



Towards a model of work engagement

Work
engagement

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Abstract

Purpose – This paper aims to provide an overview of the recently introduced concept of work engagement.

Design/methodology/approach – Qualitative and quantitative studies on work engagement are reviewed to uncover the manifestation of engagement, and reveal its antecedents and consequences.

Findings – Work engagement can be defined as a state including vigor, dedication, and absorption. Job and personal resources are the main predictors of engagement; these resources gain their salience in the context of high job demands. Engaged workers are more creative, more productive, and more willing to go the extra mile.

Originality/value – The findings of previous studies are integrated in an overall model that can be used to develop work engagement and advance career development in today's workplace.

Keywords Organizational behaviour, Human resource management, Employee participation, Employee attitudes, Job satisfaction, The Netherlands

Paper type Research paper

Towards a model of work engagement

Bakker and Schaufeli (2008) have noted the need for positive organizational behavior (POB) research, defined as “the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace” (Luthans, 2002, p. 59). In this article, we will focus on one such a POB-construct, namely work engagement – a positive, fulfilling, work-related state of mind. We will first define work engagement, describe its measurement, and review studies on the “drivers” of engagement. Then, we will outline why work engagement contributes to the bottom line – performance and client satisfaction. The findings of previous studies are integrated in an overall model that can be used to develop work engagement in today's workplace and advance career development.

Work engagement

Definition

Work engagement is defined as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli *et al.*, 2002). Vigor is



characterized by high levels of energy and mental resilience while working. Dedication refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, and challenge. Absorption is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work (see also, Schaufeli and Bakker, 2004). In short, engaged employees have high levels of energy and are enthusiastic about their work. Moreover, they are often fully immersed in their work so that time flies (see also May *et al.*, 2004).

Structured qualitative interviews with a group of Dutch employees from different occupations who scored high on the Utrecht Work Engagement Scale (Schaufeli *et al.*, 2002) showed that engaged employees have high energy and self-efficacy (Schaufeli *et al.*, 2001). That helps them to exercise influence over events that affect their lives. For example, because of their positive attitude and activity level, engaged employees create their own positive feedback, in terms of appreciation, recognition, and success. Many interviewees indicated that their enthusiasm and energy also appears outside work, e.g. in sports, creative hobbies, and volunteer work. Engaged employees are no supermen – they do feel tired after a long day of hard work. However, they describe their tiredness as a rather pleasant state because it is associated with positive accomplishments. Finally, engaged employees are not addicted to their work. They enjoy other things outside work and, unlike workaholics, they do not work hard because of a strong and irresistible inner drive, but because for them working is fun.

Results of Engelbrecht's (2006) qualitative research among Danish midwives add significantly to these Dutch findings by showing how engagement translates into behavior. In the study of Engelbrecht, participants had to describe a highly engaged colleague. The interviews revealed that an engaged midwife is a person who radiates energy and keeps up the spirit at the ward, especially in situations where work morale is low and frustration spreads. An engaged midwife is willing to do whatever needs to be done, and is viewed as a source of inspiration for herself and her colleagues. "She has a positive attitude towards her work and is happy for the things she is doing. The love (for her job) is expressed through the passion with which she fulfils her daily tasks. In addition to the normal tasks of a midwife, she is also engaged in other job-related but voluntary activities at the ward" (p. 154).

Measurement

There are several instruments to measure work engagement. The Utrecht Work Engagement Scale (UWES) (Schaufeli and Bakker, 2003; Schaufeli *et al.*, 2002) includes items for the assessment of the three engagement dimensions included in Schaufeli *et al.*'s (2002) definition: vigor, dedication and absorption. The UWES has been validated in several countries, including China (Yi-Wen and Yi-Qun, 2005), Finland (Hakanen, 2002), Greece (Xanthopoulou *et al.*, n.d.), South Africa (Storm and Rothmann, 2003), Spain (Schaufeli *et al.*, 2002), and The Netherlands (Schaufeli and Bakker, 2003; Schaufeli *et al.*, 2002). The confirmatory factor analyses applied to these studies confirmed that the fit of the hypothesized three-factor structure to the data was superior to that of any other alternative factor structures. In addition, the internal consistencies of the three subscales proved to be sufficient in each study. It should be noted, however, that some studies failed to find the three-factor structure of work engagement (e.g. Sonnentag, 2003). This may be partly attributed to translation

problems when it comes to items that contain metaphors (e.g. “Time flies when I am working”). Furthermore, Schaufeli and Bakker (2003) have argued that the total score for work engagement may sometimes be more useful in empirical research because of the moderate to high correlations between the dimensions. Schaufeli *et al.* (2006) developed a short, nine-item version of the UWES, and provided evidence for its cross-national validity. They showed that the three engagement dimensions are moderately strong related.

An alternative instrument for the assessment of work engagement is the Oldenburg Burnout Inventory (OLBI) (Demerouti and Bakker, n.d.). This instrument has originally been developed to assess burnout, but includes both positively and negatively phrased items, and hence, it can be used to assess work engagement as well (cf. González-Romá *et al.*, 2006). Researchers interested in assessing work engagement with the OLBI can recode the negatively framed items. The OLBI includes two dimensions: one ranging from exhaustion to vigor and a second ranging from cynicism to dedication. The factorial validity of the OLBI has been confirmed in studies conducted in Germany (Demerouti *et al.*, 2002; Demerouti *et al.*, 2001), the US (Halbesleben and Demerouti, 2005), and Greece (Demerouti *et al.*, 2003). Results of these studies clearly showed that a two-factor structure with vigor and dedication (referred to as exhaustion and disengagement in these studies) as the underlying factors fitted better to the data of several occupational groups than alternative factor structures.

