produce an identifiable piece of work), task significance (impact on others), autonomy and feedback.

Conclusion

The notion that downsizing-related work stressors could be compensated for by budget neutral resources was only partially supported in the current study. It was expected that aspects of social support and communication could compensate for the effects of workload and job insecurity concerning the relationships with the dimensions of burnout and engagement. Only co-worker support and recognition turned out to be consistently related to these four dimensions. Work overload and work underload were more strongly associated with the dimensions of burnout and engagement than the selected resources. The results suggest that leaders can focus best on decreasing these demands, without neglecting relevant resources like co-worker support and recognition. What was not expected in the specific downsizing context, was that the role of job insecurity as demand was not noteworthy.

Work underload turned out to be a work stressor to be reckoned with. Results suggest that work underload might be an important antecedent of cynicism and dedication, which in turn seem to have an impact on organizational commitment. By distinguishing between different types of workload and differences between rank categories, it became clear that quantitative and qualitative work underload were more common among troopers and quantitative and qualitative work overload were more common among higher ranks.

Reservations can be made with regard to the selected demands and resources in the current study. The sample means for the selected demands raise doubts concerning the assumption that work overload, work underload and job insecurity are typically downsizing related demands for the study sample as a whole. Nevertheless, this study suggests that specific demands and resources may have specific effects on burnout and engagement. The role of work underload in particular turned out to be salient. Leaders will do well to prevent workload demands and to promote engagement. Relevant and valuable insights were gained in the interplay between job aspects and the dimensions of burnout and engagement.

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Appendix

Scales and Items, Translated From Dutch to English with Cronbach's Alpha or Correlation For Each Scale.

Work overload ($\alpha = .84$)

In the unit where I work.....

- 1) work is carried out under pressure of time.
- 2) there are peaks in the work.
- 3) staff have to work too hard.
- 4) too much work has to be done.
- 5) there is too little time to finish the work.
- 6) the pace of work is too high.
- 7) the work is mentally exacting.
- 8) the work is too complicated.

Work underload ($\alpha = .84$)

- 1) My workload is too light to keep me motivated.
- 2) I perform tasks that are too easy.
- 3) I perform tasks that are boring.
- 4) I have little work to do.
- 5) My current job is under the level of my skills.

Job insecurity ($\alpha = .64$)

- 1) I worry about my job.
- 2) I know what the downsizing consequences are for myself. (r)
- 3) I know what the downsizing consequences are for my unit. (r)

Co-worker support ($\alpha = .83$)

- 1) We work well together to get the job done.
- 2) We take each other to task about attitude and/or behavior.
- 3) I receive recognition for my work from my colleagues.
- 4) My colleagues motivate me.
- 5) People I work with are competent in doing their jobs.

Supervisor support ($\alpha = .87$)

- 1) My supervisor is interested in me as a person.
- 2) My supervisor stimulates and enhances good cooperation within the group.
- 3) My supervisor stimulates and enhances a safe work environment within the group.
- 4) My supervisor makes efforts for us.
- 5) My supervisor knows how to inspire me.

Information ($\alpha = .78$)

- 1) I have been adequately informed about the goals of my unit.
- 2) I get all the information that I need to perform my tasks.
- 3) As a unit, we get the information that is needed to perform our tasks.

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Communication quality ($\alpha = .81$)

- 1) I hear enough about what is going on within the unit.
- 2) I am kept well informed about important things within the unit.
- 3) The decision making process within the unit is clear to me.
- 4) It is clear to me whom I have to address within the unit for certain problems.

Recognition ($r = .68$)

- 1) My supervisor notices my accomplishments and not only my mistakes.
- 2) My supervisor appreciates my good work.

Exhaustion ($\alpha = .90$)

- 1) I feel emotionally drained from my work.
- 2) Working all day is a strain for me.
- 3) I feel burned out from my work.
- 4) I feel used up at the end of a work day.

Cynicism ($\alpha = .87$)

- 1) I doubt the significance of my work
- 2) I notice that I have become too detached from my work.
- 3) I have become less enthusiastic about my work.
- 4) I have become more cynical about the effects of my work.

Vigor ($\alpha = .89$)

- 1) At my work, I feel bursting with energy.
- 2) At my job, I feel strong and vigorous.
- 3) At my job, I am very resilient, mentally (recover after adversity).
- 4) I can continue working for very long periods at a time.
- 5) When I get up in the morning, I feel like going to work .

Dedication ($\alpha = .93$)

- 1) I am enthusiastic about my job.
- 2) I find the work that I do full of meaning and purpose.
- 3) I am proud on the work that I do.
- 4) To me, my job is challenging.
- 5) I enjoy my job.