Finally, May *et al.* (2004) introduced three-dimensional concept of engagement that is highly similar to that of Schaufeli *et al.* (2002). More specifically, May *et al.* distinguish between a physical component (e.g. “I exert a lot of energy performing my job”), an emotional component (e.g. “I really put my heart into my job”), and a cognitive component (e.g. “Performing my job is so absorbing that I forget about everything else”), which correspond to vigor, dedication, and absorption as measured by the UWES. In the May *et al.* (2004) study, the scores on the three subscales are summed into one overall and reliable score. As far as we know, other information about the psychometric qualities of the May *et al.* (2004) engagement scale is not available yet.

Drivers of work engagement

Job resources

Previous studies have consistently shown that job resources such as social support from colleagues and supervisors, performance feedback, skill variety, autonomy, and learning opportunities are positively associated with work engagement (Bakker and Demerouti, 2007; Schaufeli and Salanova, 2007). Job resources refer to those physical, social, or organizational aspects of the job that may:

- reduce job demands and the associated physiological and psychological costs;
- be functional in achieving work goals; and
- stimulate personal growth, learning, and development (Bakker and Demerouti, 2007; Schaufeli and Bakker, 2004).

Hence, resources are not only necessary to deal with (high) job demands, but they also are important in their own right.

Job resources are assumed to play either an intrinsic motivational role because they foster employees’ growth, learning and development, or an extrinsic motivational role because they are instrumental in achieving work goals. In the former case, job

resources fulfill basic human needs, such as the needs for autonomy, relatedness and competence (Deci and Ryan, 1985; Ryan and Frederick, 1997). For instance, proper feedback fosters learning, thereby increasing job competence, whereas decision latitude and social support satisfy the need for autonomy and the need to belong, respectively. This intrinsic motivational potential of job resources is also recognized by job characteristics theory (Hackman and Oldham, 1980).

Job resources may also play an extrinsic motivational role, because resourceful work environments foster the willingness to dedicate one's efforts and abilities to the work task (Meijman and Mulder, 1998). In such environments it is likely that the task will be completed successfully and that the work goal will be attained. For instance, supportive colleagues and performance feedback increase the likelihood of being successful in achieving one's work goals. In either case, be it through the satisfaction of basic needs or through the achievement of work goals, the outcome is positive and engagement is likely to occur (Schaufeli and Bakker, 2004; Schaufeli and Salanova, 2007).

Consistent with these notions about the motivational role of job resources, several studies have shown a positive relationship between job resources and work engagement. For example, Schaufeli and Bakker (2004) found evidence for a positive relationship between three job resources (performance feedback, social support, and supervisory coaching) and work engagement (vigor, dedication and absorption) among four different samples of Dutch employees. More specifically, they used structural equation modeling analyses to show that job resources (not job demands) exclusively predicted engagement, and that engagement is a mediator of the relationship between job resources and turnover intentions.

This study was replicated in a sample of over 2000 Finnish teachers (Hakanen *et al.*, 2006). Results showed that job control, information, supervisory support, innovative climate and social climate were all positively related to work engagement. Conceptually similar findings were reported by Llorens *et al.* (2006) in a Spanish context. In addition, Koyuncu *et al.* (2006) examined potential antecedents and consequences of work engagement in a sample of women managers and professionals ($n = 286$) employed by a large Turkish bank. Results showed that work life experiences, particularly control, rewards and recognition and value fit, were significant predictors of all three engagement measures.

These studies suggesting a relationship between job resources and engagement, though conducted among different populations, are cross-sectional. Recent longitudinal research has generally confirmed the positive relationship between job resources and work engagement. Mauno *et al.* (2007) utilized a two-year longitudinal design to investigate work engagement and its antecedents among Finnish health care personnel ($n = 409$). Job resources predicted work engagement better than did job demands. Job control and organization-based self-esteem proved to be the best lagged predictors of the three dimensions of work engagement. Further, in their study among managers and executives of a Dutch telecom company ($n = 201$), Schaufeli *et al.* (2008) found that changes in job resources were predictive of engagement over a period of one year. Specifically, results showed that increases in social support, autonomy, opportunities to learn and to develop, and performance feedback were positive predictors of T2 work engagement after controlling for baseline engagement.

Salience of job resources

According to conservation of resources (COR) theory (Hobfoll, 2001), people seek to obtain, retain, and protect things they value, including for instance material, social, personal, or energetic resources. The theory proposes that stress experienced by individuals can be understood in relation to potential or actual loss of resources. More specifically, Hobfoll and Shirom (2000) have argued that:

- individuals must bring in resources in order to prevent the loss of resources;
- individuals with a greater pool of resources are less susceptible to resource loss;
- those individuals who do not have access to strong resource pools are more likely to experience increased loss (“loss spiral”); and
- strong resource pools lead to a greater likelihood that individuals will seek opportunities to risk resources for increased resource gains (“gain spiral”).

Additionally, Hobfoll (2002) argues that resource gain acquires its saliency in the context of resource loss. This suggests that job resources become more salient and gain their motivational potential when employees are confronted with high job demands (e.g. workload, emotional demands, and mental demands) because they can help goal accomplishment.

Hakanen *et al.* (2005) tested this interaction hypothesis in a sample of Finnish dentists employed in the public sector. It was hypothesized that job resources (e.g. variability in the required professional skills, peer contacts) are most beneficial in maintaining work engagement under conditions of high job demands (e.g. workload, unfavorable physical environment). The dentists were split in two random groups in order to cross-validate the findings. A set of hierarchical regression analyses resulted in seventeen out of forty significant interactions (40 percent), showing, e.g. that variability in professional skills boosted work engagement when qualitative workload was high, and mitigated the negative effect of qualitative workload on work engagement.

Conceptually similar findings have been reported by Bakker *et al.* (2007). In their study among Finnish teachers working in elementary, secondary, and vocational schools, they found that job resources act as buffers and diminish the negative relationship between pupil misbehavior, representing a demanding aspect of work, and work engagement. In addition, they found that job resources particularly influence work engagement when teachers are confronted with high levels of pupil misconduct. A series of moderated structural equation modeling analyses resulted in 14 out of 18 possible two-way interaction effects (78 percent). Particularly supervisor support, innovativeness, appreciation, and organizational climate were important job resources for teachers that helped them cope with demanding interactions with students.

Personal resources

Personal resources are positive self-evaluations that are linked to resiliency and refer to individuals' sense of their ability to control and impact upon their environment successfully (Hobfoll *et al.*, 2003). It has been convincingly shown that such positive self-evaluations predict goal-setting, motivation, performance, job and life satisfaction, career ambition and other desirable outcomes (for a review, Judge *et al.*, 2004). The reason for this is that the higher an individual's personal resources, the more positive

the person's self-regard and the more goal self-concordance is expected to be experienced (Judge *et al.*, 2005). Individuals with goal self-concordance are intrinsically motivated to pursue their goals and as a result they trigger higher performance and satisfaction (see also Luthans and Youssef, 2007).

Several authors have investigated the relationships between personal resources and work engagement. For example, Rothmann and Storm (2003) conducted a large cross-sectional study among 1,910 South African police officers, and found that engaged police-officers use an active coping style. They are problem-focused, taking active steps to attempt to remove or rearrange stressors. Further, in their study among highly skilled Dutch technicians, Xanthopoulou *et al.* (2007a) examined the role of three personal resources (self-efficacy, organizational-based self-esteem, and optimism) in predicting work engagement. Results showed that engaged employees are highly self-efficacious; they believe they are able to meet the demands they face in a broad array of contexts. In addition, engaged workers have the tendency to believe that they will generally experience good outcomes in life (optimistic), and believe they can satisfy their needs by participating in roles within the organization (organizational-based self-esteem; see also Mauno *et al.*, 2007).

These findings were replicated and expanded in a two-year follow-up study (Xanthopoulou *et al.*, 2007b). The findings indicated that self-efficacy, organizational-based self-esteem, and optimism make a unique contribution to explaining variance in work engagement over time, over and above the impact of job resources and previous levels of engagement. As a final example, Bakker *et al.* (2006) in their study among female school principals found that those with most personal resources scored highest on work engagement. Particularly resilience, self-efficacy and optimism contributed to work engagement, and were able to explain unique variance in engagement scores (in addition to social support from team members and colleague principals, opportunities for development, and social support from the intimate partner). Thus, resilience is another personal resource that facilitates work engagement, indicating that engaged workers are effective in adaptation to changing environments.

In short, engaged workers possess personal resources, including optimism, self-efficacy, self-esteem, resilience, and an active coping style, that help them to control and impact upon their work environment successfully, and to achieve career success (see also Luthans *et al.*, 2008).

Engagement – performance link

Engelbrecht (2006) noticed in her qualitative study that a highly engaged midwife "... is service-minded and client-oriented in her work, which can be noticed in her quick, calm and patient reaction towards clients." (p. 156). To date, only a few quantitative studies have shown that work engagement is positively related to job performance (for overview see Demerouti and Bakker, 2006). Nevertheless, the results look promising. Bakker *et al.* (2004) showed that engaged employees received higher ratings from their colleagues on in-role and extra-role performance, indicating that engaged employees perform well and are willing to go the extra mile. Further, in their survey among Dutch employees from a wide range of occupations, Schaufeli *et al.* (2006) found that work engagement is positively related to in-role performance ($\beta = 0.37$), whereas workaholism is not. These findings were expanded in another

study among 327 secretaries. Gierveld and Bakker (2005) found that engaged secretaries scored higher on in-role and extra-role performance than their non-engaged counterparts. In addition, results suggested that engaged secretaries had more influence on daily business. They were more often asked to carry out additional, challenging tasks, including personnel pre-selection, the organization of trade exhibitions and conventions, and website maintenance.

Bakker *et al.* (2006) conducted a study on engagement and performance among 105 school principals and 232 teachers. Their study showed significant and positive associations between school principals' work engagement scores and teacher-ratings of school principals' performance and leadership. More specifically, results of structural equation modeling showed that engaged principals scored higher on in-role and extra-role performance. In addition, engagement was strongly related to creativity; the higher school principals' levels of work engagement, the better they were able to come up with a variety of ways to deal with work-related problems. Finally, engaged school principals were seen as transformational leaders – being able to inspire, stimulate and coach their co-workers.