Affective organizational commitment ($\alpha = .87$)

- 1) I feel as if this organization's problems are my own.
- 2) I feel a strong sense of belonging in this organization.
- 3) I feel emotionally attached to this organization.
- 4) I feel like 'part of the family' in this organization.
- 5) This organization has a great deal of personal meaning for me.

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Table 1

Means and Standard Deviations of Variables of the Conceptual Model

<i>Variable</i>	<i>M</i>	<i>SD</i>
Work overload	2.67	.52
Work underload	2.61	.72
Job insecurity	2.89	.84
Supervisor support	3.81	.72
Co-worker support	3.81	.58
Information	3.58	.67
Communication quality	3.69	.62
Recognition	3.97	.79
Dedication	3.72	1.24
Vigor	3.88	1.06
Cynicism	1.93	1.26
Exhaustion	1.04	.99
Organizational commitment	3.16	.76

Note. Means and standard deviations from Amos output for cases without missing values ($N = 1234$).

Table 2

Bivariate Correlations among Variables of the Conceptual Model

<i>Variable</i>	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Work overload	1												
2. Work underload	-.11	1											
3. Job insecurity	.15	.15	1										
4. Supervisor support	-.14	-.30	-.10	1									
5. Co-worker support	-.06	-.38	-.07	.36	1								
6. Information	-.20	-.31	-.18	.39	.38	1							
7. Communication quality	-.14	-.32	-.18	.40	.39	.68	1						
8. Recognition	-.15	-.27	-.11	.75	.30	.35	.35	1					
9. Exhaustion	.30	.11	.15	-.27	-.24	-.26	-.25	-.29	1				
10. Cynicism	.04	.49	.17	-.35	-.38	-.38	-.35	-.34	.46	1			
11. Vigor	-.06	-.38	-.18	.35	.41	.37	.42	.34	-.47	-.58	1		
12. Dedication	-.03	-.55	-.12	.40	.46	.41	.43	.37	-.36	-.69	.80	1	
13. Organizational commitment	-.02	-.36	-.12	.25	.32	.28	.33	.24	-.23	-.41	.48	.52	1

Note. Correlations from Amos output for cases without missing values ($N = 1234$). Bold printed correlations are equal or higher than .30.

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Table 3

Standardized Regression Weights of Effects of Demands and Resources on Dimensions of Burnout and Engagement From the Proposed Conceptual Model (M1).

Variable	Exhaustion		Cynicism		Vigor		Dedication	
	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>
Work overload	.24	<.001	-	-	-	-	-	-
Work underload	-	-	.33	<.001	-.17	<.001	-.36	<.001
Job insecurity	.07	.009	.07	.003	-.08	.001	.00	.988
Supervisor support	-.02	.645	-.07	.072	.04	.319	.09	.011
Co-worker support	-.12	<.001	-.14	<.001	.20	<.001	.19	<.001
Information	-.05	.210	-.14	<.001	.05	.105	.09	.003
Communication quality	-.07	.067	-.03	.388	.17	<.001	.11	<.001
Recognition	-.16	<.001	-.09	.012	.12	<.001	.08	.010

Note. Standardized regression weights and *p*-values from Amos output for cases without missing values (*N* = 1234).

Table 4

Fit Indices From Structural Equation Modeling (SEM).

	Model description	χ^2	<i>df</i>	NFI	TLI	CFI	RMSEA
M1	Proposed conceptual model	164.731*	14	.977	.879	.978	.093
M _{mod}	Model modification indices	52.986*	11	.992	.957	.994	.056
M _{jdr}	Model basic assumptions JD-R model	584.062*	24	.917	.739	.920	.138
M0	Null Model	7040.272*	78	-	-	-	.27

Note. χ^2 = chi-square goodness-of-fit test; NFI = normed fit index; TLI = Tucker Lewis index; CFI = comparative fit index; RMSEA = root mean square error of approximation. M_{mod} represents a modified conceptual model with additional paths: work overload to cynicism, work underload to exhaustion and communication quality to organizational commitment. M_{jdr} represents an alternative conceptual model with the assumptions underlying the JD-R model: each job demand is only associated with exhaustion and each job resource is related with cynicism and both dimensions of engagement. Values concern Amos output for cases without missing values (*N* = 1234). **p* < .05 (compared with the saturated model).

Table 5

Estimates of Explained Variance in Variables Within the Three Models.

Variable	Model M1	Model M _{mod}	Model M _{jdr}
Exhaustion	.19	.23	.12
Cynicism	.34	.38	.18
Vigor	.31	.32	.21
Dedication	.43	.45	.28
Organizational commitment	.28	.29	.27

Note. Squared multiple correlations are reported from Amos output for cases without missing values (*N* = 1234).