Salanova *et al.* (2005) conducted an important study among personnel working in Spanish restaurants and hotels. Contact employees ($n = 342$) from 114 service units (58 hotel front desks and 56 restaurants) provided information about organizational resources, engagement, and service climate. Furthermore, customers ($n = 1,140$) from these units provided information on employee performance and customer loyalty. Structural equation modeling analyses were consistent with a full mediation model in which organizational resources and work engagement predicted service climate, which in turn predicted employee performance and then customer loyalty.

In their recent study among Greek employees working in a fast-food restaurant, Xanthopoulou *et al.* (2007c) expanded this research, and made a compelling case of the predictive value of work engagement for performance, on a daily basis. Participants were asked to fill in a survey and a diary booklet for five consecutive days. Consistent with hypotheses, results showed that employees were more engaged on days that were characterized by many job resources. Daily job resources, like supervisor coaching and team atmosphere contributed to employees' personal resources (day-levels of optimism, self-efficacy, and self-esteem), which, in turn, explained daily engagement. Importantly, this study clearly showed that engaged employees perform better on a daily basis. The higher employees' levels of daily engagement, the higher their objective financial returns.

Why engaged workers perform better

There are at least four reasons why engaged workers perform better than non-engaged workers. Engaged employees often experience positive emotions, including happiness, joy, and enthusiasm; experience better health; create their own job and personal resources; and transfer their engagement to others.

Positive emotions

Recent research has shown that engaged employees often experience positive emotions (Schaufeli and Van Rhenen, 2006), and this may be the reason why they are more productive. Happy people are more sensitive to opportunities at work, more outgoing and helpful to others, and more confident and optimistic (Cropanzano and Wright,

2001). According to the broaden-and-build theory of positive emotions (Fredrickson, 2001), certain positive emotions including joy, interest and contentment, all share the capacity to broaden people's momentary thought – action repertoires and build their personal resources (ranging from physical and intellectual resources to social and psychological) through widening the array of thoughts and actions that come to mind. For instance, joy broadens resources by creating the urge to play and be creative. Interest, another positive emotion, fosters the desire to explore, assimilate new information and experiences and grow.

Evidence for the broadening hypothesis has been reported by Fredrickson and Branigan (2005) and by Isen (2000). Accordingly, positive affect produces a broad and flexible cognitive organization as well as the ability to integrate diverse material. The question is now whether this “broaden-and-build” effect will manifest itself in enhanced job performance, as one would assume because of the accumulation of personal resources. Fredrickson (2001) has argued that we need to investigate how (and whether) broadened thought-action repertoires are translated into decisions and actions. In an organizational context, Fredrickson and Losada (2005) showed that when the ratio of managers' positive to negative emotions is relatively high during business meetings, they ask more questions, and their range between questioning and advocacy is broader, resulting in better performance.

Good health

Research suggests that engagement is positively related to health, and this would imply that engaged workers are better able to perform well. Schaufeli *et al.* (n.d.) have shown that engaged workers report less psychosomatic complaints than their non-engaged counterparts. Similarly, Demerouti *et al.* (2001) found moderate negative correlations between engagement (particularly vigor) and psychosomatic health complaints (e.g. headaches, chest pain). In addition, Hakanen *et al.* (2006), in their study among Finnish teachers showed that work engagement is positively related to self-rated health and workability.

Further, Schaufeli and Bakker (2004) found in their study among four different Dutch service organizations that engaged workers suffer less from, for example, self-reported headaches, cardiovascular problems, and stomach aches. Shirom (2003) has also argued that vigor is positively related to mental and physical health. However, note that recent research has generally failed to find evidence for a link between engagement and physiological indicators, including the stress hormone cortisol (Langelaan *et al.*, 2006).

Ability to mobilize resources

One important reason why engaged workers are more productive may be their ability to create their own resources. Research with Fredrickson's (2001) broaden-and-build theory has shown that momentary experiences of positive emotions can build enduring psychological resources and trigger upward spirals toward emotional well-being. Positive emotions not only make people feel good at the moment, but also feel good in the future (Fredrickson and Joiner, 2002).

There is indeed evidence for an upward spiral of work engagement and resources. Xanthopoulou *et al.* (2007b) showed in their research among highly skilled Dutch technicians that T1 job and personal resources resulted in higher levels of work

engagement one year later (T2). Simultaneously, work engagement resulted in more personal resources (optimism, self-efficacy, and organization-based self-esteem) and more job resources (social support from colleagues, autonomy, coaching, and feedback) over time. Conceptually similar results have been found in a Spanish context (Llorens *et al.*, 2007; see also Salanova *et al.*, 2006), suggesting that engagement triggers an upward spiral and leads to higher levels of self-efficacy over time. Furthermore, Schaufeli *et al.*'s (2008) study among managers showed that engagement was predictive of increases in next year's job resources, including social support, autonomy, learning opportunities, and performance feedback. This all suggests that in comparison with non-engaged employees, engaged employees are better able to mobilize their own job and personal resources that, in turn, fuel future engagement and so forth.

Crossover of engagement

In most organizations, performance is the result of the combined effort of individual employees. It is therefore conceivable that the crossover of engagement among members of the same work team increases performance. Crossover or emotional contagion can be defined as the transfer of positive (or negative) experiences from one person to the other (Westman, 2001). If colleagues influence each other with their work engagement, they may perform better as a team.