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Table 6

Standardized Regression Weights of Effects of Demands and Resources on Dimensions of Burnout and Engagement From the Model with Modifications (M_{-mod}).

Variable	Exhaustion		Cynicism		Vigor		Dedication	
	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>
Work overload	.32	<.001	.16	<.001	-	-	-	-
Work underload	.17	<.001	.42	<.001	-.23	<.001	-.39	<.001
Job insecurity	.05	.083	.04	.059	-.07	.002	.00	.914
Supervisor support	.00	.979	-.05	.140	.03	.382	.08	.014
Co-worker support	-.08	.007	-.12	<.001	.19	<.001	.18	<.001
Information	-.02	.638	-.10	.001	.05	.136	.09	.004
Communication quality	-.05	.149	-.02	.467	.17	<.001	.11	<.001
Recognition	-.14	<.001	-.07	.039	.12	.001	.08	.012

Note. Standardized regression weights and *p*-values from Amos output for cases without missing values ($N = 1234$).

Table 7

Standardized Regression Weights of Effects of Demands and Resources on Dimensions of Burnout and Engagement From the Model Based on the JD-R Model (M_{-jdr}).

Variable	Exhaustion		Cynicism		Vigor		Dedication	
	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>
Work overload	.33	<.001	-	-	-	-	-	-
Work underload	.14	<.001	-	-	-	-	-	-
Job insecurity	.01	.570	-	-	-	-	-	-
Supervisor support	-	-	-.09	.014	.05	.165	.12	.001
Co-worker support	-	-	-.20	<.001	.22	<.001	.26	<.001
Information	-	-	-.17	<.001	.07	.033	.12	<.001
Communication quality	-	-	-.05	.135	.18	<.001	.14	<.001
Recognition	-	-	-.06	.099	.09	.018	.07	.040

Note. Standardized regression weights and *p*-values from Amos output for cases without missing values ($N = 1234$).

Table 8

Standardized Regression Weights of Effects of Dimensions of Burnout and Engagement on Organizational Commitment From the Three Models.

Variable	Model M1		Model M_{-mod}		Model M_{-jdr}	
	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>
Cynicism	-.09	.008	-.08	.024	-.09	.008
Dedication	.46	<.001	.42	<.001	.45	<.001
Communication quality	-	-	.13	<.001	-	-

Note. Standardized regression weights and *p*-values from Amos output for cases without missing values ($N = 1234$).

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Table 9

Descriptive Statistics for Aspects of Work Overload and Work Underload

<i>Variable</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Quantitative work overload	1330	2.78	.57
Qualitative work overload	1313	2.31	.68
Quantitative work underload	1325	2.22	.82
Qualitative work underload	1324	2.86	.78

Table 10

Contrast of Troopers with Other Ranks For Qualitative and Quantitative Aspects of Work Overload and Work Underload

	<u>Troopers</u>		<u>Other ranks</u>		<i>t</i> (1261)	<i>p</i>	<u>95% CI</u>		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>LL</i>	<i>UL</i>	
Quantitative work overload	2.71	.52	2.89	.61	-5.46	<.001	-.25	-.12	-.32
Qualitative work overload	2.18	.65	2.52	.66	-8.98	<.001	-.42	-.27	-.52
Quantitative work underload	2.45	.79	1.83	.70	14.32	<.001	.53	.70	.83
Qualitative work underload	3.06	.76	2.51	.68	12.92	<.001	.47	.64	.76

Note. CI = confidence interval of the difference; *LL* = lower limit; *UL* = upper limit. Other ranks refer to ranks higher than soldiers and corporals (troopers).

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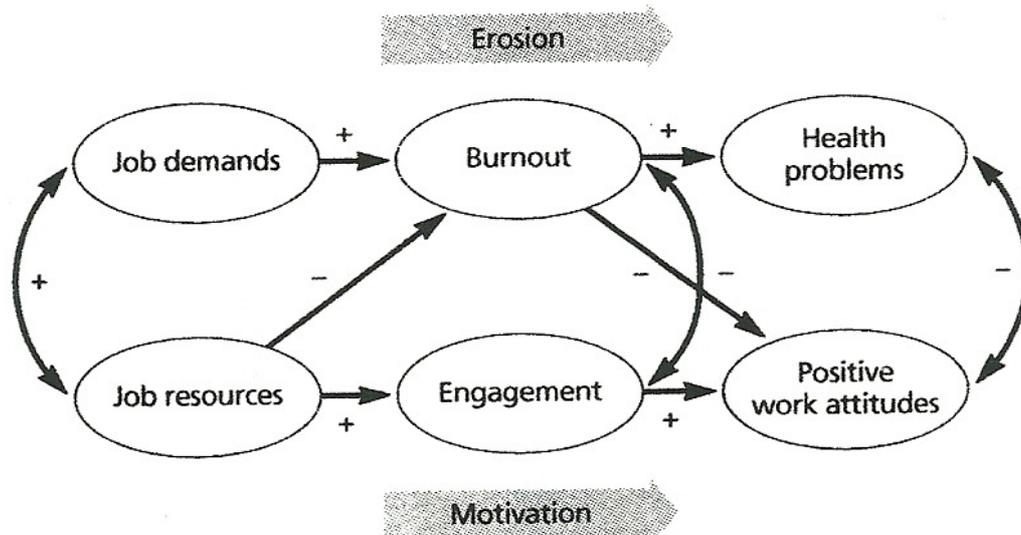