There is indeed some experimental evidence for such a process of emotional contagion. Barsade (2002) conducted an innovative laboratory study in which the transfer of moods among people in a group, and its influence on performance was examined. Using a trained confederate enacting mood, she showed that the pleasant mood of the confederate influenced (video coders' ratings of) the mood of the other team members during a simulated managerial exercise (leaderless group discussion). The positive mood contagion consequently resulted in more cooperative behavior and better task performance. In a similar vein, Sy *et al.* (2005) found that when leaders were in a positive (vs. negative) mood, individual team members experienced more positive and less negative mood. The researchers also found that groups with leaders in a positive mood exhibited more coordination and expended less effort than did groups with leaders in a negative mood.

Other researchers focused on emotional contagion in the workplace viewing contagion as a reciprocal emotional reaction among employees who closely collaborate. Thus, in a field setting, Totterdell *et al.* (1998) found evidence that the moods of teams of nurses and accountants were related to each other even after controlling for shared work problems. In addition, Bakker *et al.* (2006) in their study among 2,229 officers working in one of 85 teams found that team-level work engagement was related to individual team members' engagement (vigor, dedication, and absorption), after controlling for individual members' job demands and resources. Thus, engaged workers who communicated their optimism, positive attitudes and pro-active behaviors to their colleagues, created a positive team climate, independent of the demands and resources they were exposed to. This suggests that engaged workers influence their colleagues, and consequently, they perform better as a team.

Overall model of work engagement

The evidence regarding the antecedents and consequences of work engagement can be organized in an overall model of work engagement. In building this model, we draw on two assumptions from the job demands-resources (JD-R) model (Bakker and Demerouti, 2007; Demerouti *et al.*, 2001). The first assumption is that job resources such as social support from colleagues and supervisors, performance feedback, skill variety, and autonomy, start a motivational process that leads to work engagement, and consequently to higher performance. The second assumption is that job resources become more salient and gain their motivational potential when employees are confronted with high job demands (e.g. workload, emotional demands, and mental demands). Further, we draw on the work of Xanthopoulou *et al.* (2007a, b, c), who expanded the JD-R model by showing that job and personal resources are mutually related, and that personal resources can be independent predictors of work engagement. Thus, employees who score high on optimism, self-efficacy, resilience and self-esteem are well able to mobilize their job resources, and generally are more engaged in their work.

The JD-R model of work engagement is graphically depicted in Figure 1. As can be seen, we assume that job resources and personal resources independently or combined predict work engagement. Further, job and personal resources particularly have a positive impact on engagement when job demands are high. Work engagement, in turn, has a positive impact on job performance. Finally, employees who are engaged and perform well are able to create their own resources, which then foster engagement again over time and create a positive gain spiral.

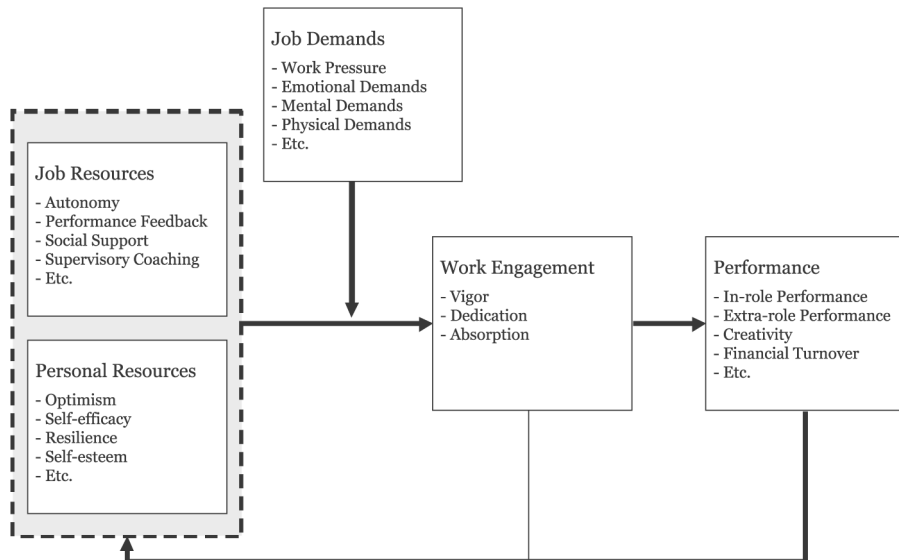


Figure 1.
The JD-R model of work engagement

Source: Based on Bakker & Demerouti (2007)

Future of work engagement

In this article, we intended to put work engagement on the research agenda by showing that engagement is predicted by typical job resources, is related to personal resources and leads to higher job performance. Thus, work engagement is an important indicator of occupational well-being for both employees and organizations. Human resource managers can do several things to facilitate work engagement among their employees. Important starting point for any active policy is the measurement of engagement and its drivers among all employees, for example by using the JD-R model (see Figure 1). On the basis of this assessment, it can be determined whether individual employees, teams, job positions, or departments score low, average, or high on work engagement and its antecedents. Following Kompier's (2003) advice, interventions should then focus on both individuals (in the context of the organization), and the organization at large.

From a theoretical point-of-view, it is important that research on work engagement starts to use more elaborated research designs where causality is tested rigorously (using experimental or longitudinal designs) and where predictors and outcomes of work engagement are measured objectively. Moreover, it is worth to focus on the mechanisms through which work engagement leads to favorable outcomes by getting insight in the processes that it initiates or is involved in. It is, for instance, conceivable that self-regulation – i.e. goal-directed behavior – is facilitated when people are engaged in their work because they have the energy (can do) and the motivation (want to do) to undertake action. This can help them not only to achieve better performance but also to increase their chances for a better career development. As Cooper (2005) notes, individuals in the future will have to take responsibility for their own personal development. Since juggling different work demands and stakeholders at work can easily lead to a lifestyle of long working hours and workaholism, it is important to appreciate the importance of sustaining a personal and family life outside work. Promoting engagement in the workplace (and not only) can prove to be a liberating experience, giving choice and control to the individual – but individuals have to arm themselves with the right skills and attitudes, and engage in a constant program of personal career development.

References

- Bakker, A.B. and Demerouti, E. (2007), "The job demands-resources model: state of the art", *Journal of Managerial Psychology*, Vol. 22, pp. 309-28.
- Bakker, A.B. and Schaufeli, W.B. (2008), "Positive organizational behavior: engaged employees in flourishing organizations", *Journal of Organizational Behavior*, Vol. 29, pp. 147-54.
- Bakker, A.B., Demerouti, E. and Verbeke, W. (2004), "Using the job demands: resources model to predict burnout and performance", *Human Resource Management*, Vol. 43, pp. 83-104.
- Bakker, A.B., Gierveld, J.H. and Van Rijswijk, K. (2006), *Succesfactoren bij vrouwelijke schoolleiders in het primair onderwijs: Een onderzoek naar burnout, bevoegenheid en prestaties (Success factors among female school principals in primary teaching: A Study on Burnout, Work Engagement, and Performance)*, Right Management Consultants, Diemen.
- Bakker, A.B., Hakanen, J.J., Demerouti, E. and Xanthopoulou, D. (2007), "Job resources boost work engagement, particularly when job demands are high", *Journal of Educational Psychology*, Vol. 99, pp. 274-84.

- Barsade, S. (2002), "The ripple effect: emotional contagion and its influence on group behavior", *Administrative Science Quarterly*, Vol. 47, pp. 644-77.
- Cooper, C.L. (2005), "Research note: the future of work: careers, stress and well-being", *Career Development International*, Vol. 10, pp. 369-99.
- Cropanzano, R. and Wright, T.A. (2001), "When a 'happy' worker is really a 'productive' worker: a review and further refinement of the happy-productive worker thesis", *Consulting Psychology Journal: Practice and Research*, Vol. 53, pp. 182-99.
- Deci, W.L. and Ryan, R.M. (1985), *Intrinsic Motivation and Self-Determination in Human Behavior*, Plenum, New York, NY.
- Demerouti, E. and Bakker, A.B. (2006), "Employee well-being and job performance: where we stand and where we should go", in Houdmont, J. and McIntyre, S. (Eds), *Occupational Health Psychology: European Perspectives on Research, Education and Practice*, Vol. 1, ISMAI Publications, Maia.
- Demerouti, E. and Bakker, A.B. (n.d.), "The Oldenburg Burnout Inventory: a good alternative to measure burnout (and engagement)", in Halbesleben, J. (Ed.), *Handbook of Stress and Burnout in Health Care*, Nova Science, New York, NY.
- Demerouti, E., Bakker, A.B., Nachreiner, F. and Ebbinghaus, M. (2002), "From mental strain to burnout", *European Journal of Work and Organizational Psychology*, Vol. 11, pp. 423-41.
- Demerouti, E., Bakker, A.B., Vardakou, I. and Kantas, A. (2003), "The convergent validity of two burnout instruments: a multitrait-multimethod analysis", *European Journal of Psychological Assessment*, Vol. 18, pp. 296-307.
- Demerouti, E., Bakker, A.B., De Jonge, J., Janssen, P.P.M. and Schaufeli, W.B. (2001), "Burnout and engagement at work as a function of demands and control", *Scandinavian Journal of Work, Environment and Health*, Vol. 27, pp. 279-86.
- Engelbrecht, S. (2006), "Motivation and burnout in human service work: the case of midwifery in Denmark", unpublished doctoral dissertation, Roskilde University, Roskilde.
- Fredrickson, B.L. (2001), "The role of positive emotions in positive psychology: the broaden-and-build theory of positive emotions", *American Psychologist*, Vol. 56, pp. 218-26.
- Fredrickson, B.L. and Branigan, C.A. (2005), "Positive emotions broaden the scope of attention and thought: action repertoires", *Cognition and Emotion*, Vol. 19, pp. 313-32.
- Fredrickson, B.L. and Joiner, T. (2002), "Positive emotions trigger upward spirals toward emotional well-being", *Psychological Science*, Vol. 13, pp. 172-5.
- Fredrickson, B.L. and Losada, M.F. (2005), "Positive affect and the complex dynamics of human flourishing", *American Psychologist*, Vol. 60, pp. 678-86.
- Gierveld, J.H. and Bakker, A.B. (2005), *De invloed van de secretaresse (The Influence of the Secretary)*, Manpower, Diemen.
- González-Romá, V., Schaufeli, W.B., Bakker, A.B. and Lloret, S. (2006), "Burnout and work engagement: independent factors or opposite poles?", *Journal of Vocational Behavior*, Vol. 62, pp. 165-74.
- Hackman, J.R. and Oldham, G.R. (1980), *Work Redesign*, Addison-Wesley, Reading, MA.
- Hakanen, J. (2002), "Työuupumuksesta työn imuun – positiivisen työhyvinvointikäsitteen ja menetelmän suomalaisen version validointi opetusalan organisaatiossa" ("From burnout to job engagement – validation of the Finnish version of an instrument for measuring job engagement (UWES) in an educational organization"), *Työ ja Ihminen*, Vol. 16, pp. 42-58.