Figure 1. Dual processes of the JD-R model: the health impairment process (erosion) and the motivational process. Adopted from “Work engagement: An emerging psychological concept and its implications for organizations,” by W. B. Schaufeli, and M. Salanova, 2007, In S. W. Gilliland, D. D. Steiner. & D. P. Skarlicki (Eds.), *Research in Social Issues in Management: Managing social and ethical issues in organizations*, p. 155.

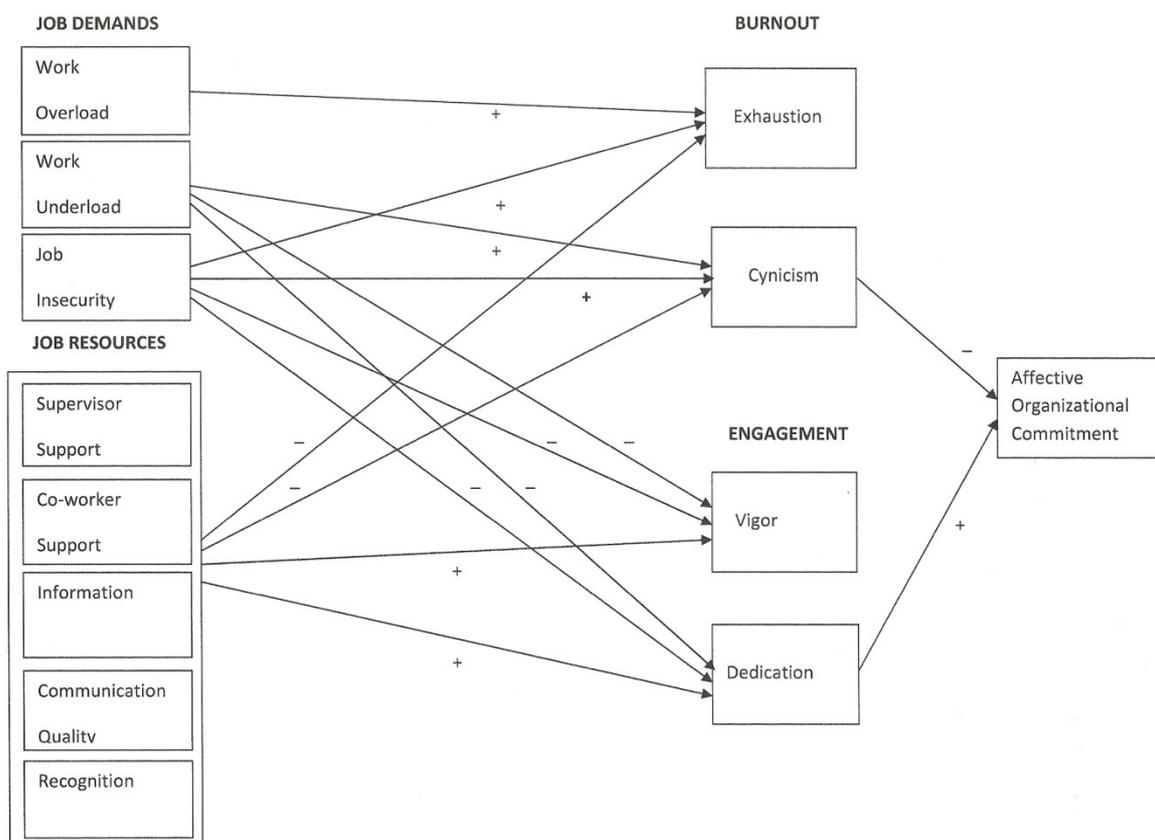


Figure 2. The hypothesized relationships for specific job demands and job resources. The visualization of relationships between job resources and the dimensions of burnout and engagement are simplified in the figure and each path applies to all the separate listed resources. For the sake of transparency, presumed intercorrelations between job demands and job resources have been omitted from the visualization of the model.