-
- Hakanen, J.J., Bakker, A.B. and Demerouti, E. (2005), "How dentists cope with their job demands and stay engaged: the moderating role of job resources", *European Journal of Oral Sciences*, Vol. 113, pp. 479-87.
- Hakanen, J., Bakker, A.B. and Schaufeli, W.B. (2006), "Burnout and work engagement among teachers", *The Journal of School Psychology*, Vol. 43, pp. 495-513.
- Halbesleben, J.R.B. and Demerouti, E. (2005), "The construct validity of an alternative measure of burnout: investigating the English translation of the Oldenburg Burnout Inventory", *Work and Stress*, Vol. 19, pp. 208-20.
- 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*, Vol. 50, pp. 337-70.
- Hobfoll, S.E. (2002), "Social and psychological resources and adaptation", *Review of General Psychology*, Vol. 6, pp. 307-24.
- Hobfoll, S.E. and Shirom, A. (2000), "Conservation of resources theory: applications to stress and management in the workplace", in Golembiewski, R.T. (Ed.), *Handbook of Organization Behavior*, 2nd ed., Dekker, New York, NY, pp. 57-81.
- Hobfoll, S.E., Johnson, R.J., Ennis, N. and Jackson, A.P. (2003), "Resource loss, resource gain, and emotional outcomes among inner city women", *Journal of Personality and Social Psychology*, Vol. 84, pp. 632-43.
- Isen, A.M. (2000), "Positive affect and decision making", in Lewis, M. and Haviland-Jones, J.M. (Eds), *Handbook of Emotions*, 2nd ed., Guilford Press, New York, NY, pp. 417-35.
- Judge, T.A., Van Vianen, A.E.M. and De Pater, I. (2004), "Emotional stability, core self-evaluations, and job outcomes: a review of the evidence and an agenda for future research", *Human Performance*, Vol. 17, pp. 325-46.
- Judge, T.A., Bono, J.E., Erez, A. and Locke, E.A. (2005), "Core self-evaluations and job and life satisfaction: the role of self-concordance and goal attainment", *Journal of Applied Psychology*, Vol. 90, pp. 257-68.
- Kompier, M. (2003), "Job design and well-being", in Schabracq, M.J., Winnubst, J.A.M. and Cooper, C.L. (Eds), *The Handbook of Work and Health Psychology*, 2nd ed., Wiley, Chichester, pp. 429-54.
- Koyuncu, M., Burke, R.J. and Fiksenbaum, L. (2006), "Work engagement among women managers and professionals in a Turkish bank: potential antecedents and consequences", *Equal Opportunities International*, Vol. 25, pp. 299-310.
- Langelaan, S., Bakker, A.B., Schaufeli, W.B., Van Rhenen, W. and Van Doornen, L.J.P. (2006), "Do burned-out and work-engaged employees differ in the functioning of the hypothalamic-pituitary-adrenal axis?", *Scandinavian Journal of Work, Environment, and Health*, Vol. 32, pp. 339-48.
- Llorens, S., Bakker, A.B., Schaufeli, W.B. and Salanova, M. (2006), "Testing the robustness of the job demands-resources model", *International Journal of Stress Management*, Vol. 13, pp. 378-91.
- Llorens, S., Schaufeli, W.B., Bakker, A.B. and Salanova, M. (2007), "Does a positive gain spiral of resources, efficacy beliefs and engagement exist?", *Computers in Human Behavior*, Vol. 23, pp. 825-41.
- Luthans, F. (2002), "Positive organizational behavior: developing and managing psychological strengths", *Academy of Management Executive*, Vol. 16, pp. 57-72.
- Luthans, F. and Youssef, C.M. (2007), "Emerging positive organizational behavior", *Journal of Management*, Vol. 33, pp. 321-49.

- Luthans, F., Norman, S.M., Avolio, B.J. and Avey, J.B. (2008), "The mediating role of psychological capital in the supportive organizational climate: employee performance relationship", *Journal of Organizational Behavior*, Vol. 29, pp. 219-38.
- Mauno, S., Kinnunen, U. and Ruokolainen, M. (2007), "Job demands and resources as antecedents of work engagement: a longitudinal study", *Journal of Organizational Behavior*, Vol. 70, pp. 149-71.
- May, D.R., Gilson, R.L. and Harter, L.M. (2004), "The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work", *Journal of Occupational and Organizational Psychology*, Vol. 77, pp. 11-37.
- Meijman, T.F. and Mulder, G. (1998), "Psychological aspects of workload", in Drenth, P.J.D. and Thierry, H. (Eds), *Handbook of Work and Organizational Psychology*, Vol. 2, Psychology Press, Hove, pp. 5-33.
- Rothmann, S. and Storm, K. (2003), "Work engagement in the South African Police Service", paper presented at the 11th European Congress of Work and Organizational Psychology, 14-17 May 2003, Lisbon.
- Ryan, R.M. and Frederick, C.M. (1997), "On energy, personality, and health: subjective vitality as a dynamic reflection of well-being", *Journal of Personality*, Vol. 65, pp. 529-65.
- Salanova, M., Agut, S. and Peiró, J.M. (2005), "Linking organizational resources and work engagement to employee performance and customer loyalty: the mediation of service climate", *Journal of Applied Psychology*, Vol. 90, pp. 1217-27.
- Salanova, M., Bakker, A.B. and Llorens, S. (2006), "Flow at work: evidence for an upward spiral of personal and organizational resources", *Journal of Happiness Studies*, Vol. 7, pp. 1-22.
- Schaufeli, W.B. and Bakker, A.B. (2003), "UWES – utrecht work engagement scale: test manual", Department of Psychology, Utrecht University, Utrecht, available at: www.schaufeli.com
- Schaufeli, W.B. and Bakker, A.B. (2004), "Job demands, job resources and their relationship with burnout and engagement: a multi-sample study", *Journal of Organizational Behavior*, Vol. 25, pp. 293-315.
- Schaufeli, W.B. and Salanova, M. (2007), "Work engagement: an emerging psychological concept and its implications for organizations", in Gilliland, S.W., Steiner, D.D. and Skarlicki, D.P. (Eds), *Research in Social Issues in Management: Managing Social and Ethical Issues in Organizations*, Vol. 5, Information Age Publishers, Greenwich, CT.
- Schaufeli, W.B. and Van Rhenen, W. (2006), "Over de rol van positieve en negatieve emoties bij het welbevinden van managers: Een studie met de Job-related Affective Well-being Scale (JAWS)" ("About the role of positive and negative emotions in managers' well-being: A study using the Job-related Affective Well-being Scale (JAWS)", *Gedrag & Organisatie*, Vol. 19, pp. 323-244.
- Schaufeli, W.B., Bakker, A.B. and Salanova, M. (2006), "The measurement of work engagement with a brief questionnaire: a cross-national study", *Educational and Psychological Measurement*, Vol. 66, pp. 701-16.
- Schaufeli, W.B., Bakker, A.B. and Van Rhenen, W. (2008), "How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism", manuscript submitted for publication.
- Schaufeli, W.B., Taris, T.W. and Van Rhenen, W. (n.d.), "Workaholism, burnout and engagement: one of a kind or three different kinds of employee well-being?", *Applied Psychology: An International Review*.

-
- Schaufeli, W.B., Taris, T.W., Le Blanc, P., Peeters, M., Bakker, A.B. and De Jonge, J. (2001), "Maakt arbeid gezond? Op zoek naar de bevlogen werknemer" ("Does work make happy? In search of the engaged worker"), *De Psycholoog*, Vol. 36, pp. 422-8.
- Schaufeli, W.B., Salanova, M., González-Romá, V. and Bakker, A.B. (2002), "The measurement of engagement and burnout and: a confirmative analytic approach", *Journal of Happiness Studies*, Vol. 3, pp. 71-92.
- Shirom, A. (2003), "Feeling vigorous at work? The construct of vigor and the study of positive affect in organizations", in Ganster, D. and Perrewe, P.L. (Eds), *Research in Organizational Stress and Well-being*, JAI Press, Greenwich, CT, pp. 135-65.
- Sonnentag, S. (2003), "Recovery, work engagement, and proactive behavior: a new look at the interface between non-work and work", *Journal of Applied Psychology*, Vol. 88, pp. 518-28.
- Storm, K. and Rothmann, I. (2003), "A psychometric analysis of the Utrecht Work Engagement Scale in the South African police service", *South African Journal of Industrial Psychology*, Vol. 29, pp. 62-70.
- Sy, T., Cote, S. and Saavedra, R. (2005), "The contagious leader: impact of leader's affect on group member affect and group processes", *Journal of Applied Psychology*, Vol. 90, pp. 295-305.
- Totterdell, P.S., Kellet, K., Teuchmann, K. and Briner, R.B. (1998), "Evidence of mood linkage in work groups", *Journal of Personality and Social Psychology*, Vol. 74, pp. 1504-15.
- Westman, M. (2001), "Stress and strain crossover", *Human Relations*, Vol. 54, pp. 557-91.
- Xanthopoulou, D., Bakker, A.B., Demerouti, E. and Schaufeli, W.B. (2007a), "The role of personal resources in the job demands-resources model", *International Journal of Stress Management*, Vol. 14, pp. 121-41.
- Xanthopoulou, D., Bakker, A.B., Demerouti, E. and Schaufeli, W.B. (2007b), "Work engagement: a cycle of job and personal resources", manuscript submitted for publication.
- Xanthopoulou, D., Bakker, A.B., Demerouti, E. and Schaufeli, W.B. (2007c), "How job and personal resources influence work engagement and financial turnover: a diary study in a Greek fast-food company", manuscript submitted for publication.
- Xanthopoulou, D., Bakker, A.B., Demerouti, E. and Kantas, A. (n.d.), "The measurement of burnout and engagement: a cross-cultural study comparing Greece and The Netherlands", *New Review of Social Psychology* (in press).
- Yi-Wen, Z. and Yi-Qun, C. (2005), "The Chinese version of the Utrecht work engagement scale: an examination of reliability and validity", *Chinese Journal of Clinical Psychology*, Vol. 13, pp. 268-70.

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